THE JECH GALLERY

Fiorella Belpoggi, MD: per aspera ad astra

Dr Fiorella Belpoggi has dedicated her career to the identification of industrial and environmental carcinogens. As vice scientific director and chief of pathology at the European Foundation of Oncology and Environmental Sciences B Ramazzini, European Ramazzini Foundation, Bologna, Italy, she has led experimental studies of widely diffused substances, including benzene, methyl tert-butyl ether and other octane enhancers, ionising radiation and aspartame. Belpoggi has also conducted studies on the chemoprevention of tumours, particularly breast cancer, by using both natural and artificial compounds. During her 25-year collaboration with mentor Professor Cesare Maltoni, her work contributed to the adaptation of international standards to better protect public health against the hazards of vinyl chloride, benzene and methyl tert-butyl ether. Currently, Belpoggi is leading the ERF integrated project on electromagnetic fields originating from electricity and cellular telephone technology. Belpoggi approaches carcinogenesis with her personal motto “per aspera ad astra” (Seneca), which, in Latin, signifies that “one only arrives at the stars by overcoming great difficulties”.

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BOOK REVIEWS

Children of the 21st century. From birth to 9 months

This book offers the first report on data obtained from the Millennium Cohort Study (MCS), a cohort of 18,819 UK babies born in the 21st century, for which an original approach to the study of child health and development by considering social and health conditions as sources of capital. For instance, family resources (father, mother and relatives) and neighbourhood are studied as sources of social capital, ethnicity, religion and language as sources of cultural capital, and parents' health as a source of human capital. Doing so, the authors open a general concern that inequalities are not only rooted in adult but also in childhood, social (neighbourhood) and cultural (ethnicity) domains, as is shown throughout the book.

The first chapter describes how MCS was planned, what objectives it pursued and what were the policy context and the methodology. Then a series of chapters present the distribution of variables within the sample in terms of: household structure, parents' language, neighbourhood conditions (chapter 2), socioconcordance conditions (chapter 3), prenatatal and perinatal care (chapter 4), children's health (chapter 5), and parenthood and parenting (chapter 7). Chapters 6 and 8 bring more analytically elaborated answers, which we expect to see in a book of this character, describing how socioeconomic and physical environments affect child development (gross and fine motor coordination, and communicative gestures), and how family characteristics and employment affect mothers' mental health (satisfaction in life and depression). The final chapter presents the conclusions, a summary of the information and answers for the questions asked in the introduction of the book.

Most chapters are accompanied by a considerate number of graphs and tables that are easy to interpret. Although the book is the result of a multidisciplinary effort, chapters show coherence and cohesion. An introductory discussion at the beginning of each chapter summarises the state of knowledge and helps the reader to be situated within the context to be developed. Subsequently, a plan of the chapter clarifies the measures and analysis used. All chapters deal with issues of class (ie, education and occupation), ethnicity and neighbourhood inequalities and the manner in which they are related to other variables such as prenatal care, poverty, child's health, etc. Although this sometimes adds complexity to the discussion, it considerably enriches its content. Methodological topics are appropriately presented. For instance, comparison of different definitions of poverty (chapter 3), the use of positive child health indicators such as adequate environment (being breastfed), self-esteem and self-reliance (among non-smoking mother during infancy), chapter 5, and especially measurement of the father's involvement in the child's care and parenting attitudes (chapters 7 and 8) are assets of this publication. The discussions in the text and the concluding chapter are clear and focus on the research questions, always leading to policy recommendations.

This book is an excellent introduction to the dynamics of family structure, ethnicity and social position and its effect on child health and development. Researchers on child health in developing countries will find in it helpful information about methods, definition of variables, presentation and policy implications of results. Concepts of human, social and cultural capital overlap with the concept of CARE used by many researchers in international nutrition. Thus, the book will also be a useful reference for those working in this field. Likewise, this work should be interest to policy makers and government agencies around the world.

