FQS FORUM: QUALITATIVE SOCIAL RESEARCH SOZIALFORSCHUNG

Volume 23, No. 2, Art. 1
May 2022

Strategies for Communicating Social Science and Humanities Research to Medical Practitioners

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Key words: qualitative health research; communication; medical journals; epistemological paradigm; recommendations; knowledge transfer

Abstract: Social science and humanities (SSH) researchers face challenges publishing qualitative research in medical journals. Yet, the descriptive, explanatory, experiential and interpretive knowledge generated by qualitative research is integral to the enhancement of health service delivery. Drawing on three examples of studies published in medical and SSH journals, we discuss elements SSH researchers can consider in the presentation of their research to better reach their intended audience. We suggest that SSH researchers resist abandoning the foundational elements of their discipline (i.e., epistemological paradigm, research objectives, study design, research methods, trustworthiness) while being mindful of medical journal editors' and reviewers' preference for practical knowledge that can inform practice change. Depending on what the authors hope to convey to their audience, other aspects pertaining to its presentation may be adapted to be more readily understood by the readership (i.e., structure, writing style, vocabulary, summary tables, interpretation level). We remain optimistic that if we continue to expose medical audiences to high-quality SSH research, they will learn to embrace diverse standards for research and value its other modes of presentation.

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Forum Qualitative Sozialforschung / Forum: Qualitative Social Research (ISSN 1438-5627)

1. Introduction

> "One who ignores or mishears is one who constantly listens to himself, whose ears are so filled from the encouragement that he constantly gives to himself and with which he pursues his drives and interests, that he is unable to hear the Other. That is, I would insist, to some degree or other a character trait we all share. Nevertheless to become always capable of conversation—that is, to listen to the Other—appears to me to be the true attainment of humanity" (GADAMER, 2006 [1972], p.358).

The descriptive, explanatory, experiential, interpretive and theoretical knowledge generated by qualitative research is integral to practice improvement and the enhancement of health service delivery. Yet, in recent years, social science and humanities (SSH) researchers have expressed concerns about the challenges they face when attempting to publish qualitative research in medical journals (GREENHALGH et al., 2016). In health services research, qualitative research is particularly valuable for understanding individuals' experiences and needs as well as in exploring organizational processes and challenges to generate knowledge about service improvement (POPE, van ROYEN & BAKER, 2002). If the knowledge generated is intended to inform service improvement, then medical journals may be most appropriate for reaching an audience that would enact this change. However, medical journals tend to impose criteria that are incompatible with the style and structure more commonly employed in SSH research (GREENHALGH et al., 2016). [1]

Additionally, the ontologies, epistemologies and styles employed by SSH researchers are less commonly found in medical journals (ROSSITER & ROBERTSON, 2014). Indeed, to publish in medical journals, SSH researchers often find themselves adapting critical aspects of their writing to fit the journals' standards and traditions, at the expense of the more central features of qualitative research (KONTOS & GRIGOROVICH, 2018). For these reasons, among others, the medical audience can only access a small portion of the descriptive, explicative, interpretive and theoretical knowledge SSH researchers generate. [2]

Prior research shows that SSH researchers who seek to publish in medical journals employ strategies of conformity or resistance to the publishing norms upheld by these journals. Many SSH researchers who *do* successfully publish in medical journals have expressed concerns about the ways they must frame their research in these fora (ALBERT, PARADIS & KUPER, 2015; KONTOS & GRIGOROVICH, 2018). One way of mitigating these concerns would be for SSH researchers to employ a "dichotomous" publication strategy, where the research findings are published in SSH *and* medical journals. However, this strategy can be problematic, as publishing the same research twice, even under different guises, is generally disapproved. One way to overcome this issue is to ensure that the research is initially conceived around appropriate research questions, foci and methodologies while simultaneously considering the audience for which the research was intended. This approach appears to hold the potential for

influencing the improvement of health services while ensuring that the central features of qualitative research are retained. [3]

