

However, for determining a sample size we need to specify an effect size based upon a standard deviation, not upon a standard error. It is the distribution of the population, not the estimate, that is important, and the standard deviation for data that are not Normally distributed is uninterpretable. Prieto *et al* also state that our calculations,<sup>1</sup> are 'against empirical published evidence which reports significant changes in the SF-36 scales using dramatically smaller sample sizes'. This, however, is a circular argument: such 'significant' results will have been obtained from tests using parametric methods, which are inappropriate to the data, and they certainly do not prove the applicability of parametric methods to sample size calculation in this case.

In our paper we highlighted the importance of considering the distribution of the SF-36 scores when considering a sample size. For example, the dimension role limitation can only take four values and, in the data set reported by Brazier,<sup>2</sup> most of the population score 100%. In practice, an apparent interval scale may be composed of several highly correlated responses, so that the final response is bimodal. In this case, our methods demonstrate that the sample size approaches the size required for a binary variable, as one might sensibly expect.<sup>3</sup> Incidentally, scoring the results as a percentage hides the fact that the data are discrete, not continuous.

For data with a marked skewness it is also important to consider the direction of the effect. Directionality is not taken into account using a normal approach to skewed data. For example, detecting a difference of 20% success versus 10% success requires 199 patients per group, with 80% power and 5% (two sided) significance level, whereas 20% success versus 30% success requires 294 patients per group.

Lastly, Prieto *et al* state that MCIDs for the SF-36 are still unknown. We are currently engaged in research to establish what are realistic and clinically meaningful effect sizes for a number of quality of life measures. In the meantime, authors should present their results as median, rather than mean, scores, together with ranges and interquartile ranges rather than standard deviations. Where appropriate, hypothesis testing should be performed using non-parametric methods.

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- 1 Julious SA, George S, Campbell MJ. Sample sizes for studies using the short form 36 (SF-36). *J Epidemiol Community Health* 1995;49:642-4.
- 2 Brazier JE, Harper R, Jones NNB, O'Cathain A, Thomas MJ, Usherwood T, Westlake L. Validating the SF-36 health questionnaire; new outcome measure for primary care. *BMJ* 1993;305:160-4.
- 3 Julious SA, George S. Sample size estimates for quality of life data. ISCB 16. *Proceedings of the International Society of Clinical Biostatistics Conference*, Barcelona, 1995.

#### Suicide from the Clifton Suspension Bridge in England

SIR - Nowers and Gunnell in their study on suicides from the Clifton Bridge<sup>1</sup> quite rightly emphasise the notoriety of this bridge as a

suicide site. It is, however, interesting that some equally famous bridges do not attract this reputation.

The Humber Suspension Bridge opened in Hull in 1982, becoming both the world's longest suspension bridge and a highly visible local landmark. In the 10 years after its opening, however, only four deaths were reported from falls from the bridge.<sup>2</sup> All received suicide verdicts at the Coroner's Court, and all had travelled between 8 and 40 miles to their chosen site of death. During this period, two Hull residents had also travelled 40 miles to the Valley Bridge at Scarborough where they jumped to their deaths.

The preference for one bridge over another is most clearly seen in the study of Seiden.<sup>3</sup> Fifty per cent of his series of 115 suicides travelled over the Oakland Bay Bridge to reach the Golden Gate Bridge where they jumped. No cases of people travelling over the Golden Gate Bridge to jump off the Oakland Bay Bridge were found. Similarly, Cantor and Hill in their later study from Australia<sup>4</sup> reported a recent preference for the newly opened Gateway Bridge over the neighbouring Story Bridge in Brisbane. While the Story Bridge had been a traditional suicide site since its opening in 1935, the newer bridge had 17 suicides in its first 17 months of use compared with two from the older bridge. The authors suggested that the first suicide from the new bridge, which occurred during the televised opening ceremony in 1986, may have influenced patterns of choice and also demonstrated significant differences between those who used each bridge both demographically and in regard to psychiatric history.

Further comparison between bridges may provide us with insight as to why certain bridges are more attractive for suicide for certain people. Are there factors in the design or location of bridges that should be considered to prevent deadly reputations developing? If such existed, a further means of suicide prevention would be available. Modifications to existing structures would be able to utilise these findings and new bridges could be designed accordingly. This is clearly an area which warrants further research.

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- 1 Nowers M, Gunnell D. Suicide from the Clifton Suspension Bridge in England. *J Epidemiol Community Health* 1996; 50:30-32
- 2 Record books of HM Coroner for Hull and North Humberside. Hull: 1972-92
- 3 Seiden RH. A tale of two bridges: comparative suicide incidence on the Golden Gate and San Francisco - Oakland Bay bridges. *Omega* 1992;14:200-9
- 4 Cantor CH, Hill MA. Suicide from river bridges. *Aust N Z J Psychiatry* 1990; 24: 377-80

## NOTICES

**17th International Colloquium, ISSA Chemistry Section, Plant Safety in the Chemical Industry**, 9-11 June 1997 in Frankfurt/Main, Germany. For further information: Secretariat of the ISSA Chemistry Section, c/o BG Chemie, Kurfürsten-Anlage 62, D-69115 Heidelberg, Germany. Tel: + 49 6221 523 498. Fax: + 49 6221 523 420.

## European Journal of Public Health - volume 6, number 2, June 1996

### Guest editorial

The history of public health in Europe. *JP Mackenbach*

### Editorial note

The history of health in Europe. *PG Svensson, J Palm*

Public health, private concern the organizational development of public health in the Netherlands at the beginning of the twentieth century. *MH Strik, N Knols*

Analysing inequalities: the tradition of socioeconomic public health research in Finland. *F Lahelma, A Karisto, O Kahkonen*

The development of medical sociology in theory and practice in Western Europe 1950-1990. *M Jefferys*

European medical sociology: a comment on Margot Jefferys' view. *D Vägerö*  
The development of medical sociology in Eastern Europe, 1965-1990. *A Ostrowska*

Pre-natal care in occupied Belgium during the Second World War. *P Buekens, CA Miller*

Purity, danger and miasmata. *Armstrong*

### Original articles

Out-patient antihypertensive drug utilization and stroke mortality - an ecological study. *J Merlo, L Råstam, J Ranstam, A Wessling, A Melander*

Explanation of national variations in alcohol and cannabis consumption: a comparative study in a Dutch and an adjoining German region. *HN Plomp, W Kirschner, H van der Hek*

Inappropriate hospitalization: reasons and determinants. *D Oterino de la Fuente, S Peiró, C Marchan, E Portella*  
*Perinatal epidemiology in Belgium. J M Tafforeau, H van Oyen, S Drieskens*

Birth weight for gestational age as a health indicator: birth weight and mortality measures at the local area level. *H Elmén, D Höglund, P Karlberg, A Niklasson, W Nilsson*

The contribution of specific causes of death to mortality differences by marital status in the Netherlands. *IMA Young, JF Glerum, FWA van Poppel, JWP Kardaun, JP Mackenbach*

### Book reviews

Health policy: an introduction to process and power

The provision of medical services to sick doctors a conspiracy of friendliness?

Designing health messages: approaches from communication theory and public health practice.

Telematics for health: the role of telehealth and telemedicine in homes and communities

A dictionary of epidemiology

### Publications received

#### Meetings

#### Calendar of Events

#### European Public Health Association