COMMENTARY

The Quest for Better Questionnaires

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The development of questionnaires is a neglected enterprise in epidemiology. It has recently been proposed that a prestigious health authority such as the World Health Organization establish a committee to tackle issues of questionnaire quality, moving eventually toward standardized instruments. However, standardization may not be the best way to invigorate this enterprise. As an alternative, the author suggests that the first step in improving questionnaires would be to make them more accessible. Ideally, questionnaires should be as easily scrutinized as a study's methods or results. To this end, the author suggests that when a research paper is published, the entire questionnaire be made available on the worldwide web. Electronic access to questionnaires could stimulate a new era of awareness about the importance of questionnaire design.

In an article titled "Epidemiology Deserves Better Questionnaires," Jørn Olsen and the European Questionnaire Group of the International Epidemiological Association (IEA) recently issued a challenge (1). The authors suggested that the development of questionnaires is a neglected enterprise in epidemiology. Compared with grant writing or data analysis, the attention given to questionnaire design is indeed sparse. The low status of questionnaires is further suggested by the scant number of papers on questionnaire quality in epidemiologic journals. For example, only 2 percent of papers published in the American Journal of Epidemiology over the past 15 years addressed issues of questionnaire quality.

The IEA group has proposed that a prestigious health authority such as the World Health Organization establish a committee to tackle issues of questionnaire quality, moving eventually toward standardized instruments. In this author's opinion, the IEA group is on the mark when they say that epidemiology needs more valid, more reliable, more informative questionnaires—but blue-ribbon committees may not be the best way to inject vitality into this enterprise.

Some of the current problem may be traced to the fact that questionnaires typically warrant barely a sentence in an article's methods section. This, in turn, makes questionnaires seem unimportant. Epidemiologists who craft a high-quality questionnaire are rewarded by increased confidence in their own data, but little else. Investigators who paste together sloppy instruments are rarely if ever challenged. Epidemiologists face the critical scrutiny of their colleagues on many fronts, but rarely does an epidemiologist take heat for an ambiguously phrased question or a poorly designed skip pattern.

Perhaps, as a first step toward their improvement, questionnaires should be brought more strongly into the foreground. Imagine a questionnaire's being as easily scrutinized as a study's methods or results. Questionnaire design would join other sources of bias as a possible reason for inconsistency among the

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1 A MEDLINE® search for all papers published between 1985 and 1999 in the American Journal of Epidemiology produced 4,177 references. Limiting the search to papers dealing with "questionnaires" and "methodology or quality or reliability or validity" produced 90 references, or 2 percent.
results of different studies. This could lead to greater curiosity about the basic relations between the questions we ask our subjects and the answers we get.

How could greater access to questionnaires be accomplished? One step would be for every research paper to include an appendix showing the specific questions on which the results rest. This is done occasionally, and it’s certainly better than nothing. Still, it does not permit the full context of the questionnaire to be taken into account. A more ambitious step would be to put the entire questionnaire on the worldwide web. This could be done in a cheap and effective way by making the questionnaire (and any related explanatory material) available on the author’s website. Persons reading the published paper could then turn to the web to find the exact questions on which the results were based. Furthermore, web access to questionnaires would provide a resource for persons planning new studies. (This resource would be even richer if the questionnaires were annotated by the authors, discussing which questions worked well and which didn’t.)

Electronic access to questionnaires could stimulates a new era of awareness about the importance of questionnaire design. Funding agencies might begin to recognize the importance of having a reliable and valid questionnaire, and be more willing to pay for it. There would be new demand for classes and summer courses on the construction of questionnaires. More scientific papers on questionnaire methodology might successfully compete for space in epidemiologic journals.

Of course, there are downsides to this proposal. Some authors are possessive about their questionnaires, just as some laboratory scientists guard the subtle secrets of their assays. This impulse is understandable. Still, if a core principle of science is the replicability of results, it’s hard to see how such possessiveness can be defended. Another downside is that a policy of posting questionnaires on the web would impose a burden on some authors. Perhaps journals could compensate for this by offering incentives. Submitted papers that were accompanied by a web-accessible questionnaire might be granted higher priority for publication. All else being equal, one could argue that a report with an easily accessible questionnaire has greater value to readers.

Inconvenience aside, some authors may be embarrassed to show their survey instruments to the world. But isn’t this part of the point? Exposure itself is not the solution, but it may provide an encouraging nudge down the path toward better solutions. If epidemiologists knew at the outset that their questionnaire would eventually be public property, they might have new motivation to bring their best efforts—and the best efforts of other relevant disciplines—to their design. As Olsen and the IEA group have already proposed, this could be a good thing not only for individual projects but for the field of epidemiology altogether.

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With his own due share of embarrassment, the author is making his questionnaires available on the web page of the Epidemiology Branch of the NIEHS (http://dir.niehs.nih.gov/direb/home.htm).

REFERENCE


Addendum: At their recent meeting, the Journal’s Board of Editors approved a policy of encouraging authors to make their questionnaires available on the worldwide web. Authors’ annotations and any suggested improvements based on their experience with the questionnaire would be especially welcomed. The website address for accessing the questionnaire should be included in the “Materials and Methods” section of the published article.