

Authorship in Global Mental Health Research: Recommendations for Collaborative Approaches to Writing and Publishing

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ABSTRACT

Background: Collaborations among researchers, clinicians, and individuals with mental illness from high-income countries (HICs) and low- and middle-income countries (LMICs) are crucial to produce research, interventions, and policies that are relevant, feasible, and ethical. However, global mental health and cultural psychiatry research publications have been dominated by HIC investigators.

Objective: The aim of this review was to present recommendations for collaborative writing with a focus on early career investigators in HICs and LMICs.

Methods: A workshop was conducted with HIC and LMIC investigators in Nepal to discuss lessons learned for collaborative writing. The researchers had experience in cross-cultural psychiatric epidemiology, health services research, randomized controlled trials, and projects with war and disaster-affected populations in complex humanitarian emergencies including child soldiers and refugees. Additional lessons learned were contributed from researchers engaged in similar collaborations in Haiti.

Findings: A step-by-step process for collaborative writing was developed.

Conclusions: HIC and LMIC writing collaborations will encourage accurate, ethical, and contextually grounded publications to foster understanding and facilitate reduction of the global burden of mental illness.

Key Words: authorship, developing countries, education, mental disorders, publishing, world health

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INTRODUCTION

In the late 1890s and early 1900s, the first major expeditions in global mental health (GMH) research took place in the form of missions from Europe to the South Pacific.¹ W.H.R. Rivers, a psychiatrist and an anthropologist, and Charles Seligman, an anthropologist, departed from

England to travel to the Torres Strait between Australia and Papua New Guinea to study mental illness among remote island populations. A few years later, Emil Kraepelin, considered the father of modern psychiatric classification, traveled from Germany to the island of Java to study mental health in a Dutch-run asylum with Javanese patients.²

These trips addressed interesting questions that remain in GMH research today. Rivers' work examined local practices of healing.³ He later used his study of healing in the Torres Strait to develop treatment for mental health problems among British soldiers who fought in World War I. His work demonstrates that studies in cultural settings far removed from Western society can be instrumental in developing healing practices in Western contexts. Kraepelin's studies with Javanese and later with American Indians and African Americans were attempts to identify what aspects of mental disorders were consistent across cultures and what other aspects were more plastic in the face of culture. He was trying to determine whether his original

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Box 1. Common Mistakes in Global Mental Health Research Publications

There are numerous reasons for inequitable representation of LMIC collaborators in academic publications. Four common mistakes made in GMH collaboration include the following:

1. *No representation at all!* The worst possible outcome is that research collaborators in LMICs are not part of the writing process, or even worse, are part of the writing process but are not included in the authorship list. The solution to this problem is inclusion. A similar problem arises when LMIC collaborators solely participate in paper writing as co-authors and never as first authors. We strongly encourage collaborators from HICs and LMICs to seek ways to facilitate more participation of LMIC researchers in paper writing, including support for lead authorship.
2. *Token representation.* In this scenario, LMIC collaborators are included as authors on papers but are not actively engaged in the writing process. This is not something that is unique to LMIC-HIC collaborations, but it is an important issue now because it can set a precedent in the early stages of GMH's expansion as a field. Token representation also demonstrates a form of devaluing another's contribution. We have struggled with this over the years at TPO-Nepal and have heard comments such as, "I've been on your papers, but some of them I've never actually read." This is a work in progress. The solution to this problem is laid out in the steps below regarding setting expectations and managing duties according to experiences levels.
3. *Exclusion based on fear of biasing results.* A foreign researcher in Nepal told the first author that he/she did not include Nepali research collaborators such as field researchers and translators in paper writing because "If they knew the hypotheses and research questions, it would bias the results. The researchers would only give you what you wanted to find." Although the concept of a "double-blind" in experimental psychology and clinical intervention research is important, it is a separate issue than inclusion of research staff and collaborators in the write-up and publication phase. In our experience, a "blinded" research staff does not improve the quality of the outcomes; it is quite the opposite. Moreover, hypotheses are always accompanied by null hypotheses to create a dialogue that the outcomes could go in different directions. At TPO-Nepal researchers are ideally open to any outcome they may find. Because of this openness, we have had community researchers come back from field sites with very different ideas than our original hypotheses.
4. *Language barriers.* A colleague recently said, "I know Mr. X doesn't speak or read English; why is he one of your co-authors?" A common reason that collaborators may not be included in paper writing is the issue of a language barrier. Some collaborators are not going to be able to contribute directly by drafting or editing sections of text in English. The solution to this problem is the inclusion of a translator during the paper writing process. When budgeting for projects and translators, strongly consider budgeting for translation during the paper writing process.

observations of mental disorders in Germany represented common pathways of psychopathology versus an epiphenomenon of German culture.