In this article, to support SSH researchers' efforts to publish in medical journals, we explore key aspects of research manuscript writing and propose considerations regarding the communication of SSH research to a medical audience. This effort is valuable in the absence of literature that includes guidance about 1. which aspects of the research process and its communication may be adapted to the standards and traditions of medical journals and 2. which aspects are not as easily translated across disciplinary boundaries. Using examples drawn from research that has been published in both SSH *and* medical journals (with distinct, complimentary components that address the different audiences), we identify elements concerning the research process and its communication. Moreover, we discuss the possibility of SSH researchers' adaptation and resistance to the prevailing standards and traditions within medicine. With this insight, SSH researchers may be better equipped to weigh, for each element, where they might conform—or resist—to potentially increase receptivity by the editors, reviewers, and readers of medical journals. [4]

The impetus for this article came from a graduate-level seminar course, Writing Qualitative Research for Primary Care, offered in the Department of Family Medicine at McGill University in Montreal, Canada. Many of the ideas explored here initially arose in class discussions and thus reflect an analytic process shaped by the participants' positionality and guided exercises in reflexivity and analysis that the seminar entailed. The 14 graduate students enrolled in the course were exceptionally diverse in terms of ethnicity and nationality. These students included medical graduates, practicing clinicians, biostatisticians, a practicing pharmacist, students with undergraduate and master’s degrees in social science disciplines, and mature students who had returned to graduate studies following careers in fields such as international development and art therapy. The course was designed and facilitated by Kathleen RICE, a Ph.D. medical anthropologist and assistant professor in the Department of Family Medicine. It was conceived in response to qualitative researchers' reported struggles publishing their research in biomedical journals and effectively reconciling disciplinary conventions. RICE's primary methodological approach is ethnography, and her research and worldview are shaped by a social constructivist lens. She published in biomedical and social science-oriented journals. The first, second and third authors are doctoral students in the Department of Family Medicine. Justin GAGNON holds a Master of Arts in sociology and a Master of Science in family medicine, Maud MAZANIELLO-CHEZOL holds a Master of Arts in social sciences, and Joshua HAMZEH holds a Master of Science in family medicine. [5]

In the following, we begin with an overview of the three examples of complementary research published in SSH and medical journals (Section 2). We then discuss the formal requirements of select medical journals and the communication styles commonly employed by their authorship (Section 3). Next, to support SSH researchers' publication in medical journals without conforming

entirely to requirements and norms that are incompatible with SSH research, we examine five aspects of the research process and suggest ways SSH researchers can adapt their research and communication to meet the expectations of medical audiences (Section 4). Finally, this is followed by a conclusion (Section 5). [6]

2. Illustrative Examples

To illustrate successful adaptation of research to the intended audience, we draw on three studies with subcomponents published in medical and SSH journals. We selected these case studies because they provided a suitable contrast of communication strategies. In the first example, LORWAY and colleagues (LORWAY, REZA-PAUL & PASHA, 2009; LORWAY et al., 2010) explored the relationship between male sex work and HIV in India. One text was published in *Sexually Transmitted Infections and* the other in *Medical Anthropology Quarterly.* In the former, LORWAY et al. (2010) described a mixed-methods study conducted in three cities in Karnataka, India. They focused primarily on the statistical analysis of surveys to map participants' sexual networks. The research involved identifying factors, predictors, and mechanisms that could be combined with existing data on risk behavior and structural determinants of vulnerability to develop more effective interventions. In the latter paper, LORWAY et al. (2009) explored the subjectivity of male sex work in Mysore (one of the three cities in Karnataka) and interpreted what it reveals about the social, political, and cultural landscape. They generated insight into the subjectivity and social dynamics of male sex work to inform more person-centered empowerment projects. [7]

The second example upon which we draw is a study, conducted by BUCHBINDER and colleagues (BUCHBINDER, 2018; BUCHBINDER, OJO, KNIO & BRASSFIELD, 2018), about the impact of legislative changes concerning medical-aid-in-dying practice in Vermont, USA. One was published in the *Journal of Pain and Symptom Management*, and the other in *Medical Anthropology Quarterly.* In the first article, BUCHBINDER et al. (2018) focused on stakeholders' experiences (clinicians, patients, caregivers, and legislators) regarding the medical-aid-in-dying process. The researchers aimed to characterize the medical-aid-in-dying ritual according to these stakeholders' experiences and perceptions. In the second, BUCHBINDER (2018) provided an illustration and theoretical discussion about the new forms of sociality that emerged because of the recent medical-aid-in-dying legislation in Vermont. [8]

