Guidelines for Writing Manuscripts About Community-Based Participatory Research for Peer-Reviewed Journals

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Abstract

Despite the importance of disseminating the results of community-based participatory research (CBPR), community health partnerships face many challenges in getting their work published. The purpose of this article is to present practical guides for writing about CBPR for those who have little experience in writing for publication or those who want to help their partners write strong manuscripts for peer-reviewed journals. The article includes tips on how to organize each part of a manuscript, suggestions on how partners can collaborate on preparing manuscripts, recommendations on how to convey unique aspects of a partnership's work

throughout a manuscript, and an annotated bibliography of well-written CBPR articles. By understanding how to prepare a manuscript about CBPR for a peer-reviewed journal, authors should be more effective in disseminating information that will help other communities to benefit from their partnership's work.

Keywords

Community-based participatory research, professional development, manuscripts

BPR is a rapidly growing field that will have greatest impact on the health of the public if results are disseminated widely through all available channels, including publication in peer-reviewed, health-oriented journals. CBPR is "a collaborative approach that equitably involves ... community members, organizational representatives, and researchers in all aspects of the research process." Thus, all partners engaged in CBPR have a stake in dissemination of the work. The fundamental reason for publishing health-related research is to disseminate new knowledge that can improve health. Additional reasons for publishing work related to CBPR include engaging all partners in interpreting and disseminating the benefits from their work; sharing participatory approaches with other academic-community health partnerships; and convincing community leaders and policy makers of the validity and importance of CBPR.

Despite the importance of publishing CBPR, academic –community health partnerships may face challenges in

getting their work published. Two fundamental challenges appear to be most salient. First, reviewers and editors who evaluate CBPR manuscripts may not have experience with this approach and the implications of a participatory approach for study design and implementation. Second, partners involved in CBPR must balance highlighting its unique features and incorporating the more traditional manuscript elements in a way that leads to a clear, compelling manuscript that will be enlightening for readers.

O'Toole et al.² provided some recommendations for writing manuscripts about CBPR in a 2003 editorial. However, that editorial did not give much detail on how to describe the unique aspects of CBPR when writing manuscripts for peerreviewed journals. It also did not give academic–community health partnerships much guidance on how to collaboratively write manuscripts for peer-reviewed journals. Accordingly, this article has two main aims.

First, this article presents practical guides for writing strong

manuscripts about research performed by academic—community health partnerships that will be submitted to peer-reviewed, health-oriented journals. These guides are intended for academic and nonacademic partners with little experience writing for publication, for those who want to teach their collaborators how to write stronger manuscripts for peer-reviewed journals, and for community partners interested in writing for peer-reviewed journals without an academic partner. Second, this article presents recommendations on how academic and community partners can collaboratively write manuscripts describing their research. This article does not address other forms of written communication that partnerships may want to use, such as newsletters, newspaper articles, and web sites.

We based this article on workshops given at the ninth annual conference of Community—Campus Partnerships for Health and the 29th annual meeting of the Society of General Internal Medicine. The workshops were led by faculty with experience conducting and writing about CBPR. Participants included academic and community partners with a broad range of experience conducting and writing about CBPR. The workshops consisted of interactive didactic sessions and small group exercises. Each workshop received positive evaluations from attendees, including recommendations that the faculty repeat them at subsequent conferences. Some of the recommendations made in this manuscript were adapted from participant feedback and small group discussions facilitated by the authors.

HOW TO BEGIN WRITING A CBPR MANUSCRIPT

Authors should begin by defining the specific aim(s) of the manuscript.³ By precisely defining the aim(s), authors are able to focus their thoughts during the writing process. After choosing the aim(s), authors need to identify a target audience and choose a potential journal. For CBPR manuscripts written for peer-reviewed journals, target audiences often include researchers, community-based health professionals, and community members. Authors should write with a particular journal in mind because the emphasis, format, writing style, and word limit may vary between journals. After selecting a candidate journal, authors should review previous issues to confirm that their planned manuscript is a good fit. Look at the journal's list of editorial board members to see if there are

individuals with CBPR experience. Many journals publish a list of their peer reviewers at the end of each year, so authors also could scan that list. Because many biomedical and social science journals have not yet published a CBPR manuscript, we recommend that authors contact the editor-in-chief to assess the journal's interest in publishing CBPR. In such cases, it might be helpful to highlight the relationship between CBPR and previously published content areas (e.g., health disparities or community health workers).

