

# Truth and death in Iraq under sanctions

Sanctions applied against Saddam Hussein's Iraq "caused 500 000 children to die". The figure, and the causation, is quoted by politicians and pressure groups. Is it justified, or were the statistics manipulated by one of the nastiest regimes on earth? **Michael Spagat** looks at the evidence.

## Introduction

In 1996 US Secretary of State Madeleine Albright had a rather astonishing exchange with CBS newscaster Lesley Stahl on the subject of economic sanctions against Iraq<sup>1</sup>:

Stahl: We have heard that a half million children have died. I mean, that's more children than died in Hiroshima. And, you know, is the price worth it?

Albright: I think this is a very hard choice, but the price – we think the price is worth it.

Albright later regretted that she did not challenge the premise of Stahl's question: that economic sanctions against Iraq were killing hundreds of thousands of Iraqi children. Instead, Albright implied that it was worth sacrificing the lives of vast numbers of innocent children so that the goals being pursued by the international community in Iraq might be achieved. This is a difficult case to make, to say the very least. Stahl won an Emmy for her interview.

In January 2010, former British Prime Minister Tony Blair testified in front of the official British panel investigating his Iraq policy (the Chilcot Inquiry) and, in effect, turned the tables on Lesley Stahl. Blair insisted that the invasion of Iraq and its aftermath had been beneficial to the Iraqi people. The main argument Blair offered to justify the war was<sup>2</sup>:

In 2000 and 2001 and 2002 [i.e. during sanctions] they had a child mortality rate of 130 per 1,000 children under the age of five, worse than the Congo ... That figure today is not 130, it is 40. That equates to about 50,000 young people, children [alive today who would have died if Saddam Hussein had remained in power], ... that's the result that getting rid of Saddam makes.

The Chilcot committee, like Madeleine Albright, did not challenge Blair's contention that child mortality rates were extremely high in Iraq under sanctions. Thus, Tony Blair claimed credit for saving the lives of tens of thousands of Iraqi children much on the same basis that Madeleine Albright had implicitly accepted responsibility for the deaths of hundreds of thousands of Iraqi children fifteen years earlier.

The idea that economic sanctions killed vast numbers of Iraqi children had travelled full circle. A claim originally used to advocate lifting economic sanctions against Iraq had evolved into an after-the-event justification for the Second Gulf War. The war had enabled sanctions to be ended, and thus saved the lives of children. Of course, the primary pro-war argument before the invasion had been the false claim that Iraq had weapons of mass destruction. Below I argue that the contention that sanctions had caused the deaths of more than half a million children is also very likely to be wrong. I am able to do this simply by drawing on published literature, notably the important paper of Tim Dyson<sup>3</sup> that is known to some specialists but that

has been overlooked by many policymakers and academics.

### Concepts and methods

There are various commonly used measures of death rates of children, but here I will focus on just one. The *child mortality rate* for a given year is the number of deaths of children under the age of five per 1000 live births in that year.

Any estimate of child deaths in Iraq *due to sanctions* must be rather speculative, because it will have to be deeply rooted in an unknowable counterfactual: how many children would have died in the absence of sanctions? This is quite a complicated question to address since it is exceedingly difficult to isolate the impact of sanctions alone. Iraq invaded Kuwait on August 2nd, 1990, and sanctions were imposed four days later. The First Gulf War was launched on January 17th, 1991, and lasted for six weeks, but sanctions were maintained

**The contention that sanctions caused half a million child deaths is very likely to be wrong**

and extended, though eventually with some weakening under the Oil-for-Food program, until after the second invasion of Iraq in 2003. At the end of the first war there were uprisings against the Iraqi regime in the north and south that were brutally suppressed and that led to mass migrations; these would have affected child mortality rates in their own right. There were also humanitarian exemptions to the sanctions, such as the Oil-for-Food program, designed to ameliorate their impact, particularly on children, but the Iraqi government did not always cooperate with these efforts. In short, we cannot observe anything resembling a controlled experiment that isolates the pure impact of economic sanctions on child deaths.

