Twenty five years of the one child family policy in China

F Festini, M de Martino

Problems and future prospects

Praised for saving China from a demographic catastrophe or blamed as a violation of a basic human right, the one child family policy (OCFP) is reaching its 25th year and a recent law has confirmed this demographic strategy for the future. The government decision to limit the number of children to one per couple, taken in 1979, was a response to the threat that the country’s massive demographic growth cast on the future of economic development and of living conditions of the Chinese people. The goal set was to limit the total population to about 1.2 billion for the year 2000 and to significantly reduce the natural increase rate.

The OCFP has been implemented—mainly through economic incentives and aids for families with a single child, and taxes, fines, and various social disadvantages for the families who do not abide by the rule, together with a strong social pressure on women not to have a second pregnancy. The acceptance of the OCFP on the part of the people has been sometimes reported as difficult as the rule seems to conflict with the deep rooted Confucian tradition that emphasises the importance of numerous offspring, in order to pass on the responsibility of supporting the old people and of perpetuating traditions. Coercion to oblige women to sterilisation, abortion, or insertion of IUDs has also been reported.

A quarter century after its introduction the OCFP has achieved most of its objectives. The birth of 250–300 million Chinese has been prevented and the rate of natural increase dropped from 11.6 per thousand in 1979 to 8 per thousand in 2001. The population of China was 1273 million in the 2000 census and the total fertility rate fell from 2.5 in 1979 to 1.8 in 2001 well below the replacement rate of 2.1 children per woman. The falling fertility has opened a “demographic window”, which has kept the Chinese population within dimensions that have enabled the availability of sufficient resources and the maintenance of a satisfactory standard of living for everybody, and has boosted China’s economic growth. Moreover, the attention on birth control brought the diffusion of a better health service for women, reduced the morbidity and mortality linked to pregnancy, and helped the women to escape from their traditionally subordinate role, giving them more opportunities of education, work, and careers.

As a result of the OCFP, the average size of the family fell from 4.54 people in 1980 to 3.36 people in 2000 and a growing number of Chinese are only children: in Beijing 62% of the families have only one child and the national average of children in each family is 0.74.

In past years concern was expressed about what would have become of this generation of only children, product of the OCFP. While on the one hand it has been emphasised that only children have benefited from the greater resources devoted to them (especially girls, freed from the competition with traditionally favoured sons), many also hypothesised various potential psychological and social problems for this cohort of only children: the children belonging to the generation of “Xiao huangdi” (Little Emperors) were forecast to be spoilt, at the centre of attention, hyper-protected, or insecure because burdened with excessive expectations by their parents, unwilling to measure themselves against their peers and to take on life’s responsibilities. The fear was that their psycho-social maladjustment would have had far reaching consequences for all Chinese society. These concerns have turned out to be groundless, as a recent study by Hesketh et al carried out on Chinese adolescents, using several health, psychological, and social indicators, has shown that the Chinese only children do not suffer negative consequences in comparison with peers who have siblings; in contrast, being an only child seems to give them some advantages with regard to their capacities for social interaction.

Yet, there are two outcomes of the Chinese demographic policy that are not entirely predictable but undoubtedly far reaching.

The first of these outcomes is the change of the sex ratio at birth (SRB)—that is, the proportion of male live births to female live births. The normal SRB ranges between 1.03 and 1.07. In 1980, the SRB in China was about 1.07; in the following two decades it progressively increased to arrive, according to the 2000 census, to the alarming proportion of 117 newborn boys for every 100 newborn girls. This ratio is higher in rural districts than in urban areas and in some areas, for example Guangdong, the SRB reached 1.43. There is little doubt that this abnormal SRB is a direct effect of the OCFP. In China there is a deep rooted traditional preference for the son, labour force who ensures a serene old age for his parents and carries on the family line; it is well known that a cultural preference for sons, combined with a fast reduction of the fertility rate, gives rise to an increase of SRB.