After selecting a journal, authors should follow the instructions regarding manuscript format and reference style. Journals may return unread manuscripts that fail to follow instructions. After following these preliminary steps, authors should construct a detailed outline and timetable for their manuscript before writing. ⁴ Unless instructed otherwise, write in the active voice. ⁵

HOW TO WRITE COLLABORATIVELY

We encourage academic–community health partner-ships to develop documents that delineate the processes used to determine authorship and collaboratively write manuscripts that describe CBPR projects. The North Carolina Community–Based Public Health Initiative and the Detroit Community–Academic Urban Research Center⁶ have developed two examples of such documents. In some cases, the development of a "publication" or "dissemination" committee composed of academic and community partners may be useful in developing this document and overseeing its use. If conflicts arise anywhere in the authorship process, a neutral third party may need to intervene.

Often in academic–community partnerships, a large group of authors are involved in the research study and manuscript preparation. In this event, it may be appropriate to list an umbrella organization as the author (with or without a few lead authors) and provide a full list of participants at the end of the manuscript. Consider using acknowledgements when collaborators do not meet authorship criteria established by the partnership.

When writing a manuscript that describes a CBPR project, partners should embrace a participatory process in developing manuscript ideas and in the actual writing process. This is consistent with the CBPR principle that calls for ongoing collaboration throughout the trajectory of a research project, ^{1,7}

including the dissemination of findings via peer-reviewed journals. The participation of community partners in writing for peer-reviewed journals not only ensures that authors incorporate community perspectives into the manuscript, but also builds the capacity of community partners in disseminating study findings.

We recommend that academic–community health partnerships develop norms and processes for their partnership at the onset of their work. Develop a process for dissemination of outcome findings from the partnership to both lay and academic audiences when the partnership begins. Partnerships should consider the following elements when planning for dissemination of findings via peer-reviewed journals:

- What is the process for developing a potential article?
 Who needs to be involved?
- What is the process for obtaining partnership agreement to write the article for a peer-reviewed journal?
 Who needs to agree?
- What is the process for asking all partners whether they are interested in contributing to a manuscript?
- What are the criteria for authorship? Given that some individuals will have less experience writing for peerreviewed publication and/or interest in writing for publication, will some individuals qualify for authorship even if they work in a limited capacity on manuscript writing?
- · How is authorship order determined?
- Given that all journals expect all authors to have granted approval of the final version, how will this approval be solicited and documented?³
- Should a parallel document be created that summarizes findings for lay audiences?
- How will the partnership determine who is responsible for writing each section?
- What will the writing process look like? How often will co-authors meet to review and discuss the manuscript?
- Are there any partners who, if not authors on the manuscript, need to review the manuscript before submission?

Once authors decide on the aims of the manuscript, authorship, and the roles of each co-author, the writing process can begin. It is likely that some partners will have little prior experience writing manuscripts for peer-reviewed journals. Individuals with more experience should explain to others

how peer-reviewed manuscripts submitted to academic journals differ from other forms of written communication, including the organization, tone, need to use citations, and need for heavy editing. Not providing sufficient information and guidance about the writing process can strain partnerships. Furthermore, partnerships can be strained by decisions about how to handle embargoed or previously published information that was not peer reviewed. When these issues arise, it may be important for both academic and community partners to make compromises in terms of when, what, and how to publish their work.

Writing manuscripts for peer-reviewed journals is an opportunity to enhance the capacity of partners related to disseminating research findings. Indeed, capacity building is a key CBPR principle and authors should include it among the "results" of their work. Consider nontraditional processes for capturing the thoughts of community partners (e.g., tape recording or journal entries) and displaying their insights within the manuscript (e.g., a rebuttal to comments made by academic partners, or an epilogue describing the action steps emerging from a project).

CHOOSING A TITLE

A good title grabs the reader's attention, ideally by highlighting the main aim or finding of the manuscript. Because CBPR is a long term to spell out in a title, we suggest that authors be creative in using other terms whose meaning will be obvious to readers who are not experts in CBPR. For example, editors and readers unfamiliar with CBPR may better understand phrases like "partnership" and "collaboration."

