

**Rosely Sichieri**

**Maria Helena D'Aquino Benício**

**Sandhi Maria Barreto**

**Maria Fernanda Lima-Costa**

## Editorial

The 1982 Pelotas birth cohort has reached adulthood in full splendor. More than 25 years have gone by since it was set up, with many papers published and much knowledge generated from this pioneering Brazilian study, with important repercussions for public health.

It is the biggest cohort and has the longest follow-up of any such study in developing countries. The Brazilian researchers responsible for conceiving it, César G. Victora and Fernando C. Barros, have now reached maturity of scientific production, with more than 300 published papers indexed in PubMed, and they provide inspirational leadership in training new epidemiologists.

Cohort studies have an ideal design for determining the risk factors associated with various outcomes. Many authors have used data from the Pelotas birth cohort to explore various types of exposure, as readers can see from this supplement of the *Revista de Saúde Pública*.

The studies published in this supplement show the data quality of the cohort, which is the fruit of an enormous effort towards standardization of approaches, and show the importance of cohort studies in Brazil, particularly this type of cohort, which makes it possible to explore the life cycle in relation to the etiology of diseases and behavioral patterns. Thus, the Pelotas birth cohort is a clear example of the importance of setting up cohorts in Brazil, given the singularity of this population, which is clearly undergoing an epidemiological and nutritional transformations. This situation does not allow direct extrapolation of the results obtained from developing countries, particularly with regard to interactions mediated by socioeconomic level.

The articles included in this supplement consider a variety of topics. In one of them, describing the methodology of the cohort, attention is drawn to the investment that was needed for the follow-up of the cohort population to be viable and for the losses (the main limitation on long-duration cohort studies) to be as small as possible. Another point that deserves highlighting was the complementary use of an anthropological approach to reveal the mechanisms involved in some associations that were observed in preliminary epidemiological studies. Thus, in addition to the richness of the large number of papers coming from the data on the Pelotas cohort, the methodological contribution from the cohort is also very relevant.

For the first time in Brazil, a longitudinal epidemiological study has investigated the role of early socioeconomic disadvantages, birth weight and breastfeeding in children's development and future opportunities, represented in this supplement by entry into university and the work market. The findings show the vicious circle of the production of social inequalities in their different dimensions and the need to break it. The long-term impact of precarious living conditions during childhood on health is also shown by the greater mortality among the poorest stratum at all phases of life, from birth to the start of adult life, and in relation to sexual behavior. The analyses also show a strong relationship between motherhood/fatherhood during adolescence and socioeconomic conditions, which are factors to be borne in mind when delineating preventive actions within the field of public health. The studies also confirm other Brazilian findings relating to overweight/obesity that have identified that the subgroups

in which these nutritional problems are most frequent are men at all income levels and women of low socioeconomic level. Sedentarism during leisure time, even among young adults, was also shown to be high, particularly among the women, and the individuals who were currently poor or who had become poor in adulthood were identified as the most sedentary portion of the population.

Over the course of these 25 years, two other cohorts were started in Pelotas, thus adding greater complexity to studying the determinants of childhood health. The 1993 and 2003 cohorts not only expanded the knowledge of the role of factors and determinants of health that had been studied in the 1982 cohort, but also made it possible to evaluate trends over time in the indicators of the children and adolescents' health. Through this, such changes have been correlated with the evolution of the local historical, cultural and socioeconomic contexts and those of the whole country. No other studies that are as robust and wide-ranging as the Pelotas birth cohorts have come to notice in developing countries. Together, they represent an opportunity to study the health-disease phenomenon and its socioeconomic and cultural determinants, during childhood, adolescence and early adulthood, as complex, interactive and dynamic phenomena. They also make it possible to identify distal, medial and proximal determinants not only of diseases but also of health-related behavioral patterns, such as early sexual initiation, which is covered in one of the articles of this supplement.

One of the challenging questions within the epidemiology of the life cycle relates to revealing the mechanisms and nature of relationships that connect exposures such as poverty, gestational conditions, infection, malnutrition and early care during childhood, with subsequent metabolic abnormalities. In Brazil, this vast and precious field of study can count on the singular contribution of the analyses produced from the Pelotas birth cohort, with social realities differing from are shown in the developed countries from which most of the hypotheses studied today originated.

There is no doubt that the present supplement brings original contributions for reflection and debate in relation to health and its early and contemporary determinants. Brazilian epidemiology today would certainly not be so vital and important internationally, had it not been for the vast and socially relevant contribution from the Pelotas cohorts. May the Pelotas cohorts have a long life!