

Re: A letter to a statistician. Emailed and airmailed and no reply

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- *From:* Ray Johnstone <[ray@xxxxxxxxxxxxx](mailto:ray@xxxxxxxxxxxxx)>
  - *Date:* Fri, 30 Mar 2007 15:11:07 +0800
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On Thu, 29 Mar 2007 09:26:47 -0500, David Winsemius <[doe\\_snot@xxxxxxxxxxxxx](mailto:doe_snot@xxxxxxxxxxxxx)> wrote:

Ray Johnstone <[ray@xxxxxxxxxxxxx](mailto:ray@xxxxxxxxxxxxx)> wrote in [news:emom03di9v20dgu9t9f313biisldnlotj2@xxxxxxxxx](mailto:news:emom03di9v20dgu9t9f313biisldnlotj2@xxxxxxxxx):

<http://members.iinet.com.au/~ray/DeVeaux.htm>

snip

Chapter 13 is about controlled intervention trials. Seven such trials have been conducted to determine the association between smoking and health, with a hundred thousand test and control subjects followed for seven years – Whitehall, MRFIT, Goteburg, Finnish Businessmen, Oslo, WHO collaborative and North Karelia. (References are available on my website.) The results of all are uniform, forthright and unequivocal: they show no association between smoking and life expectancy, deaths from cancer or deaths from any other cause.

It is very difficult to cause smokers to quit. The intervention trials generally have a very low success in modifying smoking rates.

No, they are generally successful, according to their authors. For example:

"In conclusion we have shown that it is possible to apply an intensive long-term intervention program against three coronary risk factors with considerable success in terms of risk factor changes. The overall results do not show a beneficial effect on CHD or total mortality from this multifactor intervention." (Multiple Risk Factor Intervention Trial Research Group, 1982)

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Further,  
since the incidence and mortality from lung cancer does not decrease after cigarette smoking, the short-term (5 or 6 years typically) studies all had very low power to detect an impact on that outcome. The relative lung cancer incidence of continuing smokers to that of former smokers does increase, but only because of the strong association of total dose with incidence (and mortality).

These studies were NOT looking at the 'association of smoking and life expectancy' and they were NOT "determining the association of smoking and health"; they were looking at the association of smoking cessation programs on differences in short-term event rates. s "unequivocal"

If you want to see the \_association\_ between smoking and life expectancy in otherwise healthy individuals, you should look at current life insurance estimates. The Society of Actuaries collects experience from multiple companies and prepares a report on aggregate mortality outcomes. This is observational data, of course, but it is an unmistakable \_association\_.

But whose data is it? Certainly not that collected by the US Bureau of the Census. If it were then those paying the lowest rates would be light smokers:

<http://members.iinet.com.au/~ray/SG8.htm>

<[http://www.actuary.org/life/cso/appendix\\_a\\_jun02.xls](http://www.actuary.org/life/cso/appendix_a_jun02.xls)>

If Johnstone needs help on constructing a life expectancy estimate from a mortality table, he need only ask for help here. You can see from inspection of the select or ultimate one year q's that the mortality of smokers is roughly twice that of the non-smokers.

The references from Johnstone's website:

12 Rose, G., P.J.S. Hamilton, L. Colwell and M.J. Shipley (1982), 'A randomised controlled trial of anti-smoking advice: 10-year results', Journal of Epidemiology and Community Health, 36, pages 102-108

13 Multiple Risk Factor Intervention Trial Research Group (1982), 'Multiple risk factor intervention trial: risk factor changes and mortality results', Journal of the American Medical Association, 248, pages 1465-1477.

MRFIT had multiple interventions. Subgroup analyses found that only the successful smoking quitters had lower cardiac event rates.

One of the fundamentals of experimentation is that having set the statistical design you don't change it after the data is collected.

Cherry-picking leads to spurious results.

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<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?itool=abstractplus&db=pubmed&cmd=Retrieve&dopt=abstra>

14 WHO European Collaborative Group (1986), 'European collaborative trial of multifactorial prevention of coronary heart disease: final report on the 6-year results', *Lancet*, 1, pages 869–872.

15 Wilhelmsen, L., G. Berglund, E. Elmfeldt, G. Tibblin, H. Wedel, K. Pennert, A. Vedin, C. Wilhelmsson and L. Werks (1986), 'The multifactor primary prevention trial in Goteborg', *European Heart Journal*, 7, pages 279–288.

If persons are looking for citations, they should use "Helsinki Businessmen Study" in preference to "Finnish Businessmen" which was not its name.

Neither name appears to have been used by the authors.

16 Miettinen, T.A., J.K. Huttunen, V. Naukkarinen, T. Strandberg, S. Mattila, T. Kumlin and S. Sarna (1985), 'Multifactorial primary prevention of cardiovascular diseases in middle-aged men: risk-factor changes, incidence and mortality', *Journal of the American Medical Association*, 254, pages 2097–2102.

See also:

<http://heart.bmj.com/cgi/content/abstract/74/4/449>

*British Heart Journal*, Vol 74, 449–454,  
"CONCLUSION—The traditional risk factors (smoking, blood pressure, and cholesterol) are significantly associated with 28-year mortality in this high social class population with previous health education."

Read it again: their numbers belie their words.

Death rates

Intervention group 155.2/1000

Control group 106.6/1000

The death rate in the quit group was 45% higher than in the control group. They give more details at:

<http://members.iinet.com.au/~ray/2consequences.html>

17 Puska, P., J. Tuomilehto, J. Salonen, L. NeittaanmSki, J. Maki, J. Virtamo, A. Nissinen, K. Koskela and T. Takalo (1979), 'Changes in coronary risk factors during comprehensive five-year community programme to control cardiovascular diseases (North Karelia project)', *British Medical Journal*, 2, pages 1173–1178.

You might want also to look at more recent data from that effort:

[http://www.ktl.fi/portal/english/osiot/research\\_people\\_programs/health\\_promotion\\_and\\_chronic\\_disease](http://www.ktl.fi/portal/english/osiot/research_people_programs/health_promotion_and_chronic_disease)  
Mortality changes in North Karelia in 1970–1995 (per 100 000, 35–64 years, men, age adjusted).

Rate in 1970 Change in 1970–1995

All causes 1,509 –49.00%

All cardiovascular 855 –68.00%

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Coronary heart disease 672 -73.00%

All cancers 271 -44.00%

Lung cancers 147 -71.00%

It may be more recent data but it does not concern that trial: where are the figures for control and intervention groups?

18 Leren, P., E.M. Askenvold, O.P. Foss, A. Frøili, D. Grymyr, A. Helgeland, I. Hjermann, I. Holme, P.G. Lund-Larsen and K.R. Norum (1975), 'The Oslo study. Cardiovascular disease in middle-aged and young Oslo men', Acta Medica Scandinavica [Suppl.], 588, pages 1-38.

Johnstone has apparently not kept up with the literature in this area.

The Lung Health Study was published in 2005:

"The Effects of a Smoking Cessation Intervention on 14.5-Year Mortality:

A Randomized Clinical Trial" Nicholas R. Anthonisen, et al

<<http://www.annals.org/cgi/content/full/142/4/233>>

There may well be other trials like 7 I have described but this is not one of them:

"Limitations: Results apply only to individuals with airway obstruction."

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