WRITING THE ABSTRACT

After the title, the abstract is the most often read portion of a manuscript. Many electronic search tools (e.g., MEDLINE and Wilson Social Science Abstracts) include the text of the abstract in their records. Because the content of a manuscript may change during the writing and revision process, we recommend that authors write the abstract last and ensure that its content is consistent with the information presented in the body of the manuscript. Format the abstract according to the journal's recommendations. We suggest that authors use a structured format (e.g., Introduction, Methods, Results, and Conclusion) even if the journal does not require it. For articles

about CBPR, the methods section of the abstract should briefly explain how and why you used a participatory approach, written in jargon-free terms as much as possible.

WRITING THE INTRODUCTION

Provide enough information in the introduction to orient readers to the rest of the manuscript, but do not attempt to summarize all of the literature on the topic. It is sufficient to cite the most pertinent references. Authors should generally write this section in the present tense to reflect current knowledge about the topic.

Explain the intended outcome(s), specific aim(s), and hypotheses of the manuscript, keeping in mind the unique contributions of CBPR as it relates to these items. Strengthen the rationale for the study by presenting your conceptual model or theory. Remember that CBPR is not a theoretical model, but the approach used to conduct the research.

The introduction of a CBPR manuscript should orient the reader as to why you used CBPR. Begin by briefly defining CBPR and consider differentiating CBPR from "communityplaced" research (e.g., research conducted in a community, but without ongoing, substantive community involvement). Subsequently explain the rationale for using CBPR. Often, CBPR is the overarching research approach because the host community is disproportionately affected by a health condition, hard to reach, poorly understood, or unchanged after using a traditional research approach to address a health problem. Translational research increasingly uses CBPR as academic-community health partnerships are frequently adapting and/or implementing interventions in community settings. 9 If the manuscript being prepared is not presenting empirical data, but rather describing lessons learned, theoretical or methodologic issues, or partnership-related issues, the authors should still describe the rationale for the project's use of a CBPR approach.

WRITING ABOUT THE METHODS

Describe the study design and key aspects of the methodology in the methods section. Because the methods section describes what investigators have already done, authors should write it in the past tense. Readers find it easier to follow if the section is divided into subsections that describe the study population, intervention (if one is used), study variables, measurement methods, and analytic methods. Cite references when using established methods. Make sure to document institutional review board approval(s) and disclose financial support for both the researchers and participants. There is no limitation to the study designs that can be employed in a CBPR study, so long as the community partners are involved in choosing the study design. A recent systematic review highlighted examples of CBPR studies that used experimental, quasi-experimental, and observational designs. ¹⁰

In addition to the standard elements described, CBPR manuscripts for peer-reviewed journals should define the community and describe the partnership. In defining the community, the authors should consider how the community defines itself (which might be different from how researchers define it) and consider having community partners do so in their own words. ^{11,12} In describing the partnership, discuss its creation, membership, focus, and involvement in the study.

CBPR articles should also describe how community partners were involved in the study design, data collection, and analysis. Specifically, manuscripts should describe which community partners were involved and the specific roles they played, preferably identifying people by their names, if they give consent for such identification. Authors should also describe how partners' involvement influenced the research design, data collection, and data analysis and interpretation. For example, community partners may have influenced research design by recommending the use of experimental, quasi-experimental, or observational designs. Community partners may have influenced data collection by suggesting study sites, measured variables, methods, or recruitment and retention strategies. Community partners may also influence data analysis and interpretation through their ability to provide contextual data to help explain study findings, or their recommendation to depict study findings in certain formats and products to maximize their accessibility to community members. These examples are not exhaustive; community partners can influence study design, data collection, and analysis in many ways.

WRITING ABOUT THE RESULTS

The results refer to what the investigators found, so authors should write this section in the past tense. In general, when presenting quantitative data, present the results of univariate or bivariate analyses before the results of multivariate analyses. Similarly, present the analysis of the overall study population before the analysis of subgroups. Do not repeat all of the data from the tables and figures in the text; rather, use the text to summarize the tables and figures and to present data not shown in the tables and figures. When presenting qualitative data, be sure to highlight themes or patterns. We recommend presenting each theme, providing data that support the theme, and commenting on the relation of the theme to other themes or to theoretical or conceptual frameworks that are emerging (inductive) or tested (deductive). Save commentary for the discussion section and refrain from including methods in the results section.

For empirical articles, in addition to reporting quantitative and/or qualitative findings, authors should consider reporting process outcomes (e.g., enhanced community capacity or community empowerment), the community's response to study findings (e.g., acceptance of results by community partners), and/or the impact of the study on the community. Whenever possible, to enhance the rigor of these process findings, use established measurement tools and methods.