Some analysts were more mindful than others about the complex relationships between cause and effect in this multifaceted environment. Zaidi and Fawzi<sup>4</sup> boil down myriad potential causal effects to a single simplistic connection:

The moral, financial, and political standing of an international community intent on maintaining economic sanc-

tions is challenged by the estimate that since August, 1990, 567,000 children in Iraq have died as a consequence.

Ali, Blacker and Jones<sup>5</sup>, on the other hand, are much more cautious about causality:

According to these calculations, the estimated number of excess deaths resulting from the Gulf War and its aftermath up to 1998 was between 400,000 (assumption a) and 500,000 (assumption b).

Their assumption a is that without the “Gulf War and its aftermath” (including sanctions) the child mortality rate in the 1990s would have continued at the rate reached during 1986–90. Assumption b is that the mortality rate would have declined during the 1990s at its rate of decline during 1974–90. The Ali, Blacker and Jones formulation recognises the diverse causes that might underlie differences in child mortality rates.

There are various methods for measuring child mortality rates. The preferred approach is to base estimates on birth and death registrations. Unfortunately, Iraq during the 1990s did not have sufficiently complete and reliable registration data for this method to be applied with much confidence. Consequently, the main measurements of child mortality rates under sanctions come from sample surveys. It is, therefore, important to understand the basics of this method. One draws a random sample of households; normally this is a cluster sample to economize on resources. All women living in the selected households who are between the ages of 15 and 49 and who have given birth within the time period covered by the survey are then interviewed. Best practice is to take full birth histories for each mother, including dates

of birth and death (when applicable) for each child born. This information is then used to estimate age- and time-specific mortality rates. Sample-design information is used to place confidence intervals around these estimates.

### The first survey: the International (Harvard) Study Team

The International Study Team (IST), also known as Harvard Study Team, conducted in late August and early September 1991 the first large, formal survey after the First Gulf War<sup>6</sup>. It covered 271 clusters of 25–30 households<sup>7</sup>. This international group was allowed to operate independently of the Iraqi government and to use non-Iraqi interviewers who were mostly Jordanian university students. (This, as we shall see, was important.) Interviewers took full birth histories from all women aged 15–49 in the selected households who reported births after January 1st, 1985. The main analysis compares child mortality rates before January 1st, 1991 with those between January 1st and September 1991. Thus, the second period covers not only the period of post-war sanctions but also the war itself as well as related uprisings that were, in turn, connected to flows of displaced people into inhospitable territory.

The IST provided some evidence that the national child mortality rate did indeed rise sharply in 1991. The IST measured child mortality rates of 43.2 per 1000 live births in the five years preceding the First Gulf War and 128.5 during and just after the war. This increase of 85.3 deaths per 1000 per year translates into 46 900 estimated excess deaths of children under five, a shockingly large number for such a short period of time.

The IST survey was an important contribution to our understanding of the First Gulf War and its immediate aftermath. However, because it was conducted in August and September 1991 it is of limited use for understanding child mortality patterns in Iraq throughout the 1990s. The study is of even less use for understanding the impact of sanctions specifically, since much of the increase in child mortality during this period probably resulted from the war itself, the two uprisings and the migration that followed.

### A new survey in Baghdad: 500 000 deaths claimed – and withdrawn

In 1995 the United Nations Food and Agriculture Organisation (FAO), in cooperation with Iraq’s Ministry of Agriculture and Nutrition Research Institute (NRI), organised a child



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nutrition and mortality survey of Baghdad<sup>4</sup>. The Iraqi ministry provided the interviewers for this survey, in contrast to the more independent IST survey that had supplied its own interviewers. The survey reported a meteoric leap in child mortality rates from 40.6 per 1000 live births for children born between August 1985 and July 1990 to 198.2 per 1000 for children born between August 1990 and August 1995. The IST estimated the child mortality rate in Baghdad to be 57.3 for January–August 1991 so the two surveys combined suggested that the child mortality rate had nearly quadrupled in Baghdad during the preceding four years under sanctions.