However, these missions, like much of anthropology and cross-cultural psychiatry until recently, represent extractive approaches. There was no involvement of indigenous residents in the Torres Strait or Java in the analysis and dissemination of knowledge acquired during these missions. This was in part due to attitudes related to cognitive primitivism of non-European groups,⁴ lack of educational infrastructure in these settings, and limitations in communication and technology.

Today, with higher literacy rates, greater interconnectivity, and autonomous rather than colonial governance, collaborations rather than extractions should be the standard of practice. However, there is still a long way to go for comparable representation of research collaborators between low- and middle-income countries (LMICs) and high-income countries (HICs). Although research assistants, translators, and collaborations across multiple levels are crucial to the conduct of GMH research, representation in the writing and publication process is lacking (see Box 1 for common mistakes in GMH publications).

The aim of this article is to provide an introduction to collaborative manuscript writing for young researchers to prepare for journal submission. Although basic guidelines for the steps of this process are widely available,⁵ our focus is using a collaborative ethical approach, with a special emphasis for LMIC-HIC collaborative writing. The inclusion of LMIC collaborators in both the research and writing process has numerous benefits including more accurate description of methods, context, and limitations in conducting the research; greater linguistic proficiency in explaining language use and cultural adaption of instruments and interview guides; more appropriate interpretation of findings; more realistic assessment of feasible applications of findings; and advancement of career goals for LMIC research partners.

This article is a result of a collaborative writing and publishing workshop conducted at Transcultural Psychosocial Organization (TPO) Nepal, where experienced, mid-career, and field researchers from HICs and LMICs participated. We brainstormed and identified challenges in academic writing specifically for the LMIC researchers and came up with a list of suggestions that

would be useful to individuals in LMICs and HICs in collaborative writing processes. The goal of the workshop was to use prior experiences to develop new recommendations and action plans for collaborative writing projects. Collaborators who have worked in other LMIC settings provided additional experiences and recommendations based on their writing and publication endeavors.

NINE STEPS FOR COLLABORATIVE PAPER WRITING

Step 1: The Question

Ideally, the main question for the paper should be the question proposed for grant submission and institutional review board (IRB) applications—which should themselves be developed in close collaboration with LMIC colleagues. The focus of writing a paper is relatively straightforward: there is a primary question and corresponding answer. However, studies often have secondary hypotheses and exploratory hypotheses in addition to the primary hypothesis. Therefore, the first step is to identify a few possible questions that could be the centerpieces of different papers.

Once you have a few candidate questions, it is important to select one that will guide your writing process. In our workshop at TPO-Nepal, we discussed 3 criteria for selecting a main question that will be the centerpiece of the manuscript:

1. *Is this something you care about?* To maintain the stamina to get through the writing process (and moreover the stamina to get through the review process), this should be something that provides internal energy to persevere.
2. *What contribution(s) will this make to alleviate suffering?* What difference will this study make to the participants who gave you their time and shared their lives with you? We recommend writing up the response to this question in bullet points because it will shape how you write your introduction and discussion. Issues to consider here are the prevalence of a problem, the economic and emotional burden on caregivers and society, and the availability of resources to address the mental health problem.
3. *Is this something new?* This last question is the least important but also is crucial to address. What new knowledge does this study contribute? For example, as of 2009, more than 80,000 people globally had participated in 181 studies examining post-traumatic stress disorder and depression among survivors of torture and other political violence.⁶ Therefore, in deciding on a research question to focus the writing process, try to pick an angle that will be novel. Moreover, the novelty should be more than just testing the same association in a new setting. For example, if this study is in a new setting, are there new contributions in relation to specific mediators or moderators? Could

this study tell us something new about resilience? Are there cultural, ecological, or biological factors that lead to a hypothesis about different outcomes?