Many CBPR articles written by academic–community health partnerships are not empirical. In these articles, authors should ensure that the results section clearly communicates their main points. For example, a "lessons learned" manuscript should clearly state the specific lessons learned. Similarly, a manuscript focused on theoretical and methodologic issues should clearly state what the theoretical and methodologic insights were that emerged from the partnership's work. Articles describing partnerships' impact on policy and practice should clearly describe the specific policy and practice changes that emerged.

WRITING THE DISCUSSION

To write a coherent discussion section that is easy for readers to follow, we recommend that authors work from an outline that covers a summary of key findings, strengths and weaknesses of the study, and implications of the study.³ These sections are likely to apply to empirically and non-empirically based manuscripts. Each part of the discussion has a different role, so authors may need to use a different verb tense in each part.

At the beginning of the discussion, authors should summarize the key findings and emphasize what is unique or innovative about the study. Unique to CBPR, authors should discuss how the academic–community health partnership influenced the interpretation and use of study findings. The tone of this section should be balanced and realistic. Do not include conclusions that are not substantiated by the results ¹³ and do not surprise the reader with new results in the discussion section.

Authors then should identify and explain the strengths and weaknesses of the study, including those inherent in the study design and the CBPR approach. Given the increasing use of CBPR to address an array of health issues using various research designs, methods, and approaches, a detailed and honest assessment of CBPR's strengths and limitations is valuable in guiding future research. Be sure to point out how the strengths and weaknesses of the study compare with those of previous studies, being careful to avoid being unduly critical of others' work. 14

The last part of the discussion should cover implications of the study for community and clinical practice, education, future research (including new CBPR studies), and/or health policy. This part should address issues such as the generalizability or applicability of the study to other communities. ¹⁵ By ending the discussion with the implications of the study, authors can end each manuscript strongly.

REFERENCES

Cite accurate and complete references, preferentially from landmark original research. Remember to provide support for factual statements or opinions derived from other work with references. Be careful when citing articles not to misrepresent the authors. Be aware that experts who could serve as reviewers for the submitted work may have written some of the cited articles. The use of references from sources (e.g., community data or newsletters) other than the peer-reviewed literature is common in CBPR; when citing such references, follow the journal's authorship guidelines. Many authors use reference management software, which helps to organize and format citations. However, it is still wise to review the reference list to ensure that it is complete and formatted according to the journal's instructions.

TABLES AND FIGURES

Use tables and figures to present data in a manner that is easy to interpret and remember. Titles and captions should be clear and sufficiently detailed to be meaningful to people who have not read the entire text of the article. Make sure to label the rows and columns of each table clearly and avoid using unfamiliar abbreviations. Specify the units of measurement. Round quantitative results to a number of significant figures appropriate to the precision of the data. In general, authors should round confidence intervals and *P*-values to no more than three decimal points.

Figures are a powerful method of highlighting the key findings from a study! Think carefully about ways to incorporate at least one figure into each manuscript. Wainer provides a detailed overview of how to display data appropriately. When presenting tables and figures, keep in mind that these visual images may be the parts of the manuscript that are most often disseminated to lay audiences to summarize the study findings. Accordingly, consider designing tables and figures in ways that are easy to interpret by presenting essential information in the most intuitive manner possible.

SUMMARY

This article provides general guides for writing strong manuscripts about CBPR for peer-reviewed journals, with particular emphasis on how to communicate the unique features of CBPR. Additionally, this article provides recommendations on how academic—community partnerships can work together to write manuscripts for peer-reviewed journals; collaboration should continue into the dissemination of study findings. As additional aids, Table 1 (constructed by one of our co-authors) provides a mnemonic that briefly summarizes our key points; the Appendix lists selected articles that illustrate how to present CBPR. At the end of each reference in the appendix is a brief note indicating how the article described a unique feature of CBPR.

These guides focus on writing for peer-reviewed publication. This does not mean that other forms of written communication are less important for community health partnerships. We believe that CBPR will have the greatest impact on the health of the public if results are disseminated widely through all available channels, including publication in peer-reviewed journals. By understanding how to prepare a manuscript about CBPR for a peer-reviewed journal, authors should be more effective in disseminating information that will help other communities benefit from their partnership's work.

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Table 1. Key Points to Remember When Writing About CBPR: The PRESS Mnemonic

Pay attention to general principles for organizing each part of a paper.

