

The use and abuse of statistics in influencing public opinion



Statistics are heavily used in debates on controversial issues. After all statistics are facts aren't they? No one should argue with facts. If only it was that straightforward.

"There are 3 kinds of lies: lies, damned lies, and statistics".

Mark Twain, My Autobiography, 1907

In this work sheet we look at how statistics are used and reported without scrutiny by newspapers and other media to influence public opinion on controversial life issues such as euthanasia and abortion.

Take a look at this article from the Guardian newspaper

the guardian

Court censures Poland for denying abortion rights

Ian Traynor, Europe editor
Wednesday March 21, 2007

"The European court of human rights ruled yesterday that Poland was failing to guarantee access to lawful abortions in a test case hailed as a victory for women across Europe and a blow to the deeply conservative government in Warsaw....

.... Poland practises one of the most restrictive abortion regimes in Europe, banning and criminalising it

except on medical grounds, risk to life, and where pregnancy results from sexual violence.

In the EU only Malta, where abortion is outlawed, and Ireland have more draconian regimes. Illegal abortion, however, is thriving in Poland. Polish NGOs estimate some 200,000 women are having backstreet abortions every year".

© Guardian News & Media Ltd 2003

We can see that the article includes the horrific claim that 200,000 backstreet (i.e. illegal) abortions are taking place each year in Poland. Of course, with something that is illegal there are no official figures to prove this claim right or wrong. That point alone should immediately make us look more closely at the figure to see if such a large figure could be a reasonable estimate. The following work activity helps you to look closely at this backstreet abortion figure claim.

Work Activity: Take a look at the Council of Europe Demographic Year book. The Council of Europe is an official inter-governmental organisation. You can view this year book at: http://www.coe.int/t/e/social_cohesion/population/demographic_year_book/2003_Edition/ Click on country data and then look at the Polish section of the yearbook. There is a table with the official legal abortion figures in from 1960. The numbers drop off dramatically in the 1990s after a new law in 1993 restricted abortion to very narrow circumstances.

Looking at the actual figures for legal abortion for each year before the abortion law was changed can you draw any logical conclusions about the estimated figure of 200,000 illegal abortions each year made in the newspaper article above?

So the 200,000 illegal backstreet abortions looks a clear exaggeration. If the official figures for abortion in the years before the law changed in 1993 were never more than around 130,000 it is illogical to believe that the numbers after it was made illegal would have risen. Think about changes to the law in this country on other issues e.g. smoking in enclosed public places. While a few people break the law, most people abide by the new law. Therefore logic says that the number of illegal abortions will be a lot, lot less than 130,000.

Is there any other evidence to support the view that back street abortions in Poland are not a major problem? Well, if illegal abortion was a problem it should be reflected in the official miscarriage figures as the abortions would be falsely described as miscarriages to cover them up. Also any abortion, but especially back street abortion, is damaging to women's health. If illegal abortion was taking place at the levels estimated in the newspaper article the number of deaths of women during pregnancy would be expected to rise. This is one figure that cannot easily be falsified as it is difficult to hide the death of a pregnant woman!

Work Activity: Take a look at the official Polish Government figures below.

Table 1 Number of miscarriages 1990 – 2003

Source: Polish Ministry of Health and Social Matters, reports 1997-2000
Center of Informative Systems of Health Care, reports 2001-2003.

Year	1990	1992	1994	1996	1997	1999	2000	2001	2002	2003
Number of miscarriages	59,454	51,802	46,970	45,054	44,185	41,598	41,007	40,559	41,707	41,381
Number of miscarriages per 1000 women in reproductive age	6	5	4	4	4	4	4	3	4	4

Table 2 Number of women's deaths due to pregnancy and child-birth 1990 – 2003

Source: *Demographic Yearbook*, Central Statistical Office, Warsaw 1995-2001,
Center of Informative Systems of Health Care, Warsaw 2001-2003

1990	1992	1994	1996	1997	1998	1999	2000	2001	2002	2003
70	51	36	21	24	30	28	29	31	26	23

What conclusions can you draw from these figures about the likely trend in back street (illegal) abortions since Poland tightened its abortion law in 1993?

Do you think that there is any justification to the figure of 200,000 back street abortions quoted in the newspaper article?

