Figure 4.10. EXPLORATORY DATA ANALYSIS: Public Perception of the Canadian Health Care System

EM9014: Toronto Star, January 26, 1990, page C2

Canadian health care comes up tops in study

By Marilyn Dunlop
TORONTO STAR

Canadians believe they have one of the best, if not the best, health-care systems in the world, a Canadian Medical Association doctor says.

Canadians' love of the system was made clear in a recent survey of public attitudes on health care in Canada, the United States and Britain, Dr. Judy Kazimirski, chairman of the association's board, told a meeting in Toronto this week.

Conducted by the U.S. Baxter Foundation, the survey found 95 per cent of Canadians prefer the Canadian health-care system over the U.S. system and 91 per cent prefer it to the British system.

Ad compaign

On the other hand, 61 per cent of Americans polled wish they had the Canadian system. And 28 per cent of Britons questioned said they'd rather have the Canadian one.

Kazimirski said a $2.5 million advertising campaign being conducted in the U.S. by the American Medical Association and other organizations is aimed at discrediting Canada's medicare system. The campaign is being run out of fear that Americans' dissatisfaction may lead to a government-run health insurance program, she said.

The survey found 94 per cent of Canadians "very satisfied" or "satisfied" with the care they received from their doctors in the previous 12 months, compared with 89 per cent of the British and 86 per cent of the Americans.

Cost of care

Only 3.6 per cent of Canadians said they didn't get the care they needed, compared to 4.7 per cent of the British and 12.6 per cent of Americans. And more than half of those Americans said the reason was financial. In Canada, only 0.6 per cent blamed the cost and in Britain only 0.1 per cent.

When asked to rate their own health-care system, 56 per cent of Canadians said it works pretty well and needs only minor changes, compared with 10 per cent of Americans and 27 per cent of the British.

The survey involved 1,026 adults in Canada and 1,066 in Britain who were interviewed in their homes and 1,250 adults in the U.S. interviewed by telephone. A survey of this size has a margin of error of plus or minus 3 percentage points, 95 per cent of the time.

1 What is the most *common* type of numerical data summary given in the article EM9014?
- What type of data – continuous or discrete – are the basis of these summaries? Explain briefly.

2 List the values quoted for *measures of location* that are given in the article EM9014; identify the paragraph from which you take each value.

3 At the end of the first paragraph of the third column of the article EM9014, a percentage of 0.1 is given. What *number* of respondents in the relevant category does this value most likely represent? Show your calculations.
- In light of your calculation, how much credance do you attach to the figure as an accurate reflection of British opinion? Explain briefly.

4 In the final paragraph, the article mentions that Canadians and Britons were *interviewed in their homes* whereas the Americans were *interviewed by telephone.*
- Suggest *reason(s)* for the use of the different interview methods.
- Do you consider that the different methods of collecting the survey data are likely to affect the *comparability* of the data among the three counties? Explain briefly.

5 The final paragraph of the article refers to a *survey of this size.* Comment briefly on the importance of the *size* of the survey from a *statistical* perspective.

6 In the final paragraph, the article EM9014 mentions *a margin of error.* Explain briefly what you understand by the word *error* in this context; make it clear what the word does *not* mean as well as what it does signify.

7 In the final paragraph of the article EM9014, the phrase is used: *plus or minus three percentage points.* Explain briefly whether or not this phrase has the *same* meaning as: *plus or minus three per cent.*

8 Explain briefly what you understand in context by the last phrase on the article: *95 per cent of the time.*

(*continued overleaf*)

9 An important difference between the investigation reported in this Figure 4.10 and the one discussed in the article EM8912 in Figure 4.4 on pages 4.14 and 4.15 is that the former is clearly a *sample survey* (as indicated in the last paragraph overleaf on page 4.29, for example), whereas the latter is likely based on an (essentially) *complete emuneration* of the members of the relevant population (*viz*., car accidents involving fatalities during a specified period).

- Identify explicitly the statements in Figure 4.4 which suggest that it may be based on (essentially) complete enumeration.
- Outline the main *statistical* consequence(s) of this difference between the two investigations.
- In which category (sample survey or 'census') would you place the investigation about women's occupations and pay described in the article EM9030 in Figure 4.2a on pages 4.7 and 4.8? Give brief reasons for your choice.
  - Assuming that the investigation in Figure 4.2a *is* based on data from a census, comment briefly on the relative difficulty of obtaining *complete* data in this case compared with that of Figure 4.4.

The article EM9014 reprinted overleaf on page 4.29 is also used in Statistical Highlight #99.

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