

# How to lay or lie with statistics

By Sarah Russell and Jan Browne

“One in five Australians” has become a fashionable statistic. We often see it on billboards, media releases and websites. The latest addition is that “one in five Australian workers have had a sexual relationship with someone they work with” (*The Age*, 5/1/05).

When 1,000 people were surveyed by Talent2, 200 people indicated that they have had a sexual relationship with a work colleague. In an era of hyperbole and generalisations, this small sample has become representative of all Australian workers. Who knows? Next we will be told that there is a causal link between the casualisation of the Australian workforce and casual sex.

The current trend to use a “one in five statistic” is making a nonsense of both the numbers and the conclusions drawn from these numbers. It also indicates a bias towards trivialising social experiences.

Does the statistic “one in five Australians” provide genuinely meaningful information? We are told that one in five Australians experience some form of mental illness, is affected by road traffic noise, is employed in export industries, does not hear

properly, has had a sexually transmitted infection, has no home insurance, smokes daily, has no relationship with the people next door and has a sexual relationship with a work colleague. Without providing a social context, these national statistics appear to generate more questions than answers.

Statistical surveys often ask simplistic questions such as “Have you had a sexual relationship with a work colleague?”. The respondent is expected to tick “Yes” or “No”. This question assumes people share an understanding of what constitutes a “sexual relationship”. What level of sexual activity is required to tick “Yes”? Is a grope at the Christmas party or a cuddle in the stationery cupboard sufficient? Or is orgasm mandatory?

To understand workplace relationships, it is important to make a distinction between a range of sexual relationships. For example, those who have a lifelong committed relationship with someone they met at work and those who have had a one night stand with a colleague will have very different experiences. With statistical surveys, these differences become similarities when they both tick the “Yes” box.

By asking respondents to tick a box, any box, statistical surveys often gloss over, and hide, the complexities within social experiences. Many of us can not reduce our experiences into a survey box. Our lives are often too messy.

A simplistic question invariably receives a simplistic answer. However, with the aid of computer software, the numbers are given power. People listen to numbers. A number such as “20% of Australians” has media currency, irrespective of the size of the sample or the methods used to collect the information.

It is sometimes difficult to differentiate credible social research from the rest. Few of us have the time, or indeed the expertise, to go back to the original data and see the flaws in the research design, the misrepresentation of the data and the over-simplification of the findings. If we did, we would see that statistics can be used as both a political tool and a marketing strategy.

In an increasingly complex and uncertain world, the numbers provide the impression of certainty. Colourful pie charts and bar graphs are designed to illustrate our social reality. However, these statistical presentations may not reflect the experiences of many Australians.

The over-use of the “one in five Australians” statistic is a reminder that the numbers never speak for themselves. There are often complex stories behind the numbers. This complexity can not be reduced to a percentile or a bells curve. Many Australians simply do not fit the numbers.

*The Age 14<sup>th</sup> January (edited article appeared as a letter)*