

## Letter to the Editor

# Improving the quality of Greek web surveys: adaptation of the checklist for reporting results of internet e-surveys in Greek language

Sir,

The use of the internet for surveys and research is becoming increasingly widespread, including in observational research, which employs questionnaires and surveys to study various characteristics in patients, professionals, and institutions in biomedical and primary care research.<sup>1,2</sup> Fricker and Schonlau highlighted in their review the advantages and disadvantages of using the Internet for conducting surveys and research. Internet research surveys offer advantages such as increased speed and efficiency, the ability to reach a diverse sample, real-time data collection, and cost-effectiveness.<sup>3</sup> However, disadvantages include nonresponse and response bias, potential for low response rates, and concerns about sample representativeness. To ensure quality and validity of data collected, it is important to consider these limitations and carefully design and execute internet research surveys.

Several studies have investigated the use of web-based technology for data collection in surveys, comparing it to traditional methods like mailed questionnaires. Bhandari et al investigated the effectiveness of web-based technology in increasing response rates in an international survey of 442 surgeon-members of the orthopaedic trauma association.<sup>4</sup> They concluded that the Internet arm had a lower response rate of 45% compared to the mail questionnaire arm, which had a response rate of 58%. Braithwaite et al explored the use of the internet for conducting surveys of health professionals and found that the response rate for an internet survey was higher compared to traditional methods, but the authors noted potential concerns about the representativeness of the sample obtained from an internet survey.<sup>5</sup> Kongsved et al observed that the response rate was higher for the Internet version of the questionnaire compared to the paper-and-pencil version, with a difference of 9%, and that the completeness of the questionnaires was also higher for the Internet version.<sup>6</sup> Whitehead and Ebert et al both concluded that no significant differences between internet-mediated research and traditional mailed questionnaires in terms of response rate, completeness of data, or financial cost, but noted that researchers should be aware of potential biases and security measures.<sup>8</sup>

In Greece, the use of the internet for surveys and research is increasing. The accuracy, reliability, and validity of data collected through online surveys are crucial for ensuring the quality of Greek web surveys. This is

especially important as the use of the Internet for research and surveys is becoming widespread in Greece. Factors like sample selection, response bias, and survey design can impact the quality of web surveys. To ensure quality, researchers must use appropriate sampling techniques, minimize response bias, and carefully design the survey questions. They must also use appropriate data analysis techniques. Ensuring the quality of Greek web surveys is critical for obtaining valuable insights that accurately represent the population. By carefully designing and implementing web surveys, researchers can improve the validity and reliability of the data collected.

Medical and information technology journal editors face a challenge accepting surveys without a clearly identified research population, as these are vulnerable to bias, low response rates, and questionable validity due to convenience sampling.<sup>9</sup> To ensure accurate virtual survey results and their inclusion in the body of research knowledge, it is important to define the methodology and follow guidelines such as PRISMA, QUORUM, STROBE, and CONSORT.<sup>10</sup> Propensity scores from the Rubin model offer a solution for methodological problems, but are often ignored in published research.<sup>10</sup> Identifying the intended study population is crucial, as biased results from one population may still provide useful hypotheses for another.

The purpose of this letter to editor is to translate the CHERRIES publication guidelines into Greek to improve the reporting of web-based questionnaires and survey research findings. This cross-sectional observational study involves the use of questionnaires. Figure 1 lists the key concepts and components of the recommendation for publications studies including web-based questionnaires.

### *The CHERRIES checklist*

Eysenbach et al emphasize the importance of improving the quality of web surveys and introduce the checklist for reporting results of internet e-surveys (CHERRIES) as a new tool.<sup>9</sup> They suggest that paying attention to various factors such as sample selection, response bias, and data analysis methods can improve the quality of web surveys. CHERRIES is a checklist designed to help researchers ensure the quality of web surveys by covering topics such as survey design, response bias, and data analysis. By increasing transparency and accountability in the research process, CHERRIES can improve the quality of web surveys and provide a consistent framework for reporting on their results.



Eysenbach et al discuss the challenges of measuring response rates in online surveys and recommend improving the quality of web surveys.<sup>9</sup> The CHERRIES checklist, designed for web-based surveys, also applies to surveys administered via email. The authors recommend using "view rate," "participation rate," and "completion rate" instead of "response rate" as preferred response metrics. They suggest using cookies or log-file/IP address analysis and employing JavaScript or server-side techniques to enforce completion or internal consistency and indicate the methods used in survey results.

The CHERRIES checklist is a useful tool for improving the quality of web-based survey results and ensuring the validity and reliability of web surveys. Web-based technology for data collection can be effective, but potential biases and limitations must be considered. A comprehensive approach to determining response rates is necessary.

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## REFERENCES

1. Kellerman S. Physician Response to Surveys A Review of the Literature. *Am J Prev Med*. 2001;20:61-7.
2. Granello DH, Wheaton JE. Online Data Collection: Strategies for Research. *J Couns Dev*. 2004;82:387-93.
3. Fricker RD, Schonlau M. Advantages and Disadvantages of Internet Research Surveys: Evidence from the Literature. *Field Methods*. 2002;14:347-67.
4. Leece P, Bhandari M, Sprague S, Swiontkowski MF, Schemitsch EH, Tornetta P et al. Internet Versus Mailed Questionnaires: A Randomized Comparison. *J Med Internet Res*. 2004;6:e30.
5. Braithwaite D, Emery J, De Lusignan S, Sutton S. Using the Internet to Conduct Surveys of Health Professionals: A Valid Alternative? *Fam Pract*. 2003;20:545-51.
6. Kongsved SM, Basnov M, Holm-Christensen K, Hjollund NH. Response Rate and Completeness of Questionnaires: A Randomized Study of Internet Versus Paper-and-Pencil Versions. *J Med Internet Res*. 2007;9:e25.
7. Whitehead L. Methodological Issues in Internet-Mediated Research: A Randomized Comparison of Internet Versus Mailed Questionnaires. *J Med Internet Res*. 2011;13:e109.
8. Ebert JF, Huibers L, Christensen B, Christensen MB. Paper- or Web-Based Questionnaire Invitations as a Method for Data Collection: Cross-Sectional Comparative Study of Differences in Response Rate, Completeness of Data, and Financial Cost. *J Med Internet Res*. 2018;20:e24.
9. Eysenbach, G. Improving the Quality of Web Surveys: The Checklist for Reporting Results of Internet E-Surveys (CHERRIES). *J Med Internet Res*. 2004;6:e34.
10. Rosenbaum PR, Rubin DB. The Central Role of the Propensity Score in Observational Studies for Causal Effects. *Biometrika*. 1983;70:41-55.

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