Finally, the third example is a study by KREINER, HUNT and colleagues (HUNT, KREINER & BRODY, 2012; KREINER & HUNT, 2014). One was published in *Annals of Family Medicine* and the other in *Sociology of Health & Illness.* In the former, HUNT et al. (2012) identified factors associated with new trends associated with the diagnosis of chronic illness and polypharmacy (lower treatment thresholds in clinical guidelines). Specifically, the authors assessed clinicians' perceptions of factors influencing their treatment decisions and patients' perceptions of the management of their illness. In the latter, KREINER and HUNT (2014) illustrated how the conflation of risk prevention and disease

management is manifested in clinical care. That is, the authors discussed the social implications of treating risk as though it were a disease. [9]

3. Medical Journal Requirements and Norms

Before discussing how qualitative research might better reach a primarily medical audience, we will first examine the formal requirements of some popular medical journals and their traditions in the publication of qualitative research. This will help us anticipate where medical journals may be more or less flexible in their consideration of qualitative research's content, length, structure and style. With this in mind, we will have a better sense of how to present qualitative research and where we might want to concede or offer resistance in maintaining the SSH research traditions, regardless of audience. [10]

3.1 Formal requirements

In Table 1, we illustrate a comparison of the requirements and norms regarding the publication of qualitative research for the following medical journals with a relatively high impact factor (as of February 2022): the *British Medical Journal* (BMJ), *Annals of Family Medicine*, *PLoS Medicine* and the *Lancet.* In our examination of their respective instructions for authors, we found that *BMJ* and *Annals of Family Medicine* explicitly expressed their openness to qualitative research. In contrast, *PLoS Medicine* and the *Lancet* did not even list qualitative study designs among the types of designs accepted.

	British Medical Journal (*BMJ*)	*Annals of Family Medicine*	*PLoS Medicine*	*The Lancet*
Explicit mention of qualitative research	Yes	Yes	No	No
Types of qualitative research accepted	Not specified	Not specified	Qualitative designs not mentioned	Qualitative designs not mentioned
Word limit	None specified	2,700 (flexible for qualitative research)	No limit	3,500
Manuscript structure	Introduction, Methods, Results and Discussion	Not specified	Introduction, Methods, Results and Discussion	Not specified
Abstract	Structured	Structured	Structured	Structured

	British Medical Journal (*BMJ*)	*Annals of Family Medicine*	*PLoS Medicine*	*The Lancet*
Expressed publication priority	"[O]riginal research studies that can improve decision making in clinical medicine, public health, health care policy, medical education, or biomedical research."[1]	"[O]riginal research from diverse perspectives, including: clinical, biomedical, behavioral, personal, community, and social sciences; and health services, health care systems, and policy."[2]	"[O]riginal research articles of outstanding medical importance."[3]	"[R]reports of original research that are likely to change clinical practice or thinking about a disease."[4]

Table 1: Comparison of selected medical journals' authorship guidelines for original research articles (2022) [11]

First, the word limits of medical journals tend to be restrictive (PITCHFORTH, PORTER, VAN TEIJLINGEN & FORREST KEENAN, 2005). Among the four journals reviewed, two (*Annals of Family Medicine* and the *Lancet)* have limits of 2,700 words and 3,500 words, respectively. However, in the *Annals of Family Medicine* authorship guidelines, it is stated that "[s]ome topics, including some qualitative research, may require more words and fewer tables/figures."[5] This flexibility toward qualitative research is promising. *PLoS Medicine* does not explicitly impose a word limit, as is more common with open-access journals. [12]

SSH research typically involves an in-depth description of 1. experiences, meanings, culture and context, 2. researchers' self-reflections throughout the research process and 3. illustrative examples, vignettes and quotes. These are extremely valuable for deepening the reader's understanding of the phenomena under study in terms of more nuanced conditions that underlie them. They are also valuable for understanding the researchers' interpretations and the meaning generated in their investigations (SANDELOWSKI, 1993a). With illustrative examples and self-reflection, the reader is carried along as a kind of secondary observer—following the researchers' logic as they integrate prior knowledge,