Step 2: Co-authors and Dividing the Work

There are few things that sully the exciting challenge and interesting questions of GMH research as much as disputes over authorship. The key to addressing this—as with any mental health promotion activity—is prevention. Ideally, author teams are decided on at the outset of the research so that roles and outputs are clear. The earlier this happens, the clearer the roles will be in this process. In many cases, the full authorship team may not be clear at the project inception because of changing roles and level of investment. Therefore, based on the needs of the project, lead authors may be determined at different points in a project: onset of the project, once data are collected, or after analysis.

There are myriad approaches to building author teams for an equitable division of labor with appropriate LMIC and HIC representation. A central issue for LMIC-HIC collaborations is distributing lead authorship for different outputs at the same time as having mechanisms in place (eg, mentoring, workshops, coursework) to be develop skills needed to adequately perform the role of lead author. In Kosovo, a partnership was formed between Kosovar mental health clinicians and HIC clinicians and researchers who are experts in the field of family therapy. The Kosovar Family Professional Educational Collaborative followed a model wherein authorship alternated between American and Kosovar contributors.^{7,8} This division assured dyads of Kosovar-American contributors at each level, rather than having all LMIC contributors sandwiched somewhere between fourth and second-to-last authorship.

If all authors are at approximately the same level of experience with article writing, project components can be divided so that each team member chooses a first author piece. For the pieces in which they are not first author, team members take on different roles as co-leads and other levels of contribution. It is the responsibility of the lead and/or senior author to assemble the appropriate team of co-authors. It is important to be cautious about becoming overly inclusive and inviting too many co-authors, which may dilute individual authors' contributions. This can result in many contributors with only token representation. The challenge is to achieve a balance between recognizing and including those who have contributed to the study and allowing all authors the opportunity to make substantial contributions to the paper while engaging in a genuine professional development experience (see Box 2 for authorship guidelines).

An increasing number of journals, such as the *BMC* series, *PLoS*, and *JAMA*, ask for descriptions of specific contributions by each author. Outlining these roles at the beginning of the writing process is helpful in deciding who is invited to be an author. Once individuals are invited, the order of authorship should be established

Box 2. Authorship Guidelines

The International Committee of Medical Journal Editors (www.icmje.org/ethical_1author.html) define an author as one who significantly contributes intellectually to a published study by being responsible for a minimum of one portion of the work with an additional general understanding and trust over the other authors' contributions, abilities, and integrity. The Council of Science Editors (www.councilscienceeditors.org/i4a/pages/index.cfm?pageid=3355) has guidelines to avoid guest authorship, honorary or gift authorship, and ghost authorship. Salas-Lopez and colleagues⁹ have developed 6 basic procedures for authorship and membership guidelines for writing in collaborative groups:

1. Authorship and its respective order being determined at the commencement of the writing group's activity;
2. Authorship to be determined based on the group members' contributions to the manuscript;
3. First authorship being granted to the individual who writes the first draft and leads the subsequent revisions;
4. Second authorship being granted to those with the responsibility of providing significant assistance to the first author for writing and revising the manuscript;
5. Third authorship and below being granted to those who assist with literature searches and edits by request of the first author; and
6. Excluding authorship from those who are not involved with the project or preparation of the manuscript.

They recommend reserving the acknowledgments for expressing gratitude to those who assisted with support or ideas but were not significantly involved in the development and revision of the manuscript.

from the outset so that each author is clear about the extent of expectation for his or her contribution. Possible divisions in write-up include methods section (setting, ethical conduct, sample and sampling, instruments), results (including methods section for qualitative or quantitative analysis and outcome of those analyses), literature review for bullet points that will become the introduction and discussion, and discussion and introduction write up. The discussion can be further divided into limitations and implications sections.

We recommend putting together an outline of 10 PowerPoint slides to guide the paper-writing process moving forward. This will be helpful in coordinating with the co-author team and can be fleshed out into a 10-slide presentation for conferences and academic meetings. [Table 1](#) outlines the contents of the 10 slides.

Some LMIC-HIC collaborations represent individuals at different stages of experience and aptitude in writing. When thinking about writing articles with collaborators in LMICs, capacity building can work best when based on the theories of the Russian child psychologist Lev Vygotsky, who wrote about the zone of proximal development. In Vygotsky's approach, people learn best from others who have recently mastered the skill being taught. We have found that this theory applies in our own medical and graduate school training. As we learned aspects of research implementation and manuscript writing, we worked with other TPO-Nepal staff to pass on these skills.