Zaidi and Fawzi made two risky extrapolations to convert their child mortality rate estimates into an estimate of 567 000 excess child deaths due to sanctions<sup>4</sup>. (This half-million-plus figure was of course the number that Leslie Stahl quoted to Madeleine Allbright.) First, they projected their Baghdad estimate onto all of Iraq. Second, they blamed the whole increase in child mortality rates on economic sanctions. Despite the weaknesses of this excess-death calculation, there can be no doubt that if the child mortality rates measured in Baghdad by the FAO–NRI survey were anywhere close to the truth then Baghdad had suffered extraordinary devastation since the end of the war.

In 1996 the principal researcher for the FAO–NRI survey conducted a follow-up survey in Baghdad that included repeat interviews for 20 of the 64 clusters covered in the original survey. This time each interview team had an international supervisor and a Jordanian interviewer in addition to three enumerators supplied by the Iraqi government. The 1996 results came out sharply discrepant from the 1995 ones. The international teams in 1996 were unable to confirm fully 65 deaths that had been reported in 1995 while managing to confirm only nine deaths. A further nine deaths were reported in 1996 that had not been reported in 1995.

The principal researcher, Sarah Zaidi, returned yet again to Baghdad in 1997 to interview for a third time 26 women who had apparently reported deaths in 1995 that they had subsequently disavowed in 1996. In 1997 nine of the 26 switched back from their 1996 story to their 1995 one, while 13 stuck with their 1996 report rather than their 1995 one. This third round of interviews also uncovered a further four miscarriages and stillbirths that had been misclassified as deaths in 1995.

The 1996 survey yielded a child mortality rate estimate of 38 per 1000 per year, less than 20% of the 198.2 reported in 1995. Because of

these serious replication problems Zaidi<sup>8</sup> partially retracts the results of Zaidi and Fawzi<sup>4</sup>, suggesting in the end that the true child mortality rate must lie somewhere between the extremes measured in 1995 and 1996.

I asked Sarah Zaidi to explain the discrepancies between her two Baghdad surveys and she responded with impressive courage and forthrightness:

My guess is that “some” Iraqi surveyors recorded deaths when they did not take place or the child had died outside the time frame but they specified the opposite<sup>9</sup>.

This episode is, perhaps, not so surprising in retrospect. Iraq’s citizens feared the Iraqi regime which, in turn, clearly wanted its citizens to tell surveyors that they had suffered many child deaths. Respondents to surveys in Iraq might easily have suspected that their confidentiality could be breached to the regime, in which case they could have been punished for not reporting enough child deaths. The Iraqi government might also have instructed the interviewers it supplied in 1995 to report extra child deaths. Even in the absence of explicit instructions, some interviewers could have feared punishment if their survey work did not generate high enough child death rates. Fear aside, both interviewers and respondents might have shared a goal of getting sanctions lifted and may have believed that inflating child death tolls could help them to achieve this goal. In short, Iraqis in various positions relative to the survey all had incentives to inflate Iraq’s child mortality rates.

Sarah Zaidi seems to be highly unusual in her determination to seek out the truth. She was clearly concerned to document and alleviate the suffering of the Iraqi people. In this cause she travelled to Iraq in 1993, 1995, 1996, and in 1997. She witnessed much hardship on these trips and had reason to believe that the high excess death estimate that emerged from her 1995 survey might help to reduce the pain. Yet, she actively scrutinized her figures and when they did not hold up she reported this fact openly rather than letting unsupported figures stand in the interest of some greater good than the truth. She deserves great credit.

### The Iraq Child and Maternal Mortality Survey: the claim again

After the collapse of the FAO–NRI excess mortality estimate, another survey became the main basis for the widespread perception of extremely high child mortality rates in Iraq. The Iraq Child and Maternal Mortality Survey (ICMMS)<sup>10</sup> consists of two closely related surveys, one done in the part of the country controlled by Saddam Hussein, the “South/Centre”, and the other done in the Kurdish zone which was outside the control of the central government. Iraqi and Kurdish authorities, respectively, provided the interviewers and supervisors for the two surveys. In February and March 1999 the teams interviewed 47 140 mothers aged 15–49 who were drawn from clusters of 15 households.

