Principles of Authorship in Health Promotion Research

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In our work in the area of health promotion research, we have noted that attitudes towards authorship (both within and outside academia) are changing.¹⁻¹³ We find that the number and variety of individuals who are interested in participating in the process and products of our research is increasingly heterogeneous. This poses challenges of determining the “value of work” and assigning credit for contributions.¹⁴⁻¹⁸ Our decisions about authorship are also laden with challenges more relevant to academics, such as the need to maintain individual visibility and viability (publish or perish) in a health promotion environment that fosters multiple author papers.¹⁹⁻²⁴

Determination of “value of work”

Traditionally, assignment of authorship has been based on status and work. Status is a product of longevity and productivity. In some cases, individuals have been granted authorship by virtue of status alone. With status, comes the option of “sharing” credit. Over and Smallman²⁵ identified a phenomenon they termed “noblesse oblige” or sharing of credit with lesser lights. The pattern of sharing credit varies according to where a “senior” faculty member is in his or her career. These attitudes are very much confounded with one’s role and status in a given project.²⁶⁻²⁹

We recognize that the parameters and definition of high status are changing in that many health promotion research stud-

ies are placing greater emphasis on participatory partnerships. Health promotion researchers may tend to be more egalitarian in sharing credit than researchers from other less multidisciplinary or community-oriented backgrounds.^{30,31} Participatory research engenders an ethic of collaboration, inclusiveness, and sharing. Participatory research may also serve to fuel a greater trend towards increased altruism among senior researchers. These altruistic trends may be countered by the tradition (in some disciplines) of honorary authorship (sometimes first author) for principal investigators (PIs); expectations of other advising faculty; and most importantly, the structure and reward system of academia.

Increasingly, we struggle with the reality that single author papers continue to be held in high regard and there continues to be skepticism of multiple author papers among tenure and promotion review committees. Historically, academia has not rewarded its members for creating and conducting community-based, participatory research.

The question of status also bears on the issue of power. Imbalances in real or perceived power across individuals are likely to complicate the determination of value of work. Two special cases are the student-teacher relationship,³² and collaborations where academics and non-academics are involved.^{33,34} Recently, there has also been a discussion of credit for statisticians, newsletter editors and peer reviewers.³⁵⁻⁴³ Some organizations have even discussed the possibility of doing away with the concept of authorship.

We support the view⁴³ that in student-teacher relationships there is a paramount need: “to specify clearly and mutually the

requirements to be met for a given project, [and] respect when possible the voluntary nature of the relationship.” We note that one’s contribution to a particular project may be confounded with one’s role in a setting. Different roles bear different inherent responsibilities and liabilities. In many health promotion studies, local or community participants seldom receive the “recognition they deserve.” The inclusion and valuing of community representatives requires a re-thinking of the “value” of different roles in research projects.

Assigning authorship credit

Like researchers from many disciplines, we have struggled to identify and value the dimensions of contribution or work involved in research.⁴⁴⁻⁴⁷ We agree that “creative aspects” of research warrant credit.⁴⁸ Previous research⁴⁹ supports the view that research design and writing are ranked as contributions that most deserve recognition of authorship. In contrast, activities such as collecting and analyzing data and level of time commitment are often judged to be insufficient to warrant authorship. Like others,^{50,51} we believe that status and power should not unduly enter into the determination of credit for authorship.

However, it is also interesting to reflect on how various disciplines deal with questions of authorship. In doing so, two themes emerge. First, the different disciplines tend to create similar lists of dimensions. Second, there is greater divergence or disagreement (across disciplines) when it comes to the value or emphasis placed on a given dimension when assigning credit. Points of diversity include: the question of assigning status-related points, the question of assigning points for creative versus technical input, and finally, the question of

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providing recognition for junior contributors.

Multiple authors

A further ironic and troubling phenomenon lies in the dramatic increase in the number of multiple author papers over the past few decades.^{21,50,52-60} If health promotion research aims to be more inclusive in assigning authorship, then we must also deal with the absurdity that sometimes occurs with multiple author papers. For example, Kassirer and Angell² recently reported a paper with 155 physician authors and 63 institutions. In such cases, membership on the list of authors becomes difficult to interpret and borders on being meaningless.

Co-authorship of articles in journals is also causing serious academic problems. Many persons who are listed as authors do not contribute as authors but rather as clinical investigators, statisticians, or program directors.⁶¹ One can question whether in effect, a dishonest practice has developed that allows contributors to such research to receive the honorific title of author when this title is not deserved or earned. The structures and policies of our universities also contribute significantly to the origins of attitude towards "ownership" of data and to confusion and misunderstandings of researchers' "rights" to data. Many researchers subscribe to the concepts of "my grant" and "principal" investigator.