Beatriz E Alvarado

Mortality, Biochemistry, Diet and Lifestyle in Rural China. Geographical Study of the characteristics of 69 Counties in mainland China and 16 Areas in Taiwan

China has the largest population of people who have different diets, habits and lifestyles from Western people. What's more, enormous differences also exist within the Chinese as a result of geographical differences. This monograph offers a great mass of first-hand Chinese data involving diets, habits and lifestyles, and the corresponding differences in anthropometry and blood biochemistry. A total of 69 rural counties in the mainland and 16 cities in Taiwan were chosen. These 69 rural counties are distributed throughout mainland China, in terms of mass, which well reasonably represents the whole rural area in mainland China. In Taiwan, these 16 survey cities were chosen, including different types from typical urban to rural.

The monograph comprises four sections, study description and methods, summary statistics for all 639 variables, and detailed displays for 333 of 639 variables, with a foreword and an appendix.

The results mainly contain: (1) death rates and their specific causes at the county level during 1986–8 (all 69 counties, obtained by retrospective sampling survey) and 1973–5 (65 of 69 counties, referred from a previous nationwide study); (2) analysis of blood and urine biochemistry, dietary, lifestyle, anthropometric and socioeconomic characteristics in 1989 (all 69 counties) and 1983 (65 of 69 counties); and (3) retrospective study on mortality in 16 cities in Taiwan in 1986–8 and a similar survey on biochemistry, diet and lifestyle in mainland China (1989).

This Herculean task was finished owing to the contribution of thousands of people, which is also a successful example of epidemiological collaboration across the Taiwan Strait. The original data, and the findings of the geographical associations between the death rates and the multiple characteristics (ie, biochemical, anthropometric, dietary and behavioural factors), provide clues for further aetiological studies in the field of epidemiological research. However, the study is an ecological study in the combined use of sampling technique, retrospective analysis, questionnaire survey and laboratory detection. The 69 rural counties were distributed throughout mainland China, but mainly in the southeast coastal region, and the observational unit comprised all the research sites but not individual sites. The bias, mainly "ecological fallacy", information bias and selection bias, is unavoidable. Hence, not all results with statistical significance in this study have practical significance or will be found to be true in the future. The readers must selectively refer to the observations and findings in consideration of correlative knowledge.

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CORRECTIONS

doi: 10.1136/jech.2006.047167corr1

D F Salerno. Fiorella Belpoggi, MD: per aspera ad astra (J Epidemiol Community Health 2006; 60:1019). In this article Fiorella Belpoggi appears as an MD: she actually holds a PhD.


Since the publication of the above paper, as a result of further analyses on the cohort, the authors have identified an error in the coding of the milk and egg consumption for some families. This occurred because the Boyd Orr childhood dietary data record family consumption in weekly amounts and the database used in recoding dietary intake for this paper was a modified version of the database used for the analysis of diet-cancer associations that was to slightly weaken some and to strengthen others.

The main association highlighted in the article and abstract was that between fruit consumption and cancer incidence. In fully adjusted logistic regression models, odds ratios with increasing quartiles of fruit consumption in the original findings were: 1.0 (reference), 0.66 (0.48 to 0.90), 0.70 (0.51 to 0.97), 0.62 (0.43 to 0.90); p value for linear trend = 0.08. These findings are now 1.0 (reference), 0.67 (0.49 to 0.91), 0.74 (0.54 to 1.01), 0.62 (0.43 to 0.91); p = 0.03. The interpretation of the data therefore remains the same. The other associations altered in a re-analysis using the corrected data are (i) the apparent adverse effect of vitamin E on total cancer incidence/mortality and smoking-related cancer incidence/mortality—these adverse effects are now slightly stronger (p = 0.02 to p = 0.04 respectively) and (ii) the association between higher fruit and reduced cancer risk, which is weaker: the OR for cancer mortality across quartiles of increasing energy intake were 1.0 (reference), 1.54 (1.07 to 2.22), 1.12 (0.74 to 1.70), 1.62 (0.96 to 2.74) (p = 0.23 in fully adjusted models). A previous analyses of the energy intake-cancer incidence in this cohort (Frankel et al. BMJ 1993;316:499–504) is not affected as this used cohort members' energy intake as estimated at the time of the original survey.