Reinforce text with strategically selected and clearly labeled tables and figures.

Explain why a CBPR approach was used.

Specify how a CBPR approach was used.

Specify what the CBPR approach added to your project.

Appendix: Selected Examples of How to Present CBPR in Peer-Reviewed Journals

Introduction

- Lam TK, McPhee SJ, Mock J, Wong C, Doan HT, Nguyen T, et al. Encouraging Vietnamese-American women to obtain Pap tests through lay health worker outreach and media education. *J Gen Intern Med.* 2003;18:516–24. Note how the last paragraph on page 516 describes the formation of the project.
- Krieger JW, Castorina JS, Walls ML, Weaver MR, Ciske S. Increasing influenza and pneumococcal immunization rates: a randomized controlled study of a senior center-based intervention. *Am J Prev Med.* 2000;18:123–31. **Note on page 124 how the authors describe the challenges in traditional immunization delivery models and how CBPR could help to improve immunization rates.**
- Ledogar RJ, Penchaszadeh A, Garden CC, Iglesias Garden. Asthma and Latino cultures: Different prevalence reported among groups sharing the same environment. *Am J Public Health*. 2000;90:929–35. **Note the detailed description of the partnership in the second and third full paragraphs on page 930.**
- Schulz AJ, Israel BA, Parker EA, Lockett M, Hill Y, Wills R. The East Side Village Health Worker Partnership: Integrating research with action to reduce health disparities. *Public Health Rep.* 2001;116:548–57. **Note the detailed description of the partnership on pages 549 and 550.**
- Vander Stoep A, Williams M, Jones R, Green L, Trupin E. Families as full research partners: What's in it for us? *J Behav Health Serv Res.* 1999;26:329–44. **Note the authors' use of conceptual models on pages 333 and 334.**
- Wismer BA, Moskowitz JM, Min K, Chen AM, Ahn Y, Cho S, et al.

 Interim assessment of a community intervention to improve breast and cervical cancer screening among Korean Study American women. *J Public Health Manag Pract*. 2001;7:61–70.

 Note how the last two paragraphs on page 62 describe unmet needs among Koreans and how they used CBPR to engage the community.

Methods

- Gotay CC, Banner RO, Matsunaga DS, Hedlund N, Enos R, Issell BF, et al. Impact of a culturally appropriate intervention on breast and cervical screening among native Hawaiian women. *Prev Med.* 2000;31:529–37. **Note how on page 531** the intervention uses community health workers who were trained to be culturally sensitive.
- Krieger JW, Song L, Takaro TK, Stout J. Asthma and the home environment of low-income urban children: Preliminary findings from the Seattle-King County healthy homes project. *J Urban Health*. 2000;77:50–67. **Note the recruitment strategies mentioned on page 52.**
- Lauderdale, Kuohung V, Chang SL, Chin MH. Identifying older Chinese immigrants at high risk for osteoporosis. *J Gen Intern Med.* 2003;18:508–15. Note the detailed description of the project development on pages 509 and 510, especially the last two paragraphs under "Protocol and Recruitment," which demonstrate cultural sensitivity.

- Masi CM, Suarez-Balcazar Y, Cassey MZ, Kinney L, Piotrowski ZH. Internet access and empowerment: A community-based health initiative. *J Gen Intern Med*. 2003;18:525–30. **Note how the community and researchers worked together in the last paragraph under "Intervention" on page 526.**
- Minkler M, Thompson M, Bell J, Rose K. Contributions of community involvement to organizational-level empowerment: The Federal Healthy Start experience. *Health Educ Behav*. 2001;28:783–807. **Note the description of the advisory committee on page 789.**

Presenting Results

- Daniel M, Green LW, Marion SA, Gamble D, Herbert CP, Hertzman CP, et al. Effectiveness of community-directed diabetes prevention and control in a rural Aboriginal population in British Columbia, Canada. *Soc Sci Med.* 1999;48:815–32. **Note the description of "Whole systems norms and values" on page 826.**
- Perera FP, Illman SM, Kinney PL, Whyatt RM, Kelvin EA, Shepard P, et al. The challenge of preventing environmentally related disease in young children: Community-based research in New York City. *Environ Health Perspect*. 2002;110:197–204. Note the detailed description of community outreach on pages 201 and 202.
- Wagenaar AC, Gehan JP, Jones Webb R, Toomey TL, Forster JL. Communities Mobilizing for Change on Alcohol: Lessons and results from a 15-community randomized trial. *J Comm Psychol.* 1999;27:315–26. Note the detailed process measures described on pages 320 to 324.