Step 3: Selecting a Journal

Choosing a journal is an important step that should occur early in the writing process. Once you have your team, an outline of your paper in 10-slide form, and assigned sections, you can select a journal for initial submission. The journal's author guidelines will dictate the word limit of the manuscript, the style and

composition of sections, and the formatting for tables and figures. A first question in choosing a journal is deciding whether or not you will pursue an open-access journal. If you have funds available to pay for open access, then you could choose almost any journal and pay the fee for open access. If you do not have those funds, some open-access journals accept petitions from student researchers for waiving the publication fee. If a LMIC collaborator is the corresponding author, then the fee is typically waived.

If not selecting an open-access journal, try to find a journal that is widely cited by others in your field. *Social Science & Medicine* (SSM) has a longstanding tradition of publishing global health and medical anthropology research and has a rapid turnaround for publication. *Culture, Medicine and Psychiatry* publishes both qualitative and quantitative research as well as clinical pieces and has a rapid turnaround for publication. *Intervention: International Journal of Mental Health, Psychosocial Work and Counselling in Areas of Armed Conflict* (www.interventionjournal.com), is a good source for descriptions of interventions and a good place to publish papers on development of interventions in GMH.

The choice of journal strongly influences your literature search. Journal editors often will look at the number of times their own journal is cited in the manuscript submitted. Once you decide on a journal for submission, search its recent contents and cite recent articles from that journal.

Step 4: Literature Review

The literature review is a nonlinear process that is important at each stage of writing. Through preparing for the study, submitting grants, and IRB applications, much of the pertinent literature should have already been reviewed by the time it comes to the writing process. However, with time elapsed for new studies and

Table 1. Ten-Slide Structure for Outlining the Writing Process

| Slide No. | Content | Initial Outline | Final Presentation |
|-----------|---|--|---|
| 1 | Question | Key question in text form | Key question in text form |
| 2 | Background | Bullet points related to alleviation of suffering and novel contribution | Add literature citations to support bullet points |
| 3 | Methods I: implementation | Bullet points on setting, sample recruitment, and instruments | Add psychometric properties of instruments; add research site map |
| 4 | Methods II: analyses | Describe plan for analysis: statistical analysis (quantitative) or coding plan for and analytic approach (qualitative) | Describe final analyses conducted (quantitative) or coding tree development and inter-rater reliability (qualitative) |
| 5 | Sample demographics | For both quantitative and qualitative papers, provide a table of initial sample demographics, including language of engagement | Simplify table including only key variables used in subsequent analyses, retain language of engagement |
| 6 | Univariate and bivariate results (quantitative paper) or major themes (qualitative paper) | Proposed univariate and bivariate tests: independent and dependent variables, test type (quantitative); Proposed themes for coding process (qualitative) | Final univariate and bivariate analyses (quantitative); final themes (qualitative) |
| 7 | Multivariate results (quantitative paper) or codes (qualitative paper) | Proposed multivariable tests: independent and dependent variables, test type (quantitative); Proposed codes for each theme (qualitative) | Final multivariate analyses (quantitative); final codes (qualitative) |
| 8 | Text summary of main findings | Three bullet points of expected main findings | Three bullet points of final findings after analyses |
| 9 | Implications | Proposed theoretical implications; proposed public health implications; proposed clinical implications | Final theoretical implications; final public health implications; final clinical implications |
| 10 | Limitations | Known limitations of study design, implementation, and data quality | Effect of known limitations on interpreting findings; suggestions for addressing limitations in future studies |

potentially greater clarity of the research questions, it would be helpful to repeat the search and update the literature. New questions may have arisen among the research team during the study that lead to foci that were not fully covered in the prior literature searches. When working with collaborators from LMICs, it is helpful for them to obtain login and password information for the search site HINARI (<http://www.who.int/hinari/en/>). The HINARI Access to Research in Health Programme established by the World Health Organization (WHO) provides free or very low-cost online access to the major journals in biomedical and related social sciences to local, not-for-profit institutions in developing countries. If you have regular collaborators in an LMIC, it is worth exploring whether you can get them an adjunct appointment at a university in an HIC where they would have access to library materials for conducting

literature searches. Google Scholar has an “Alerts” function that allows anyone, regardless of academic affiliation, to monitor the most up-to-date publications in your area of interest and to follow the publications of specific researchers. In each country, young researchers should also identify local resources.

Our last point about references: use reference software! When working in a collaborative environment with numerous people making text edits, managing citations is much more effective with a shared reference file. Google Scholar and journal websites enable easy downloading of citations to EndNote and similar programs.