Figure 1 shows ICMMS-measured annual time series for child mortality rates in the South/Centre and the Kurdish zone<sup>5</sup>. These

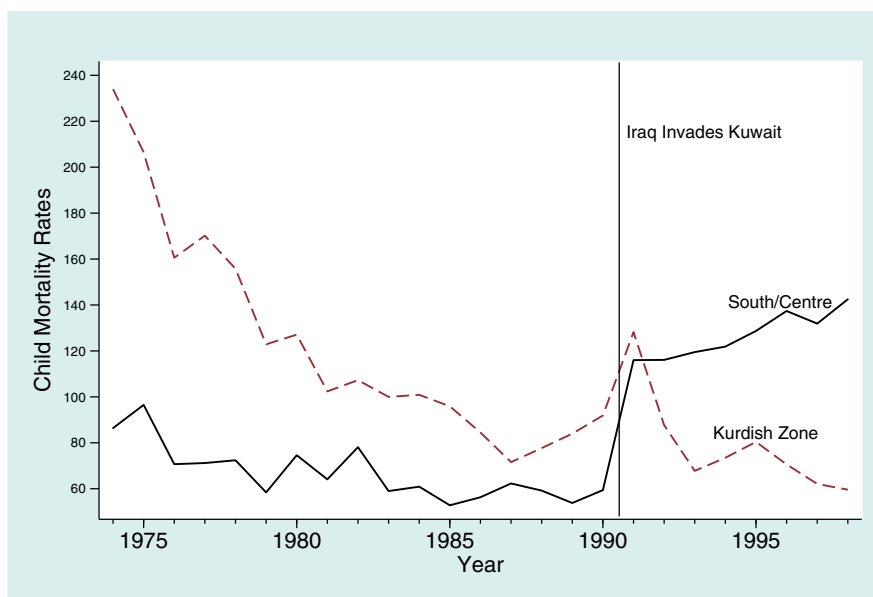


Figure 1. Iraq Child and Maternal Mortality Survey: comparing the South/Centre and the Kurdish zone

provide the basis for the excess death calculations of either 400 000 or 500 000 under different assumptions for counterfactual baseline rates in the 1990s that we noted at the start.

According to Figure 1, the Kurdish zone had much higher mortality rates than the South/Centre for many years before the First Gulf War. In 1991 the rates in both zones rise sharply to 116.0 in the South/Centre and 128.2 in the North. Shortly after the suppression of the Kurdish uprising the child mortality rates in the North begin a sharp descent, albeit with a hump in 1994–95. The South/Centre displays a completely different pattern according to the ICMMS, with child mortality rates deteriorating strongly even from 1992 onwards. In fact, the ICMMS shows a historic reversal between the two zones, with South/Centre child mortality rates exceeding Kurdish ones for the first time in 1992.

This post-1991 divergence between the Kurdish and South/Central zones is puzzling. International sanctions applied to both zones. Thus, the Kurdish pattern undermines claims that sanctions were a major driver of the child mortality patterns in the South/Centre. The same sanctions brought no such rise to the Kurds. In fact, pre-war conditions in the Kurdish zone were much worse than in the South/Centre, as exemplified by its far worse pre-war child mortality rates. Saddam Hussein's regime for many years had oppressed the Kurds and neglected their infrastructure. In the 1990s the Kurdish zone suffered from several disadvantages, including "lack of access to the rations from Baghdad, the collapse of administrative structures with the pull-out of Baghdad's administration, large scale displacement of the population, and isolation from wary neighboring states"<sup>11</sup>. To be sure, the Kurdish zone did have some post-war advantages such as relatively abundant agricultural land and, ultimately, permeable borders with neighbours to the north. Nevertheless, it is hard to believe that these factors could completely overwhelm the major disadvantages of the Kurdish Zone in which perhaps 20% of the population was internally displaced compared to about 0.3% in the South/Centre.