What reasons can you give for the media simply reporting false information in this way?

Let's look now at another area of statistics much used to influence public debate of contentious issues: the opinion poll.

In a democracy it's a powerful argument to be able to say that a majority of people support a particular position. Of course, it would be worrying if this was a clinching argument on its own. If 51% of the population agreed in a poll to kill the other 49%, that majority support wouldn't make it right! Thankfully, with an extreme example such as this we can rely on our MPs not to be swayed. However, in different circumstances MPs can be swayed by opinion polls, after all they have to be re-elected.

How should we view opinion polls? To start with try this activity.

Work Activity: Split the class into two teams. You'll now need the help of another year group (pick the year group immediately below or above yours). Choose one PAIR of questions from the selection below. One team will ask half the year group one of the questions, while the other team will ask the other half of the year group the other question from the pair. If there are enough of you, you could split into smaller teams and use more than one of the question pairs.

Apart from this different question you should try to make everything else about the two year group halves the same. For example, make sure there are the same number of pupils in each of the two groups and make sure there are the same number of boys and girls in each group. Try to ensure there at least 50 people in each group. These are probably the two most important factors, as the pupil's ages will be roughly the same as they are all from one year group.

Can you see why we want to keep all other factors the same? What are we trying to test here?

Question Pair 1

- Given all the dangers of crime in today's society, do you think that all teenagers should be provided with and use a mobile phone for their personal safety?
- Do you think that all teenagers should have a mobile phone?

Question Pair 2

- Are you in favour of reducing the age at which young people can learn to drive from 17 to 16?
- Young drivers cause a high percentage of road traffic accidents. Are you in favour of reducing the age at which young people can learn to drive from 17 to 16?

Question Pair 3

- Do you think that chips and other fatty foods should be banned from the school canteen?
- Chips and other fatty foods contribute to ill-health in teenagers if eaten in excess. Do you think that chips and other fatty foods should be banned from the school canteen?

Write the results to the question pairs you and the other team chose in the grid below

Question	Yes	No	Don't know

Why do you think the results were different?

Let's look at a contemporary controversy to see if the way that questions are posed affects opinion poll results. We'll look at the issue of euthanasia. Euthanasia refers to the deliberate killing of a person supposedly for the benefit of that person. It is sometimes termed "mercy killing".

In 2004 the Voluntary Euthanasia Society asked the question: "Do you think a person who is suffering unbearably from a terminal illness should be allowed by law to receive medical help to die, if that is what they want."

82% of people who responded said yes.

In 2006, the British Social Attitudes Survey conducted by an independent research body asked the question "Do you think that a person with an incurable and painful illness from which they will die – for example someone dying of cancer should be able to ask a close relative to end their life. Should the law ever allow the close relative to end their life or not?"

Only 44% of people answered yes to this question.

QUESTIONS:

What are the differences between the two questions? Why do you think the differences led to such different responses? The Voluntary Euthanasia Society is a pressure group lobbying for a change in the law. Why do you think that they would frame their question in the way that they did? Do you think any of the wording encourages a particular response from the person surveyed?

In 2006, a House of Lords Select Committee considered the whole subject of euthanasia. They took a close look at the opinion polling that had been carried out on the subject. Their report can be accessed at:

<http://www.publications.parliament.uk/pa/ld200405/ldselect/ldasdy/86/86i.pdf>

and the section on opinion polls is on page 75. It might assist you in answering the following questions:

QUESTIONS:

- 1** One of the differences in the results of the two opinion poll questions listed above was that the first question with 82% agreement stipulated that medical staff must carry out euthanasia. The second question with only 44% stated that a relative should be able to carry out euthanasia. The general public would seem clear that euthanasia, if it were to be allowed should only be carried out by doctors. However, what do you think the attitude of doctors to euthanasia might be? Look up some opinion polls of doctors on the internet. Do the results you've found change the situation at all?
- 2** Do you think that simple yes/no questions are a good method of testing public opinion on matters such as euthanasia? State the reasons for your view.
- 3** Euthanasia is seen by many on both sides of the argument as a moral issue. In your view are opinion polls useful in such circumstances? Again state the reasons for your view.