This is also suggested by experiences in other Asian countries, where however the drop in fertility has different causes. In China, the rapid drop in fertility was a programmed and desired effect of OCFP, the tendency goal of which was, indeed, a fertility rate of 1. The role of OCFP in determining a changed sex ratio is confirmed by a recent study that showed that the SRB of an entire cohort of babies born in Italy to Chinese recent immigrants over a decade is normal. In general, in China couples are encouraged by tradition and by social environment to act so that the only allowed child will be male. This is achieved mainly through selective abortion of female fetuses, made possible by prenatal identification of the sex through ultrasound scan, and by the increasing availability of this diagnostic procedure in China. This practice has become widespread and has been specifically forbidden, although it is easy to get round the prohibition. Underreporting of births of girls is not likely to have a relevant role in the changed SRB but a relevant female early mortality ratio, more than twice as high as male mortality, has been recently reported in a rural area, which is likely to make the gender imbalance even worse. Whatever the causes may be, the surplus of boys is particularly striking, and in the next years in the areas in which the SRB are now highest, up to one quarter of men will not be able to find women to marry and to create a family. It has been forecast that, from the first decade of the century, approximately 1 million men each year will be unable to find a female partner. Anecdotal evidence of the shortage of women to marry is emerging in some rural areas of China,
from which there are reports of kidnap- 
pings and trade in women, of frequent 
marriages between blood relatives, and 
even of rural villages with no girls and 
single women at all.17 20 There is no 
historical precedent for a society with 
such a high surplus of men: in the past, 
especially after wars, the opposite phe-
nomenon of a surplus of women often 
emerged. The potential consequences 
of this dramatic gender imbalance is still 
an open question: by a demographic 
point of view it can be hypothesised that 
the marrying age of women will fall 
progressively to adolescence, that the 
ethnic minorities—to which the OCFP 
was not applied and therefore have 
lower SRB2—will be absorbed by the 
Han ethnic majority, and, finally, that 
there will be a stimulus towards male 
health of Chinese surplus men, also 
future internal security. 25 The impact of 
will have a higher risk to be prone to 
socially disruptive behaviours bringing 
to an increase of violence and crime, 
which raises concerns about China’s 
future internal security.25 The impact of 
the forced bachelorhood on the mental 
health of Chinese surplus men, also 
raises questions that will have to be 
faced in the coming years.

The changed SRB, anyway, is not just 
a male issue: it represents first of all a 
form of discrimination against the 
female gender. The Chinese government 
has intervened for a couple of years now 
to cope with this problem, with a “Care 
for girls” campaign aimed to tackle the 
sex disproportion through the elimina-
tion of the cultural discrimination 
against girls in rural and underdeve-
loped areas.14 Future years will show us 
if this measure will be effective in 
allleviating China’s gender imbalance.

The second problematic consequence of 
the OCFP is the aging of the population. 
In 2000 the over 60s accounted for 
over 10% of the population, and China 
consequently became an “aging soci-
ety”. The percentage of the population 
of over 65 years of age, which in 1982 
was 4.9% rose to 7% by 2000, while the 
old age dependency ratio (the ratio of 
over 65 to the working age population) 
orose from 7.98 to 10.82 9 Forecasts for the 
next 30 years, around 2025 to 2050 the over 65% 
will account for 15% of the population 
and will continue to increase, reaching 
22% in the 10 years following. The old 
age dependency ratio will rise to about 
25 in 2030 and to 35–40 in 2050.18 In 
2050 the over 60s will account for a 
quarter of the population.30 This scenario 
depends in large part on the 
Chinese demographic policies. The 
increase in the proportion of older peo-
ple and in the old age dependency ratio 
appears indeed to be a direct conse-
quency not only of the physiological 
increase in longevity, but also of the 
comparatively short time in which a 
significant reduction of birth rate and of 
fertility rate has taken place.31 32 This has 
determined, in the span of just one 
generation, an alarming disparity of 
numbers between one generation and 
the next.

Aging of the population is a well 
known phenomenon in industrialised 
countries, which tackle it with difficulty. 
China, in contrast, which is still largely a 
developing country, seems to be unpre-
pared to this phenomenon as a solid 
pension system has not been developed yet. 
Currently, only 17% of older Chinese have 
some form of pension and more than 70% 
rely only on the support of their 
children.32 According to Chinese tradition 
it is indeed the duty of children to sup-
port their parents and grandparents in 
old age. Nowadays therefore, the problem 
seems to be the disproportion of numbers 
between the generation that needs to be 
supported and the one that is responsible 
for their support: more and more couples 
will be composed by two only children 
spouses and within about 30 years, they 
will account for 70% of Chinese couples.31 
As an example, this means that a couple 
of single children in their working age 
might have to support one child and four 
parents, as well as up to eight grand-
parents, without the help of any sibling, 
according to the “1-2-4-plus” formula 
that scares the Chinese demographers. 
This potentially disproportionate burden 
is likely to cause many problems to 
Chinese families, which may appear even 
more serious if we consider that the length-
ening of life expectancy—in 2050 the 
over 85s will be about 166 million, over a 
tenth of the population26—will increase the 
prevalence of cardiovascular disease, 
cancers, chronic degenerative illness, and 
permanent invalidity among the elderly 
population, and that, with the introduc-
tion of the market economy, the access to 
the health services in China is becoming 
more difficult than in the past.

The demographic bonus that China is 
receiving thanks to the decrease of 
fertility is a favourable circumstance 
to cope successfully with the problem 
of population aging. Yet, it is necessary 
that resources made available by the 
decrease of the demographic pressure 
are effectively invested in health and 
social security and that proper attention 
is given to the importance of creating 
without delay an adequate pension 
system or other forms of support of the 
elderly population.