1 https://www.bmj.com/about-bmj/resources-authors/article-types [Accessed: February 18, 2022]

2 https://www.annfammed.org/sites/default/files/additional_assets/PDF%20Documents/PDF/InstructionsForAuthors.pdf [Accessed: February 18, 2022]

3 https://journals.plos.org/plosmedicine/s/submission-guidelines [Accessed: February 18, 2022]

4 https://thelancet.com/pb/assets/raw/Lancet/authors/tl-info-for-authors.pdf [Accessed: February 18, 2022]

5 https://www.annfammed.org/sites/default/files/additional_assets/PDF%20Documents/PDF/InstructionsForAuthors.pdf [Accessed: February 18, 2022]

theory and rigorous methodological techniques—in this way, the reader is guided towards the researcher's conclusions. Restrictive word limits do not adequately account for the critical role of these techniques in describing the observations and explaining and interpreting their meaning, and they limit researchers' capacity to provide sufficient theoretical and methodological detail. In turn, this has the unfortunate consequence of obscuring how the analyses were carried out, thereby contributing towards the erroneous but widely held view within medicine that qualitative analysis is arbitrary and lacking rigor (SARMA, 2015). To echo the sentiments of other researchers on this topic (TOEWS et al., 2017), we recommend that medical journals consider adjusting their word limits to better account for the different nature of SSH research and the kind of knowledge it generates. [13]

Second, many medical journals require that manuscripts employ an experimental or natural science research structure: introduction, methods, results and discussion (IMRaD). Among the four journals we compared, *BMJ* and *PLoS Medicine* impose an IMRaD structure, and all four journals demand structured abstracts. However, descriptive, explanatory, interpretive and theory-building content may be more effectively communicated following a chronological or conceptual structure, as opposed to an experimental research structure, and by employing narrative or story-telling techniques to situate the reader in the world of the research subjects. These techniques include 1. beginning with an illustration of the phenomenon under study, 2. describing the setting and circumstances under which it arises and 3. integrating observational data using quotes and vignettes to support one's claims. [14]

In some instances, adopting an experimental research structure may be valuable for communicating SSH research. The experimental structure does have the advantage of laying out, in a standardized manner, the procedures employed in the conduct of research and supports more concise and explicit reporting of results and more practical expression of their implications. One might employ an experimental research structure, for instance, when the message is more easily distilled, and its practical implications may be stated explicitly—that is, when situating the reader in the circumstances of the problem is unnecessary for a reader to grasp the kind of knowledge the research was intended to generate. The IMRaD structure lends itself well to a detailed presentation of the research process (i.e., how the research was conducted and how the analysis was performed). Employing this structure may be valuable for expanding the readership's methodological horizons. Its use in SSH research might imply a well-documented analytical process and, possibly, the inclusion of appendices demonstrating how themes and concepts were derived from the data or an established framework (e.g., the codebook). [15]

3.2 Writing style and presentation of data

Writing style and presentation of data are key elements of journals' publishing norms. Articles published in medical journals tend to involve more concise language. Sentences are generally shorter, and messages are often relatively explicit. Given the restrictive word limits, space is often insufficient for the more nuanced, illustrative, evocative or metaphorical language more commonly employed in SSH journals. While SSH articles tend to be written in such a way as to leave space for interpretation, medical journal articles are often explicit on the intended meaning and practical implications of the results. Adopting a more concise and authoritative style of writing may help SSH researchers more successfully reach an audience of medical practitioners. Although the readership may be less familiar with the research designs or methods employed, distilling the results in this manner may better favor the readership's uptake of the results and the implications for their practice. SSH researchers' adaptation of their writing style to address medical practitioners may also have the secondary benefit of introducing forms of qualitative research methodology less commonly seen in medical journals. While adapting one's style to better align with medical journals might improve uptake by medical practitioners, such an adaptation comes at the expense of detail essential for an in-depth understanding of the studied phenomenon. [16]