Health promotion faces special variants of the problems that have emerged in multi-centre, clinical research.⁶²⁻⁶⁶ As health promotion researchers, we are wise to recognize and guard against the emergence of similar problems in our field. We believe that a partial solution may lie in shifting from the concept of authorship to a more general concept of receiving credit. Persons who contribute to articles as authors should be so credited, but those who contribute as clinical investigators, for example, should receive credit as clinical investigators, not authors. Persons receiving credit should be permitted to list non-author contributions in their curricula vitae.

Health promotion research also faces important questions regarding the age-old issue of intellectual property and (mis)

conceptions about the ownership of publicly supported scientific research.^{67,68} The issue of ownership of data (and any subsequent product) becomes even thornier when the research involves multiple stakeholders from a variety of academic disciplines and/or community groups.⁶⁹

Principles of authorship

We believe that any scheme or method for determining and recognizing authorship credit must be grounded in some basic principles or values.⁷⁰ Health promotion researchers can look to basic principles for determining authorship that have been widely adopted, particularly in the biological/physical sciences.⁷¹⁻⁷⁵ These are: each author should have participated sufficiently in the work to take responsibility for the content; participation *must* include conception or design of the work represented by analysis or interpretation of data; drafting the article or revising it for critical content; and final approval of the version to be published; participation solely in the collection of data does not warrant authorship; each part of the content of an article critical to its main conclusions and each step in the work that led to its publication must be attributable to at least one author; and finally, persons who have contributed intellectually to an article but whose contributions do not justify authorship may be named and their contribution noted.

These principles^{71,72} are based on the notion that "an author cannot publicly defend the intellectual content of an article unless he/she thoroughly understands the basis for its origin and can testify to the validity of its argument." While the applicability of such principles may be tested in situations involving research collaborations with community members, they offer a starting point for discussions of authorship in health promotion research. They also serve to highlight several key issues. First, what are the "objects of interest" to be used in assessing authorship. The question of "objects of interest" is reflected in attempts by many professions and disciplines to develop and adopt "official" authorship guidelines.^{76,77}

The second question lies in establishing a metric or "standards of acceptability" for a given contribution. This issue is reflected

in the various schemas or scoring systems which have been proposed for assigning authorship and credit.^{50,78-83} There is no shortage of suggested solutions in the literature ranging from multiple categories of authorship, to mathematical formulae, to assigning weights and credit to various tasks.

We believe that the weights for specific contributions to a given project are less important than the careful and systematic examination of each person's contribution(s). While they are useful in identifying items for discussion among project members, indiscriminate use of quantitative authorship scoring systems may also lead to a noncritical "cookbook" mentality in assigning credit and authorship. Rather than assigning arbitrary weights to elements of work, it is important to follow a process and a series of clear and consistent steps in determining authorship.^{54,84,85} These include: providing a brief summary of the research idea, determining the audience/forum for the report, consultation among PI and project members to determine if the paper's subject is consistent with the general goals, publication and the basic theoretical foundations of the project. Drafts and the final version of the report must be circulated for approval prior to publication and/or presentation.

From our review of the literature, we suggest the following elements be considered in implementing a policy for assigning authorship credit and recognition of contributions to health promotion research activities. These elements may be equally applied to the question of authorship in regards to conference or other presentations.

The first step in setting an authorship policy is the establishment and adoption of a set of guiding principles. Such principles are grounded in the need for clarity, consistency, fairness, and representativeness. The following principles are suggested:

- Authorship guidelines should be discussed and consensus reached as early as possible in any research collaboration. Collaborators should be open and honest in their discussion of authorship issues.
- Authorship should be clearly distinguished from other research-related

activities and/or project implementation or program development activities.

- The opportunity for authorship should be open to all collaborators on a given project. All project collaborators should be informed of any possible or intended publications as early as possible.
- Authorship credit should be based upon work contributed rather than on power and status. Work should be defined and weighted in a manner that recognizes the potential for contribution of both academic and non-academic collaborators.
- Individuals should not be excluded from consideration as authors by virtue of their having received some other form of recognition.
- Participation must include conception or design of the work represented by analysis or interpretation of data, and drafting the article or revising it for critical content. Authors should have the opportunity to approve the version to be published.
- Authorship should be clearly distinguished from acknowledgement.
- Acknowledgement should include persons who produced the data if they are not directly involved as authors in a given project or those who made special contributions but do not warrant authorship.
- Acknowledgement should also recognize financial and institutional support or research.

This commentary is intended to serve as a vehicle for discussion and establishment of a policy and a set of guidelines for health promotion research. The adoption of any policy or guidelines should only be undertaken after opportunity for significant input from the various stakeholders. Further, we suggest that issues of authorship and acknowledgement are best considered early on in a project right through to issues regarding the final ownership/interpretation of results and the ultimate publication or dissemination of results.⁸⁶ While the genesis of these principles lies in previous work in the area of participatory research in health promotion, the suggested approach is relevant to researchers, practitioners, policymakers and lay collaborators involved in public health and population health promotion research.

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