Step 5: Methods

The methods section is an area where contribution from LMIC team members is especially critical to produce an accurate and high-quality manuscript.

Describing the setting. The setting section should address 2 levels: the country level and the research implementation site. Country details can include geographic location, human development and gender development indices, population, and per-capita income. Any country-level data on mental health also should be included, such as prevalence rates, cultural conceptions and explanatory models of mental health, data on available services, mental health policies or legislation, and help-seeking practices. The WHO Atlas can be a resource for some of this information, but it becomes outdated quickly so try to get the most recent research data.

Information on the specific site of the study is helpful to provide further context. Does this region represent a poorer or wealthier section of the country? Are the dominant languages the same as the national language? Any specific information on local prevalence, cultural conceptions of mental health, help-seeking practices, and available services are helpful to include here, especially if there are differences from national level statistics. These details are relevant when considering generalization in the discussion section. Additionally, it is crucial to document the context details of the study because this also affects generalizability.

Ethical conduct and referral. Informed consent and ethical approval are crucial to document. Global health research, as with most research, is characterized by power differentials between researchers and research participants. In the majority of cases in global health research, the investigators have access to more material resources than individuals who are participants in studies. Because of lack of services in many GMH research settings, documenting the referral and service provision pathway is crucial. What support is provided for persons with suicidal thoughts and behavior, for persons who are acutely psychotic, and for participants who are actively at risk of child abuse, gender-based violence, or other human rights violations? In writing, it is important to document the support pathways, as well as the number of cases that required such support. This is important to set a precedent for documentation in publication and to present solutions for these challenging issues.¹⁰

Language, methods, and collaboration. When reviewing GMH research manuscript submissions for journals, one of the most common revisions we request is more information related to language and adaptation of instruments for use with participants. Language choices are crucial. There can be many local terms for mental health-related issues, some of them more or less stigmatizing than others. However, if the specific terms are not presented in the write-up, future studies may fail to replicate findings because other terminology is chosen. Or, clinical or public health interventions built on research may fail if terminology used is different from that which was studied. If multiple languages are used,

then the key terminology should be presented for each language. Having a local research collaborator who is a native speaker of the language in which the research was conducted is a major help to address these issues. Thus, with regard to language, our first recommendation is to document which languages were used in the study implementation. The use of translators for interviews versus interviews being conducted entirely in the local language should be documented. We advise that key local terminology be included in the methods section, or at the very least in supplemental materials available with the article. Increasingly, in our studies we are making our Nepali research tools available as online supplements attached to the published articles.

A second issue related to language is the fallacious claim historically made about emotional language and non-Western cultures—a claim that still plagues us today. A legacy of early cross-cultural psychiatry was the failure to thoroughly explore language for emotional terms and mental health. This led to claims that non-Western cultural groups do not have well-elaborated terms for psychological distress. This grew out of cognitive primitivism theories and influenced the notion that non-Western groups somatize distress, whereas Western groups psychologize. This misconception is a legacy of approaches wherein cross-cultural psychiatrists worked in secondary languages and disregarded involvement of local collaborators in the analysis and writing process. A comparative study of 14 countries ranging including low and high income sites demonstrated that lack of ongoing relationship with a physician was a stronger predictor of somatization rates than cultural or economic differences; for example, rates of somatization were the same (42%) in Seattle, Washington (United States) and Ibadan (Nigeria).¹¹ Furthermore, when somatic terms for distress have been investigated in other cultures, it has been shown that they have salient psychological implications while drawing upon the body as metaphor.¹² Some of the most offensive language in papers includes comments such as “the XX culture has a limited vocabulary to describe emotions.”

Instruments. The issue of describing measurement and instruments in methods sections is an extension of the language issue. GMH articles can be rejected when instrument development is simply translation-back translation, or when an English instrument is used and translated differently with each administration. In the methods section, the following issues need to be clearly outlined: name of instrument, general construct assessed, number of items, types of responses (eg Likert-scale or visual response scale), and period of assessment. The process used for cultural adaptation and validation should be listed. Approaches include using local categories as an external criterion¹³⁻¹⁵ or applying qualitative methods to achieve equivalence across cultures.^{16,17} For psychometrics, the cutoff score, sensitivity, and

specificity should be written for the target cultural group, not for HIC populations when the instruments were originally developed. With the specific study sample, the test-retest reliability, the inter-rater reliability, and Cronbach's α should be reported. With increasing use of portable technology, specify what devices and software were used for tablet or smartphone administration if applicable, especially if the software is open source and can be used by others.