In addition, the manner in which data is interpreted and presented is fundamental in knowledge transfer. Medical journal articles tend to present aggregated data using quantitative description, explanatory factors and typologies. Data is often displayed in tables. An advantage of this form of presentation is that it provides a visual, simplified characterization of the results. SSH researchers, on the other hand, tend to describe and explain phenomena qualitatively, at the macro, meso and/or micro levels, engage critically with assumptions that shape health and healthcare practice, and use social theory to explain phenomena that are inevitably embedded in their social context. SSH researchers are typically less inclined to overlook differences and deviations rather than present only the most frequently recurring themes and exclude outliers from consideration. They are more concerned with descriptors, qualifications and theoretically informed explanations than counts. Visual forms of data presentation that SSH researchers use tend to indicate more the analysis and interpretation of the data. Examples include typifications, typologies and tables depicting themes alongside illustrative quotes. Tables are frequently used in qualitative research employing thematic content analyses, especially when published in medical journals. While the illustrative quotes are not intended to be representative of all subjects interviewed, they show how a subject has expressed a particular idea and elucidates why it may have been coded, categorized or interpreted in a particular way. Tables involve more rapid review and distillation of the key messages. When SSH researchers use tables to explain results, they create more space for meaningful data and interpretations. [17]

We draw on BUCHBINDER's articles on medical aid in dying to illustrate differences in data presentation: In their *Journal of Pain and Symptom*

Management article, BUCHBINDER et al. (2018) appended a table characterizing the forms of social support caregivers provide on the day of an assisted death (emotional or instrumental), for a variety of aspects of the process (preparation, ingestion, waiting, after death). They also included a table with quotes from the interviews that illustrate the caregivers' experience of the process. In their *Medical Anthropology Quarterly* article, on the other hand, BUCHBINDER (2018) presented the data in a narrative fashion. The cases were not aggregated into a typology. Instead, specific cases were described in detail to immerse the reader in the experience. The implication is that the reader engages in aggregation and synthesis using the information provided to arrive at an understanding of their own. [18]

In our experience, editors and/or reviewers of medical journals often request a table displaying the characteristics of the study participants (typically "Table 1" in quantitative studies). Such a table is generally intended to support claims about the representativeness of a randomly study sample. This tends to be inappropriate in SSH research. However, in cases where the participants are purposively selected based on certain differing characteristics, such a table may be useful. When not including such a table, one may need to offer a justification for editors and/or reviewers, as they may be expecting one, even if it is inappropriate. [19]

A final consideration in this section is whether to adopt an active or passive voice. While some journals might discourage active voice, it better reflects the active role of the researcher in the conduct of the research and interpretation. Regardless of one's research paradigm or epistemological position, researchers make numerous decisions about the research process, including the literature review, research question, methodology and interpretation of results. Therefore, active voice tends to be most appropriate. In the illustrative examples, two of three articles targeting a medical audience (BUCHBINDER et al., 2018; LORWAY et al., 2010) used passive voice in their methods and results sections, whereas all three articles published in SSH journals employed an active voice. For instance, LORWAY et al. (2010) in their *Sexually Transmitted Infections article* used passive voice: "Role playing exercises were used to practise recruitment scenarios and procedures, consent scripts and interviewing techniques" (p.iii71). Meanwhile, in *Medical Anthropology Quarterly* (2009) they wrote: "[We] developed a training program that took into account the existing knowledge, skills and experiences of MSM leaders" (p.148). [20]

4. Writing for a Medical Audience

In addition to navigating journal requirements, it can be advantageous to consider the audience for which one is writing (CLARK & THOMPSON, 2016). When writing for medical journals, consideration of the manuscript's significance for a medical audience is essential. Additionally, the readership's exposure to and capacity to grasp SSH *research objectives*, *research paradigms* and *research methods* may be worth considering. Medical audiences may not be accustomed to SSH research. As these aspects may not be as readily understood as by SSH researchers, a brief explanation might be useful to improve the audience's receptiveness. [21]

4.1 Relevance of the research

Medical journals tend to favor applied knowledge that might directly inform action —often a change in practice. This is evident from the aims and scope of virtually all medical journals. In the *BMJ* mission statement, for instance, it is written that they "[aim at] Improving the creation and dissemination of research evidence; improving clinical education and practice; advocating for universal, equitable, high[-]quality healthcare; championing the health and wellbeing of doctors; [and] improving the social and environmental determinants of health."[6] Following BELCHER (2019), editors of medical journals tend to prioritize research that can be used to illuminate problems and induce practice-change, over more theoretical, methodological or interpretive research. Accordingly, to successfully publish in a biomedical journal, SSH researchers might do well to clearly explain upfront the expected contribution of their manuscript to a particular field of medical practice. LORWAY et al. (2010), at the end of the introduction of their *Sexually Transmitted Infections* paper, provided an appropriate example of a contribution statement:

> "In addition to making a theoretical contribution, this study suggests how empirical data on sexual networks, when used in conjunction with behavioural and ethnographic data, can yield specific insights into where [men who have sex with men] interventions can be refocused at each site" (p.iii72). [22]

4.2 Research objectives

In SSH research, greater responsibility is placed on the reader to interpret and aggregate, whereas this is performed largely by the authors of medical texts. SSH manuscripts are typically more detailed, illustrative, explanatory and (explicitly) theoretically informed, from which the reader often gains a deeper understanding of the phenomena and their circumstances. Rich contextual detail and experiences may be too abstract for medical practitioners or may detract from their being able to rapidly distill how the knowledge generated by the investigation may be relevant to their practice. Translating the knowledge

6 https://www.bmj.com/about-bmj [Accessed: February 18, 2022].

generated by the investigation for medical audiences thus implies clearly and explicitly articulating its practical implications. [23]

Sometimes, SSH researchers undertake studies with broader, macro-level implications in mind (societal or theoretical, for instance). However, when targeting a medical audience, they could consider placing greater emphasis in the scope of their interpretation on the micro (implications for specific patients or medical practices) or meso (implications for communities or organizations) levels. [24]

4.3 Research paradigms

The readership of medical journals, as well as the editors and reviewers, often employ a post-positivist approach to scientific investigation. This means they consider research to be more objective, factual and capable of generating value-free, generalizable knowledge and "truths" about the world. In contrast, most qualitative researchers begin from a social constructionist position, whereby truly objective research is impossible because all perception and knowledge are shaped by social, cultural and historical factors (CRESWELL, 2014). This has important implications for SSH researchers, as post-positivists ask different research questions, employ different research designs and employ different criteria for ensuring its "validity" and "rigor." [25]

SSH researchers are instrumental in continuing to broaden the medical audience's exposure to different epistemological perspectives. We contend that SSH researchers who embrace interpretivist/constructivist or critical paradigms should not bend to the post-positivist paradigm to publish in biomedical journals because of the immense value that interpretivist/constructivist paradigms bring to the interpretation, understanding and explanation of health-related phenomena. For example, qualitative researchers working in a social constructivist paradigm can effectively analyze the underlying, often harmful assumptions that shape health policy and practice. For instance, RICE, RYU, WHITEHEAD, KATZ and WEBSTER (2018) showed how—in being shielded by mentors from the challenges of treating socioeconomically marginalized and complex chronic pain patients—Canadian medical trainees implicitly internalize the notion that chronic pain patients are "difficult" and lack educational value. [26]

4.4 Study design and research methods

Audiences differ in terms of their familiarity with different study designs and methods. For instance, the medical audience may be more accustomed to seeing something similar to a "thematic analysis" and less accustomed to seeing grounded theory or narrative analysis. To improve readability by a medical audience, some SSH researchers have used different terms or have avoided mentioning altogether terms with which the audience may be less familiar. In their *Annals of Family Medicine* article, HUNT et al. (2012) emphasized their data collection methods, interviews and observation of clinical consultations. They did not explicitly mention their study design, *ethnography* (which was specified in

their *Sociology of Health & Illness* paper), a term with which their readership may be less familiar. Finally, concerning their data collection methods, BUCHBINDER et al. (2018) also downplayed the ethnographic observation component of their study and specified that their data were derived from in-depth interviews. [27]

While disguising the methods applied in actuality as something with which the audience is more familiar might improve their capacity to grasp the research, this only maintains the status quo regarding the methods typically considered "scientific" or "valid" by the medical community and perpetuates a hierarchy of knowledge within biomedicine (VARPIO, AJJAWI, MONROUXE, O'BRIEN & REES, 2017). As suggested above with respect to research paradigms, broadening the medical audience's exposure to different methodological techniques is beneficial. Accordingly, to improve readability when presenting less-utilized methods, one could provide additional explanations, using less specialized language. [28]

