

“Monday's Child is Fair of Face”. An analysis of the day of birth as an indirect way to assess the abuse of elective delivery in Italy.

Extended Abstract

BACKGROUND

The concentration of births on working days compared to a relative lack of events at weekends or during public holidays have been interpreted in literature as evidence of an excessive appeal to elective delivery. The World Health Organization has repeatedly expressed concerns about the abuse of this practice.

We investigate the daily distribution of births in Italy in the period 1999-2016 to answer the following question: In addition to the weekend effects found in other countries, do popular beliefs about “unlucky” days also influence the calendar of births?

Introduction

In the decades preceding World War II, a commission of the International Institute of Statistics, revealed that the birthdate of newborns was artificially modified in various countries. The phenomenon was ascertained in 16 out of 29 examined countries, and it assumed considerable quantitative consistency in five countries: Bulgaria, Japan, Italy, Poland and Serbia (Gini, D’Addario, 1930; Gini, 1934). In particular, the falsifications were relative to the birthdates of the babies which occurred in the last days of a year, which were systematically registered as having happened in the first days of the following one.

The Italian scholars of the epoch reconstructed the phenomenon as due to the deliberate intention of parents of delaying the call for the one-year compulsory military service for male newborns and to the desire to make female newborns appear younger (see Breschi et al., 2018). It is useful to recall that, with exception of Lombardy, Piedmont and Liguria, Italy was an agriculturally-based economy. Thus, the compulsory military service (which lasted 2 years) took away a free workforce from peasant families.

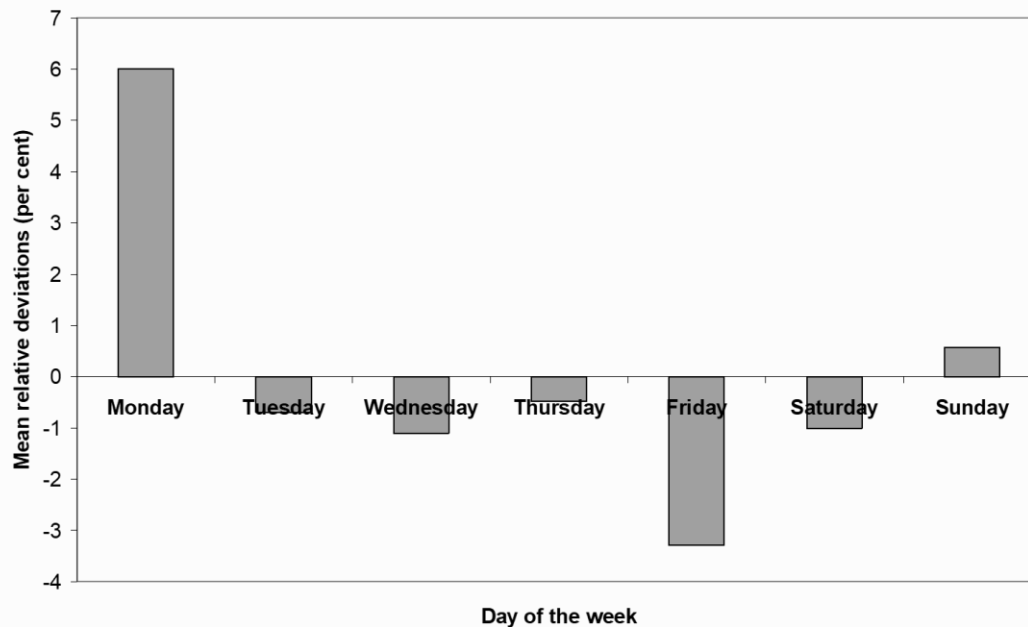
In addition to the artificial postponement of the new year, the empirical investigations (Livi 1929, Maroi 1954, Gini, Naddedo, Passeggeri 1954) carried out on the birthdates of Italians highlighted other singular aspects of the daily distribution of livebirths. In particular, reluctance to report the correct date for those born on certain days of the week (fig. 1), and particularly on Friday, a day considered ominous in popular tradition (see also Breschi and Ruiu, 2016) was evident; conversely, Monday was the most frequent day of birth, and this was likely due to the fact that, especially in rural and mountain communities, the registry office was closed at the weekend (Gini, Naddeo and Passeggeri, 1954). Another huge reduction in the number of births was evident on the 17th day of each month, and indeed the number 17 is considered unlucky in Italy (see Breschi and Ruiu, 2016), a similar effect was exerted by All Souls' Day (which falls on the 2 November). Furthermore, a huge depression in the number of births was registered on both the first day of the month and the last day of each month.

Despite these interesting peculiarities, the topic of the daily distribution of births has been completely neglected by Italian scholars in the second part of the twentieth century. Analyses carried out in other countries have shown, for instance, that Sunday born-babies have almost disappeared (Lerchl and Reinhard 2008 for Switzerland; Lerchl, 2005 for Germany; Morikawa et al., 2016 for Japan) and in general births occurring on public holidays are substantially lower than those on working days.

Unlike in the past, where for the sake of economic, cultural and religious reasons the date of birth was artificially modified, its occurrence nowadays is thanks to the technical possibility of anticipating and delaying delivery. In other words, the health system can intervene directly in the natural cycle of birth, thus creating an artificial calendar of births. This alteration has increased in recent years and to a great extent is associated with elective birth obtained by induction of labour or by elective caesarean section. In Italy, the use of this practice has been defined as “excessive” by the same Ministry of Health (2016, p.6): 35% of the births that occurred in 2014 were, in fact, conducted by caesarean section. This is almost three times higher than the figure considered ideal by the World Health Organization (WHO, 2015). Furthermore, if we consider that in 2014 labour was induced in more

than 15% of cases, we can conclude that, for half of the births, the time of delivery was more or less “driven”.

Fig. 1. Percentage difference of daily number of livebirths from the weekly average. Italy, 1951



In order to evaluate whether or not the calendar of births is still modified to avoid inauspicious days (such as Friday or the 17th of each month) or if a depressing effect on the birth rate exists in Italy exerted by civil and religious feasts, we requested from ISTAT (the Italian Institute of Statistics) an ad hoc count of the daily births for the period 1999-2016. In compliance with the stringent privacy protection regulations (data is not provided when it involves less than ten events), it was possible to obtain the count of per-day births only at the level of the five macro-geographical regions (North West, North East, Centre, South and Islands). These data are however enough to highlight the existence of large differences in the practice of “adjusting the calendar” between the Southern area (South and Islands) and the rest of the country.

We believe that these findings are indicative of a systematic abuse in the practice of elective delivery. In addition to the concerns regarding the consequences on the health of both mothers and babies expressed by the WHO, it must be remarked that this artificialization of the calendar of births seems

to respond, in the best case scenario, to irrational beliefs held by parents, in the worst, to the same irrational beliefs of practitioners who do not want to operate on “unlucky” days.

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