Quantitative statistical analysis and qualitative analysis. Statistical analyses do not vary significantly for GMH versus other types of studies. The only caveat is the need to control for language of administration. If there happen to be 2 forms of administration (eg, self-completion vs verbal administration), then these issues should be controlled in the analyses. For qualitative data, the process of coding and analysis should be explained in terms of theoretical framework, such as grounded theory, content analysis, or interpersonal phenomenological analysis. An important question for GMH research is whether to code in the original language of administration and/or in English. Because of variation in translation, coding in English introduces a number of biases. That said, it is often more feasible. With local collaborators, it is possible to code transcripts in the original language and compare this coding with English coding.

Organizational templates. One recommendation for organizations and large projects with ongoing publications is to develop methods templates rather than rewriting them each time. Once the setting, sample, ethical conduct and referral, and instrument development are written, they can be saved and imported for subsequent articles.

Step 6: Results

Demographics. For both quantitative and qualitative studies, demographics information should be presented clearly in a table. Issues pertinent to local mental health will nearly always include education and poverty-related variables (eg, personal and household income, access to electricity and running water). Other items should be addressed as appropriate for the setting and the study. Given the implications of social rather than the biological factors influencing health outcome differences,¹⁸⁻²⁰ it is most helpful to have groups categorized by locally salient ethnic, tribal, or other identity groups, being cautious not to reify social categories that may be permeable and in flux. In Puerto Rico, Gravlee et al¹⁹ demonstrated that the vast majority of differences in hypertension attributed to racial-genetic differences are explained by sociocultural variables. In Nepal, we have shown that all of the variance in caste differences in depression can be explained by economic factors and exposure to stressful life-events.²¹

Real-world presentation of results. When writing up quantitative results, it is important to keep in mind that GMH is an interdisciplinary field, a field that is trying to increase accessibility within LMICs and make itself relevant and comprehensible to policymakers and funders.²² Therefore, every effort should be made to make statistics comprehensible and reproducible in other contexts, such as in policy reports or lay media. For this, prevalence rates and odds ratios can be most effective. When using linear regression, explain the results in terms that are understandable to nonspecialist audiences, for example, "For every \$1000 decrease in monthly income, there is an increase of 5 points in depression severity."

Figures and tables. Figures, diagrams, and tables that can be easily understood increase the likelihood of someone attending to your publication. They also can be reproduced for meetings with policymakers, on websites, and in conference presentations. Tables should be produced in an easily interpretable manner with a limited amount of information, highlighting the main points. Be sure to follow the guidelines of the journal. For figures, try to demonstrate inter-relationships among processes. When producing figures, use thin lines and avoid color or shading, unless the journal will reproduce the figure in color. For figures, be sure to use the 95% confidence interval or at least standard error to produce error bars for graphs. For percentages, also use 95% confidence intervals when possible. Even in qualitative research, findings should be presented visually. Many qualitative data analysis programs have functions to do this, and figures can be created relatively easily in commonly available programs.

Step 7: Discussion

LMIC collaboration in drafting the discussion. Writing the discussion needs to be done in collaboration with local collaborators and partners. Do the results have face validity with someone who lives and works in that cultural setting (ie, are your results consistent with his or her lived experience in that cultural context)? Are there other interpretations of the results that may be more or less culturally appropriate? How do the recommendations and implications map onto feasible changes in interventions at public health and clinical levels?

Main findings. The discussion should be written in a manner such that the reader could skip other sections of the manuscript and obtain the main thrust of the paper from the discussion alone. Therefore, describe the main research question first and then what the results showed in relation to the question. Avoid statistics in the discussion unless there are pertinent prevalence rates or odds ratios that can be clearly presented without explaining the specific statistical test.

Secondary and unexpected findings. After the main finding, provide additional information on other relevant findings, such as secondary hypotheses or exploratory outcomes. These should be contextualized within the broader literature. Unexpected or surprising findings should be presented with possible interpretations of these outcomes. This may require additional literature searching to determine if other studies found similar unexpected results.