Although the authors cited above did present their research methods in a different manner according to their target audience, their publications reflect entirely different, yet complimentary, studies, driven by entirely different research questions. It is, therefore, entirely appropriate to frame two distinct research questions: one that is relevant to medical journals' methodology and one whereby the SSH audience can relate. [29]

4.5 Trustworthiness

There has been extensive debate among researchers and methodologists around assessing qualitative research's "validity" (GUBA & LINCOLN, 1994; LINCOLN & GUBA, 1985; SANDELOWSKI, 1993b; SHENTON, 2004). Initially, researchers sought to apply the same criteria as experimental designs: internal validity, external validity, reliability and objectivity (GUBA & LINCOLN, 1994; LINCOLN & GUBA, 1985). LINCOLN and GUBA (1985) devised the following analogs for qualitative research: credibility, transferability, dependability and confirmability. These analogs have been criticized and expanded to draw attention to other elements such as ethics, data collection and analysis techniques as well as crystallization (CHOWDHURY, 2015; RICHARDSON, 2003). Criteria for "trustworthiness" can be a useful guide for researchers in the conduct of their research and their discussion of the quality of the research process. [30]

While practitioners of the positivist paradigm might treat quality criteria as a checklist with which they can make a case about the validity of their research, this would not be the case with social constructivists. For instance, while positivists aim to achieve objectivity and generalizability, social constructivists acknowledge that positionality inevitably shapes all stages of the research process and therefore consider the generalizability of results an impossible aim. In our experience, reviewers and/or editors of medical journals recommend the term "limitations" in delineating this section of a manuscript. However, we prefer avoiding this term. We recommend advocating for an alternate term, such as "trustworthiness," to reflect the different criteria SSH researchers employ for

assessing the quality and rigor of qualitative research. We consider this section a space where the researcher can formally reflect openly and honestly on the relationship between the research process, how it was conducted and the results (GAGNON, 2019). Here, researchers can be transparent about their role in the research process, justify their decisions and interpret the impact of their decisions. To appeal to medical audiences, however, SSH researchers may want to highlight specific strategies for ensuring trustworthiness (e.g., crystallization, thick description, prolonged engagement in the field, reflexivity). As medical audiences may be less familiar with this terminology, we recommend providing additional detail to help the reader understand that scientific rigor is indeed a foundational requirement in qualitative research. [31]

5. Conclusion

In this article, we discussed SSH research manuscript writing for medical audiences and proposed considerations for SSH researchers to judge when it may be appropriate to conform to or resist the standards and norms of medical journals. We compared the journal requirements of four high impact factor medical journals and examined the strategies employed by three sets of authors who each devised two complimentary manuscripts, each targeting either an SSH audience or a medical audience. [32]

We discussed the benefits of being mindful of the medical audience's preference for practical knowledge and forms of data presentation that more clearly elucidate the results and how they may be directly applicable to them. In some instances, following the writing structure of experimental designs may be valuable. We contend, however, that retaining one's epistemological base or methodological traditions has immense value. Publishing qualitative research in biomedical journals is an opportunity to broaden the medical audience's exposure to different kinds of research questions, epistemological perspectives, methodologies, analyses and means of evaluating the quality of the research process. Providing additional detail in one's elaboration of the research process can be beneficial. Medical journals tend to impose word limits and structures that can constrain SSH researchers' elaboration of research processes and their provision of sufficient contextual detail, which contributes toward negative perceptions regarding the rigor of SSH research. Echoing what many SSH researchers have argued before us, we hope to see greater openness on the part of medical journals to longer, more experiential, theoretical or explicative texts and a greater variety of methodological approaches. Despite the formal criteria and publishing traditions of particular medical journals, editors may be open to broadening the boundaries of their content. We should, therefore, make efforts to appeal to editors to help us reach our target audience with the knowledge we generate through our research. [33]

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Citation

Gagnon, Justin; Mazaniello-Chezol, Maud; Hamzeh, Joshua & Rice, Kathleen (2022). Strategies for communicating social science and humanities research to medical practitioners [33 paragraphs]. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, *23*(2), Art. 1, https://doi.org/10.17169/fqs-22.2.3760.