Discussion

- Angell KL, Kreshka MA, McCoy R, Donnelly P, Turner-Cobb JM, Graddy K, et al. Psychosocial intervention for rural women with breast cancer. *J Gen Intern Med.* 2003;18:499–507. Note the section entitled "Lessons for Community-Research Partnerships" on page 505.
- Green L, Fullilove M, Evans D, Shepard P. "Hey, mom, thanks!":

 Use of focus groups in the development of place-specific materials for a community environmental action campaign.

 Environ Health Perspect. 2002;110 Suppl 2:265–9. Note how they developed their materials in the second to last paragraph on page 269.
- Horowitz CR, Williams L, Bickell NA. A community-centered approach to diabetes in East Harlem. *J Gen Intern Med*. 2003;18:542–8. Note the frequent mention of CBPR throughout the discussion section.
- Maciak BJ, Guzman R, Santiago A, Villalobos G, Israel BA. Establishing LA VIDA: A community-based partnership to prevent intimate violence against Latina women. *Health Educ Behav*. 1999;26:821–40. **Note the section, "Facilitating Factors and Lessons Learned: Implications for Health Education," on pages 834 to 836.**

288

Northridge ME, Yankura J, Kinney PL, Santella RM, Shepard P, Riojas Y, et al. Diesel exhaust exposure among adolescents in Harlem: A community-driven study. *Am J Public Health*. 1999;89:998–1002. Note the description of the partnership and how it shaped the study design on page 1001.

Reese DJ, Ahern RE, Nair S, O'Faire JD, Warren C. Hospice access and use by African Americans: Addressing cultural and institutional barriers through participatory action research. *Soc Work.* 1999;44:549–59. **Note the practice implications of their work on page 556.**

REFERENCES

- Israel BA, Schulz AJ, Parker EA, Becker AB. Review of community-based research: Assessing partnership approaches to improve public health. Annu Rev Public Health. 1998;19: 173–202.
- O'Toole TP, Aaron KF, Chin MH, Horowitz C, Tyson F. Community-based participatory research: Opportunities, challenges, and the need for a common language. *J Gen Intern Med.* 2003;18:592–4.
- Huth EJ. How to write and publish papers in the medical sciences. 2nd ed. Baltimore: Williams & Wilkins; 1990.
- Kliewer MA. Writing it up: A step-by-step guide to publication for beginning investigators. AJR Am J Roentgenol. 2005;185:591–6.
- Goodman NW. Hazards of the passive voice. Nature. 1996; 381730.
- Community—Campus Partnerships for Health. The tools and resources page [article on the Internet; cited 9 Feb 2007]. Available from: http://depts.washington.edu/ccph/partner-ships.html#Tools.
- Jones L, Wells K. Strategies for academic and clinician engagement in community-participatory partnered research. *JAMA*. 2007;297:407–10.
- Pitkin RM, Branagan MA, Burmeister LF. Accuracy of data in abstracts of published research articles. *JAMA*. 1999;281: 1110–1111.

- Westfall JM, Mold J, Fagnan L. Practice-based research—"Blue highways" on the NIH roadmap. JAMA. 2007;297:403

 –6.
- Viswanathan M, Ammerman A, Eng E, Garlehner G, Lohr KN, Griffith D, et al. Community-based participatory research: Assessing the evidence. Evid Rep Technol Assess (Summ). 2004;99:1–8.
- Israel BA, Eng E, Schulz, AJ, Parker, EA. Methods in community-based participatory research for health. San Francisco: Jossey-Bass; 2005.
- Minkler M, Wallerstein N. Community based participatory research for health. San Francisco: Jossey-Bass; 2003.
- Skelton JR, Edwards SJ. The function of the discussion section in academic medical writing. BMJ. 2000;320:1269–70.
- 14. Docherty M, Smith R. The case for structuring the discussion of scientific papers. *BMJ*. 1999;318:1224–5.
- Green LW, Glasgow RE. Evaluating the relevance, generalization, and applicability of research: Issues in external validation and translation methodology. Eval Health Prof. 2006;29:126–53.
- 16. Wainer H. How to display data badly. *Am Statistician*. 1984;38: 137–47.