Assumptions, Ambiguities, and Possibilities in Interdisciplinary Population Health Research

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ABSTRACT

The rhetoric of “interdisciplinary,” “multi-disciplinary,” and “transdisciplinary” permeates many population health research projects, funding proposals, and strategic initiatives. Working across, with, and between disciplines is touted as a way to advance knowledge, answer more complex questions, and work more meaningfully with users of research. From our own experiences and involvement in the 2003 CIHR Institute for Public and Population Health’s Summer Institute, interdisciplinary population health research (IPHR) remains ambiguously defined and poorly understood. In this commentary, we critically explore some characteristics and ongoing assumptions associated with IPHR and propose questions to ensure a more deliberate research process. It is our hope that population health researchers and the CIHR will consider these questions to help strengthen IPHR.

La traduction du résumé se trouve à la fin de l'article.

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While attending the 2003 CIHR Summer Institute, one of the authors (Whitfield) informally surveyed 39 attendees about their understandings and experiences of IPHR. The purpose of the Summer Institute was to explore interdisciplinary population health research and to build research networks among doctoral and postdoctoral students. Whitfield’s conversations with the diverse participants were not intended as systematic data collection or analysis; rather, their purpose was to gain some general insights into perspectives regarding IPHR. Our views are informed by both these conversations and our personal experiences as health researchers attempting to conduct interdisciplinary research.

Assumption: The values and benefit of IPHR

There is a general assumption that conducting IPHR is valuable and beneficial. Population health has a strong interdisciplinary foundation representing such disciplines as epidemiology, medicine, nursing, psychology, biostatistics, biology, environmental studies, women’s studies, planning, and so on. Although population health has been inherently interdisciplinary, there remains a paucity of writing about the challenges and successes associated with interdisciplinary population health research. Is it assumed that because population health is founded on a breadth of disciplines, it inevitably and uniformly adopts an interdisciplinary approach? Such assumptions may rationalize the CIHR’s emphasis on interdisciplinarity in research. The CIHR’s structure and documentation encourages researchers to “engage the research community and encourage interdisciplinary, integrative health research...[and to] work together to forge a health research agenda across disciplines, sectors, and regions.”¹ Our conversations at the Institute reflected similar assumptions. While some participants proposed interdisciplinarity as the way forward, others suggested that since both health and humans are complex, understanding health or any human phenomenon requires integrating a range of disciplines. It was generally believed that IPHR expands our vision and knowledge of health.

Ambiguities: IPHR definitions and processes

From our conversations, we witnessed little consistency in definitions of inter-

disciplinarity and there was disagreement about the very definition of "discipline." Some questioned whether participants in a research study represented a disciplinary perspective – does an obese child in a study of child obesity offer a disciplinary view, or a view of equal value to the researchers? We found no resolution to this question in our conversations nor in the literature on interdisciplinarity. Disciplines reflect intellectual and institutional situations and distinctions between disciplines are arbitrary and often inconsistent.²

Some commented that interdisciplinarity was a shared and collaborative process that brought individual disciplinary strengths to the research. In this first camp, each researcher takes a piece of the research based on the potential contribution of her/his discipline. This perspective reflected a more instrumental view of knowledge wherein an interdisciplinary approach could address an applied or problem-centered activity through functional and methodological borrowing.² Yet other participants asserted that one result of interdisciplinarity is the creation of new knowledge, disciplines, and research methods. Epistemologically, IPHR was seen as an enterprise involving internal coherence, the development of new conceptual categories, and methodological unification.²

Although our conversations fell into the same two camps described by Salter and Hearn (1996), typically the instrumental camp that does not challenge disciplinary boundaries or general epistemological assumptions accompanying the disciplinary paradigm, prevailed. While health research will always be faced with solving instrumental problems, in our view, it has been plagued by an inattention to significant theoretical divisions and has devoted the majority of its attention to instrumental concerns and problem-solving issues. Some argue that population research has been problematically atheoretical and that moving towards integrating and developing conceptual and epistemological frameworks will, in the long run, enable us to address the significant questions that remain in health research.^{3,4} However, it is important to consider that IPHR's movement towards the conceptual camp could have considerable implications for our understandings of disciplines and the structuring of academic institutions.

Unresolved issues: Power and representation in IPHR

Many population health researchers, increasingly encouraged to conduct interdisciplinary research, share a veiled assumption that they know what it looks like and their own perspectives are consistent with others. Yet our conversations at the Summer Institute revealed considerably divergent opinions. While some participants asserted that interdisciplinarity moves us away from power and towards owning, others asserted that inevitably one discipline will dominate and drive the research process. Power is associated with disciplines, and not everyone is equal in an interdisciplinary process. Particular core disciplines, fields of study, or departments at universities may hold the balance of power throughout a given research project.²