Note, further, that child mortality rates in the South/Centre rose to new highs between 1996 and 1998, according to the ICMMS, even after the introduction of the Oil-for-Food program in 1996, which was the most extensive effort to provide humanitarian support to Iraq during the sanctions period. This perverse response to the weakening of sanctions casts further doubt on the contention that sanctions

were the primary cause of high child mortality in the South/Centre.

There are two obvious candidate explanations for the divergence of the Kurdish zone and the rising child mortality rates in the South/Centre. First, the Kurdish zone was free of Saddam's control. In the South/Centre, though, the reaction of Saddam Hussein's regime to the sanctions must be part of a full explanation for child mortality patterns in this zone. A central feature of Iraqi foreign policy during the 1990s was to convince the international community that sanctions specifically were causing great hardship for the

### Saddam's government clearly wanted high child mortality estimates to use in its battle against sanctions

Iraqi people. A logical next step for this policy would be to exacerbate this suffering surreptitiously while blaming observed suffering on sanctions. An interview with an Iraqi doctor after Saddam Hussein had been removed from power offers a graphic illustration of how such a policy might have worked<sup>12</sup>:

I [the journalist] inquired whether there had been other manipulations of the system to make things seem worse than they had really been.

"Of course," he replied, as if it were the most obvious thing in the world. "It happened all the time. For example, we would get a shipment from the Ministry of Health of vaccines provided by the World Health Organization. But then we would be instructed not to use them until they had reached or even exceeded their sell-by date. Then the television cameras would come and we would be told to lie and tell the public how the U.N. made ordinary Iraqis suffer. You have to understand: this was a system where everyone knew what was expected of them. Most of the time, we didn't even have to be told what to do."

Of course, the above manipulation *would* actually make things worse by denying children vaccinations or vaccinating children with expired medicine. However, it would be misleading to portray deaths resulting from these policies as simple consequences of sanctions alone.

A second potential explanation for the strange patterns displayed by the South/Centre in the ICMMS is that they were not real but, rather, results of manipulations by the Iraqi government. The Iraqi government, which provided the interviewers and supervisors in the South/Central zone, clearly wanted high child mortality estimates to use in its battle against economic sanctions and apparently did manipulate the FAO–NRI survey. The Kurdish authorities were generally happy with the autonomy and humanitarian aid they were receiving despite sanctions from the international community, and did not have an interest in demonstrating that this system was failing. The same Iraqi doctor just quoted also illustrates this manipulation scenario<sup>12</sup>:

One doctor I [the journalist] spoke to who spent several years in a hospital in the provincial city of Baquba, about 25 miles north of Baghdad, told me that the hospital staff had instructions, whenever a child died, to keep the corpse in the morgue rather than burying it immediately as mandated by Islamic custom. "When a sufficient number of bodies accumulated," he explained, "the authorities would stage a mass funeral, railing against the sanctions, even though as often as not there was no connection between a particular child's death and the sanctions."

I asked the doctor how a child's parents could possibly have agreed to such a deception.

"This was not a country in which one disagreed," he replied. "And in any case they got 50 kilos of rice and 50 kilos of flour."

### Three recent surveys and the Oil-for-Food Report

The official United Nations investigation of the Oil-for-Food programme was quite sceptical about the ICMMS and explicitly raised the possibility that the ICMMS data "could conceivably have been tampered with" by the Iraqi regime<sup>11</sup>. The ICMMS has since been defended<sup>13</sup>, but three big new surveys strongly contradict it. All three are UN-sponsored, done in conjunction with the Iraqi (post-Saddam) and Kurdish authorities. They are the Iraq Living Conditions Survey (ILCS) in 2005<sup>14</sup>, the Multiple Indicator Cluster Survey in Iraq (MICS-3) in 2007<sup>15</sup> and the Iraq Family Health Survey (IFHS) in 2008<sup>16</sup>. The first two took full birth histories and computed