Implications and applications. Implications can be categorized into 2 types: those for theory building and those for practice. Theory-building implications involve new approaches to understanding problems or revising prior theoretical approaches. In GMH, public health and clinical care implications are very important. Unfortunately, practice-based applications are often vague recommendations (eg, “we need more services,” “we need more screening,” “we need more task-shifting,” and “we need more medications”). These types of applied recommendations are not helpful because they are so general and were likely common knowledge before the study. Based on the specific outcomes of the study—whether a randomized trial, a cohort study, a single-case study, a qualitative study, or a longitudinal or cross-sectional epidemiological study—there should be concrete and specific recommendations drawn from the outcomes. If more training is needed, exactly what type of training and for whom; what would the content be and how long would it take? If task shifting is being recommended, how does your study affect current practices in task shifting; what would be modified or done differently? Whenever possible, try to speak to both public health and clinical application audiences.

Limitations. The limitations section is crucial and, if weakly crafted, a reason for rejection. The limitations in GMH should address generalizability. Can this study be generalized to the rest of the country, the rest of the region, or to other LMICs? State as honestly as possible whether or not you as the researcher think that this applies across space and time or whether it is a rich localized outcome. Use the limitations to speak to how the study could be done better next time if it were replicated. Should validated instruments have been used? Should sampling have been different? Should the setting have been different? And what do the limitations suggest about future studies?

Step 8: Introduction

The introduction is a place where one can easily become waylaid, by including too much information. We recommend writing the introduction as a latter step in producing the manuscript; some members of our organization also have found writing the background after the methods to be effective. At the beginning of the process, the main points should be bulleted: the questions, the reasons for

the study, why it is significant, and what new insight it offers. Do not introduce background issues that are not directly relevant to the discussion and implications. By the time the discussion is written, you know exactly what points will be relevant for the introduction.

Step 9: Getting Published

The writing process is not over. The cover letter is also a crucial aspect of submission that helps to determine whether or not an article is sent out for review. A mistake in writing cover letters is to restate the abstract. The key for the cover letter is to state how the manuscript relates to the specific journal's status. As stated in the journal selection and literature review discussions, every attempt should be made to cite articles from the journal to which you are submitting. Editors will be especially happy if publishing your article leads to advancing an ongoing debate or topic that their journal's readers have been following. In the cover letter, we recommend mentioning 3 to 5 recent publications (eg, within the past 2 years) that relate to the study you are submitting. These articles should be cited in your article as well. Connecting your manuscript with the journals' recent publications fosters an ongoing and deepening research narrative and helps with impact factors.

Once your team has written the paper, all authors have reviewed the final version, and you have drafted a convincing cover letter with key citations, it is time to submit. Following submission, there is a waiting period (weeks to months) to receive referee comments. After making appropriate revisions and resubmitting—perhaps multiple times (a topic that warrants a separate discussion for which we lack adequate space here)—and if all goes well, the paper will be published. The long duration between research and publication can often lead us to forget that there was once a pressing question and public health implication for the research. However, the GMH issue likely was not resolved between the time conducting the research and the publication. Therefore, it is crucial to invest time in further dissemination once your article has been published. After the writing is completed and papers are published, the next step is to find avenues for dissemination in the region and country and among relevant policymakers. Increasingly, websites, listservs, and blogs on GMH can help publicize your new article in a cost-effective manner. In Nepal, the Nepalese Psychology Network (NEPsychNet) listserv is a resource for disseminating new publications (psychology-network@googlegroups.com). There are journalists focusing on mental health issues in LMICs, such as Jagannath Lamichhane with the Nepal Mental Health Foundation (www.nepalmentalhealth.org). The Carter Center Mental Health Program trains journalists throughout the world to cover important mental health issues using approaches that help to reduce stigma (www.cartercenter.org/health/mental_health). Published articles combined with brief summaries of the major take-home points in

lay language can be distributed to local journalists to help promote dissemination to the public in the form of feature stories in leading newspapers and magazines read by the public. This is an area where having LMIC collaborators with local connections will facilitate dissemination of research.

CONCLUSIONS

Global mental health is a rapidly growing and changing field. The nature of research, the composition of research teams, and the translation of research into practice are taking on new forms in the 21st century. Success from both an academic and a real-world perspective requires ongoing partnerships and collaborations. For those at the beginning of their research careers, the steps described here can lead to developing habits of writing and publishing research in a way that is collaborative and ultimately produces the most contextually grounded interpretation of findings. The growing burden of disease attributable to mental illness requires a new cadre of dedicated, innovative, and collaborative researchers.

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