Other Summer Institute participants raised questions about the improbability of a single researcher being able to adequately represent the perspective of her or his discipline. Since many disciplines are rife with internal methodological and epistemological struggles, can we be sure that an individual psychologist represents the breadth of the field of psychology? As well, if interdisciplinarity is about negotiation and coming to a place of agreement, does the process itself force individual researchers to become more attached to and possibly protective of their discipline? How can an interdisciplinary process be structured so that different disciplinary constructs and methodologies enrich an understanding of the problem being examined, rather than lead to competition over which discipline's system of understanding will predominate? Can the ability to synthesize and work between disciplines be learned, and if so, how? As well, engaging in an interdisciplinary process creates challenges with knowing when certain disciplinary views are necessary in a given research study. These unresolved questions are compounded by a dearth of realistic and detailed accounts of conducting IPHR. It is relatively easy to know the theory and rationale for conducting IPHR but far more difficult to grasp the intricacies of the processes involved in initiating the research project, selecting the disciplines, working together, developing new theorizations and measures, evaluating the research process, and so on. For

instance, how do researchers work together during the different stages of the research? What does the process of "synthesis" really look like? How do we know when a research project has been truly interdisciplinary? The health research literature needs realistic portrayals of the IPHR process to guide emergent population health researchers in their efforts to conduct interdisciplinary research in a more strategic manner. As well, from the beginning, researchers and funding bodies must be clear about the value and purpose of an interdisciplinary process and why it is more appropriate and useful than a disciplinary-based one.

Possibilities: A call to action for population health researchers and the CIHR

Defining interdisciplinarity is not an easy task, and clearly outlining its characteristics is equally difficult. Although a tremendous amount of the literature in this area has attempted to define interdisciplinarity,^{2,5-8} opposing views, ambiguities, and considerable debate remain. Both the literature and our experiences suggest that too many people are promoting IPHR without addressing even the most basic conundrums involved in attempting to do it.² Based on the critical issues raised in the Summer Institute, we developed the following questions for population health researchers and the CIHR to help guide the interdisciplinary population health research process:

1. What is the inherent value of an interdisciplinary approach in answering the research question? Why is a discipline-based approach insufficient?
2. Which disciplines have potential contributions to answering the research question and why?
3. What understandings of IPHR do the researchers bring to the process? How do they envision conducting the research in an interdisciplinary manner?
4. Will the project reflect an instrumental approach (i.e., various disciplinary views working together to answer a specific problem) or a more conceptual one (i.e., the emergence of a new theory or method)?
5. What strategies will be implemented to manage all stages of the research process? How will the interdisciplinarity of the project be ensured and maintained?

How will the predominance of a single disciplinary view be identified and managed?

6. What are the key indicators that an IPHR has been undertaken? Are there measures of success that are particular to IPHR?

The rhetoric of "interdisciplinary" has been so overused in health research circles that it has become almost meaningless. From our experiences and participation in the Summer Institute, we identified the need for population health researchers and the CIHR to be more deliberate in their approaches to IPHR by strategically and meaningfully embracing the disciplines involved, thus furthering our knowledge in health and human issues and ultimately leading to improved outcomes in health research. It is our hope that through our own work and the concerted efforts of others, we can develop more accurate and insightful accounts of the characterizations, processes, and challenges of IPHR.

REFERENCES

1. Canadian Institutes of Health Research. About the Institutes. 2003. <http://www.cihr-irsc.gc.ca/e/7155.html>.
2. Salter L, Hearn A. *Outside the Lines: Issues in Interdisciplinary Research*. Montreal & Kingston: McGill-Queen's University Press, 1996.
3. Poland BD. Knowledge development and evaluation in, of, and for healthy community initiatives. Part I: Guiding principles. *Health Promot Int* 1996;11(3):237-47.
4. Poland B. Social inequalities, social exclusion and health: A critical social science perspective on health promotion theory, research and practice. *Conference Presentation*. Bergen, Norway, 1998.
5. Rosenfield P. The potential of transdisciplinary research for sustaining and extending linkages between the health and social sciences. *Soc Sci Med* 1992;35(11):1343-57.
6. Aagaard-Hansen J, Ouma JH. Managing interdisciplinary health research: Theoretical and practical aspects. *Int J Health Planning and Management* 2002;17:195-212.
7. Miller JE. Interdisciplinarity and the ethics of health science research with human subjects in Canada. In: Salter L, Hearn A, *Outside the Lines: Issues in Interdisciplinary Research*. Montreal & Kingston: McGill-Queen's University Press, 1996;109-17.
8. Thompson-Klein J. A conceptual vocabulary of interdisciplinary science. In: Weingart P, Stehr N (Eds.), *Practising Interdisciplinarity*. Toronto, ON: University of Toronto Press, 2000;1-24.

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RÉSUMÉ

Un grand nombre de projets de recherche, de propositions de financement et d'initiatives stratégiques en santé de la population s'appuient sur des notions d'interdisciplinarité, de pluridisciplinarité et de transdisciplinarité. La collaboration à l'échelle et à l'intérieur de plusieurs disciplines serait un moyen de faire progresser les connaissances, de répondre aux questions d'une grande complexité et d'approfondir la collaboration avec les utilisateurs de la recherche. D'après notre expérience et notre participation, en 2003, à l'atelier d'été de l'Institut de la santé publique et des populations des IRSC, la recherche interdisciplinaire en santé de la population (RISP) demeure une notion mal comprise et dont la définition est ambiguë. Dans ce commentaire, nous procédons à l'analyse critique de certaines des caractéristiques et des hypothèses courantes associées à la RISP et nous posons quelques questions pour éclairer le processus. Nous espérons que les chercheurs en santé de la population et les IRSC étudieront ces questions afin de renforcer la RISP.

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