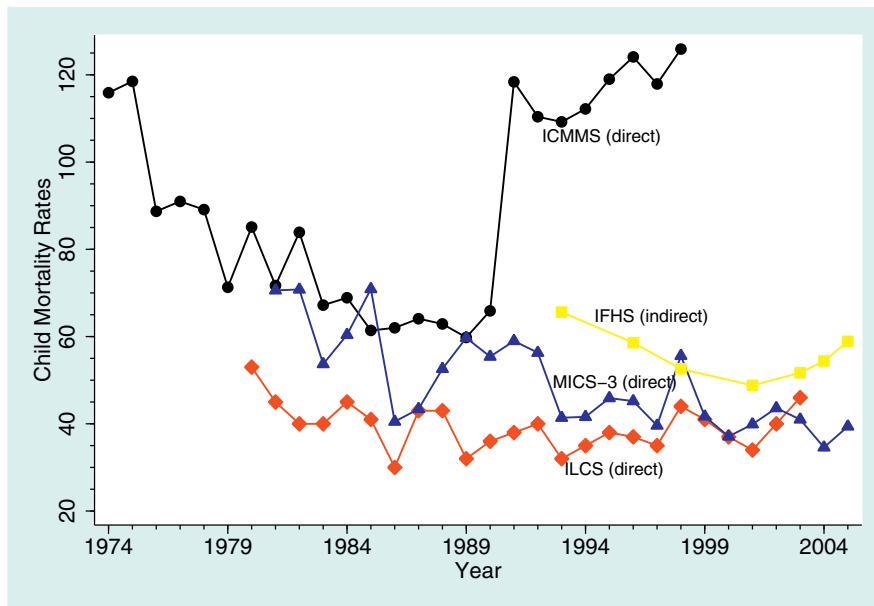


Figure 2. Comparison of the ICMMS and three later surveys. ICMMS is clearly in spectacular disagreement

child mortality time series, and the third collected summary birth histories.

Figure 2 shows their conclusions, along with those of the ICMMS. Beginning in 1991 the child mortality rate estimates for the ICMMS are in spectacular disagreement with those from these last three surveys. Between 1991 and 1998 the average ICMMS estimate exceeds the averages for the others by factors of 3.1, 2.4 and 2.0. The ratio of the ICMMS estimates to those of both of ILCS and MICS-3 are roughly double in the 1990s what they

**Any survey conducted within the confines of a ruthless and powerful dictatorship must be treated with caution**

were in the 1980s. Figure 2 leaves little doubt that the ICMMS child mortality estimates for the period 1991–98 are far too high.

The last of these three UN surveys also strongly opposes the dubious regional patterns displayed in Figure 1 by the ICMMS data. The average IFHS-based indirect child mortality estimates are 56 in the South/Centre for 1993–98 and 78 in the Kurdish zone for 1995–98. In contrast, the ICMMS places the corresponding rates at 130 in the South/Centre and 68 in the Kurdish zone. In fact, the IFHS matches the ICMMS rather well in the Kurdish zone (78 versus 68 – remember

that in this region Saddam Hussein's regime was unable to manipulate ICMMS results). Yet, not only does the ICMMS South/Centre estimate surprisingly rise up above the ICMMS Kurdish one in the 1990s but it also more than doubles the IFHS South/Centre estimate.

### In retrospect

In retrospect it is surprising that so many people seem to have believed so strongly in the massive child death numbers emanating from Iraq. Common sense dictates that any survey work conducted within the confines of a ruthless and powerful dictatorship with a huge stake in the outcome has to be received with caution. An estimate of half a million child deaths due to sanctions appeared in 1995 and was quickly withdrawn in 1997 amidst clear signs of manipulation. Yet, when virtually the same estimate sprang back to life a few years later based on a survey that already displayed a questionable reversal of fortune between the Kurdish zone and the South/Centre, it quickly gained widespread acceptance.

The credibility of the half-a-million-plus figure seems to have remained largely intact even as evidence has piled up against it.

Thus, Tony Blair was able to defend himself in front of the Chilcot Inquiry by citing ICMMS-inspired figures, extrapolated beyond the 1990s, to argue that the invasion of Iraq had saved lives. The evidence suggests that this claim should now take up its rightful place in the historical record next to Iraq's mythical weapons of mass destruction.

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