J Epidemiol Community Health 2004;58:358–360.
doi: 10.1136/jech.2003.017335

Authors’ affiliations
F Festini, M de Martino, Cystic Fibrosis Centre of Tuscany, Meyer Paediatric Hospital, 
University of Florence, Italy

Correspondence to: F Festini, Cystic Fibrosis Centre of Tuscany, Meyer Paediatric Hospital, 
University of Florence, Viale L Giordano 13, Florence 50132, Italy; filippo.festini@iol.it

Funding: none.

Conflicts of interest: none declared.

References
1 Anonymous. No relaxation of Chinese “one 
couple, one child” policy. People’s Daily, Beijing 
2 Hoo Y. China’s 1.2 billion target for the year 
2000: “within” or “beyond”? Australian Journal of 
3 Hesketh T, Zhu WX. The one child family policy: 
the good, the bad, and the ugly. BMJ 
4 Lin F. Evolution of China’s family planning policy 
and fertility transition. China Popul Today 
1999;15:3.
5 Kone P, Choi CY. China’s one child family policy. 
6 Berman J. China attempts to soften its one-child 
7 China Population Information and Research Center. 
Basic population data of China 1949–2000 and major figures of the 2000 population 
8 UNICEF. Demographic indicators. http://www 
.unicef.org/nfobycountry/ 
china_statistics.html (accessed 1 Sep 2003).
9 Marshall A, ed. The state of world population 
2002 New York, United Nations Population 
10 Zhu WX. The one child family policy. Arch Dis 
11 China Population Information and Research 
Center. China being listed among countries with 
12 Chen B. A little emperor. One-child family. 
13 Jing Q, Wen C, Over R. Single child family in 
14 Hesketh T, Qu JD, Tomkins A. Health effects of 
family size: cross sectional survey in Chinese 
15 Davis DL, Gottlieb MB, Stampnitzky JR. Reduced 
ratio of male to female births in several industrial 
16 Gu B, Roy K. Sex ratio at birth in China, with 
reference to other areas in East Asia: what we know. Asia Pac Popul J 
1995;10:17–42.
17 Pfaffler T. Sex selection in China sees 117 boys 
born for every 100 girls. BMU 2002;324:1233.
18 Anonymous. Gender imbalance prompts more 
care for girls in China. People’s Daily, Beijing 
20 Li N, Feldman MW, L. U.S. Cultural transmission in a 
demographic study of sex ratio at birth in China’s 

www.jech.com
THE JECH GALLERY

Patxi Catalá, founder of the Andalusian School of Public Health*

do: 10.1136/jech.2004.020982

On 9 November 2003, at 54 years, Dr Francisco Javier Catalá died, known as Patxi for the many friends conquered by his seductive looks and his professional activity. His death came prematurely after a long illness, which, much to his regret, transformed him into another of the many episodes in which his lack of conformism shined. A battle that witnessed to his limitless love for life until the very last week and that didn’t prevent him enjoying it until the sudden outcome, when the last breath was already escaping from his body.

Patxi was born in Navarre, lived his youth in Madrid, and reached maturity in Andalusia. He made compatible his study of medicine at the Universidad Complutense of Madrid with a political activity that took him to the Carabanchel prison, an experience which he didn’t flaunt, although he kept the affectionate memory of people he met there and the much time that he devoted to literature, one of his favourite interests.

His social consciousness determined his early vocation for the public health, from his student days, and that later took him to the General Directorate of Public Health. After the restoration of the Ministry of Health, he became one of the most outstanding representatives of the generation of epidemiologists and public health practitioners that stood out during the period of transition to democracy in Spain. Later he carried out the responsibility of Deputy Director of Epidemiology in the Ministry of Health until the mid-eighties, when he was appointed for leading the project of creating the Andalusian School of Public Health (EASP, Escuela Andaluza de Salud Pública).

The EASP, inaugurated in 1985, was the first of the schools of public health created by the new Autonomous Communities (Regions) of Spain, and the one that has best survived the difficulties of a health system disproportionately focused on the care sector. Patxi had been the soul of the EASP, and had continued serving it until the last moment. He was able to build the EASP from scratch into a reference for Andalusian, Spanish, and international public health.

A man of action, Patxi knew to counteract the sterility of rhetoric and doctrinal controversies, with the research and educational activities that the health system needed most. In this way public health could assume front line responsibility and leadership over the whole health system, with an effective contribution to the improvement of the population’s health and the rationalisation of the health organisations. A contribution that is already confirmed by a generation of public health practitioners and health services managers from all over the world. Not in vain international cooperation is one of the main areas of the EASP.

Dr Catalá was a founding member of the Spanish Society of Epidemiology (SEE) and of the Spanish Society of Public Health and Health Administration (SESPAS); his legacy has left a deep impression among the epidemiologists and the Spanish public health community that his physical disappearance won’t be able to erase.

*Published in Spanish by the newspaper El País on 11 November 2003. Translated by permission.

Correspondence to: Professor A Segura, Barcelona University, CAP BArcelona/Passeig Maritim s/n 08003 Barcelona, Spain; asegura@bell.ub.es