



Original Research

Assessing and Improving Processes and Outcomes of the McGill Primary Health Care Research Network

Zhida Shang, BScN¹, Justin Gagnon, BSc, MA, MSc², Vera Granikov, BA, MLIS³, Charo Rodriguez MD, PhD², Pierre Pluye, MD, PhD²

MJM 2017 15(18)

Abstract

Background: The McGill Primary Health Care Research Network (the Network) is a Practice-Based Research Network (PBRN) that promotes the collaboration between researchers and clinicians in research. The Network follows an approach called Organizational Participatory Research (OPR).

Purpose: To discover the processes and outcomes associated with the Network, to learn about researcher and clinician collaboration within the Network and to propose recommendations and a revised questionnaire.

Methods: A thematic qualitative data analysis was conducted. The data that was analyzed consisted of the diaries of two diaries of two Network coordinators, email correspondence between the core group members and the coordinators, and the minutes of 12 core group meetings. The data were interpreted according to the Capacity Building Framework. Then, codes were organized according to 10 framework-based meta-themes (5 domain-related processes, and 5 domain-related outcomes) and grouped in 24 key-themes (key processes and outcomes).

Results: The processes and outcomes of the 5 domains were discovered (leadership, organizational development, partnership, resource allocation and workforce development). Leadership involved communication, which lead to clinicians becoming project leaders. Organizational development required planning and led to members' research projects being completed. Partnerships were formed due to members identifying their respective challenges. Resource allocation required time and funding management, and led to scheduling and accommodation of time constraints. Workforce development included researchers mentoring clinicians, which allowed for networking between members.

Conclusions: The results generated practice and policy recommendations. Based on the results an improved mailing policy, a wiki/blog, a humbler approach for researchers and a questionnaire were proposed.

► Organizational Participatory Research, Action Research, Practice based Research Network

¹Ingram School of Nursing, McGill University, Montréal, Canada.

²Department of Family Medicine, McGill University, Montréal, Canada.

³School of Information Studies, McGill University, Montréal, Canada.

All authors report no conflict of interest relevant to this publication. Corresponding Author: Zhida Shang, email zida.shang@mail.mcgill.ca.

Introduction

Researcher-clinician partnerships as an approach to improving clinical practice have grown in popularity in recent years. An example of such a collaboration is the McGill Primary Health Care Research Network (hereinafter called the Network). The Network is a Practice Based Research Network (PBRN) that promotes collaboration between scientists and clinicians in research. The Network follows an

Abbreviations & Acronyms

OPR – Organizational Participatory Research
PBRN – Practice Based Research Network

approach called Organizational Participatory Research (OPR), a collaborative effort between academic researchers, clinicians and patients to improve practice in health care settings.

OPR constitutes a learning opportunity for both researchers and clinicians. The researchers gain valuable insight into clinical practice while the clinicians learn about research processes and apply this knowledge in the assessment and improvement of their practice. OPR is derived from the tradition of Participatory Action Research, a term first coined by Kurt Lewin. Where the objective of research is to effect change, Lewin suggested conducting research in equal collaboration with those who would use the knowledge generated by the research (1). Lewin's action research involves the achievement of communication and cooperation between groups (1). Involvement of stakeholders in the research process ensures that the objectives, interpretation of results, and dissemination is meaningful to them, making the knowledge more likely to be translated into action (2). Given the potential benefits of action research, the authors were inspired to analyze the Network as participatory organizational stakeholders.

In this study, we conceived of and assessed the Network as a 'complex intervention in clinical and academic settings'. Our research question was "What are the key processes and outcomes associated with the adoption of OPR in the Network?" A systematic review conducted by numerous qualitative researchers suggest that there are added benefits associated with OPR, particularly when projects are initiated by the health organization (3).

This current review is based on the Capacity Building Framework (4), and includes five domains: *leadership*, *organisational development*, *partnerships*, *resource allocation*, and *workforce development*. The capacity building framework allowed the authors to interpret the data in a strengths-based and multi-

domain way. This framework was used in the interpretation of the Network's processes and outcomes.

Methods

A descriptive qualitative study was conducted using a participatory action research approach (1) and thematically analyzed using capacity building framework (3). This study was approved by McGill Research Ethics Office (IRB study number A04-E39-14B). Qualitative description allows for the description of a phenomenon based on the participant's views, and results in a broad and comprehensive summary (5).

Qualitative data collection occurred from 2013 to 2015 by the Network coordinators. The sources of data were: diaries from two Network coordinators (35 pages), email correspondence between the core group members and the coordinators (70 pages), and 12 core group meeting minutes (25 pages). The number of members who attended Network meetings varied from 10 to 18. As the diaries represented the major source of data, and the email correspondence was most often initiated by the Coordinators, the Coordinators' perspectives were more prominent in the data.

A thematic qualitative data analysis was conducted by one of the authors (ZS). Thematic analysis involves the identification of themes through careful reading and re-reading of the data. Fereday and Muir-Cochrane suggested a hybrid approach of deductive and inductive coding for theme development and data analysis (6). In accordance with this approach, themes were generated from the raw data, and their meanings were examined. In addition, the data were interpreted and themes built according to the Capacity Building Framework.

Specifically, data-based blocks of texts (words, sentences or paragraphs having a meaning or conveying a message) were assigned to codes (suggested by the data) using specialized software (NVivo 10). Redundant codes were merged. This led to 132 codes for the meeting minutes, 164 for the correspondence, 179 for the first coordinator's diary, and 15 for the second coordinator's diary (new 2015 coordinator). Then, the codes were organized according to 10 framework-based meta-themes (five domain-related processes, and five domain-related outcomes) and grouped in themes identifying key processes and outcomes.

Results

The participants of this study were all members of the core group of the Network (n=31). The core group comprised researchers and clinicians (mainly nurses, pharmacists and physicians) based in different academic sites of the Department of Family Medicine at McGill University. Out of the core group of 31 members, 10 were males and 21 were females. Their years of involvement ranged from six months to two years, and all were affiliated with McGill University or the McGill University Health Centre. Analysis of the data generated 24 themes, which led to the discovery of processes and outcomes in the domains of leadership, organizational development, partnerships, resource allocation and workforce development (Table 1).

Leadership

Leadership in this context would be initiating communication with others, recruiting members and leading people in research. Three prominent leadership processes were observed: identifying and addressing clinician concerns about research and the Network, core group members recruiting new members, and researchers promoting communication. Leadership outcome themes were the membership variations (membership increase and decrease) which were in line

with strengths and weaknesses of members' leadership capabilities. While there were few instances of confusion due to poor communication, all the leadership-related processes ultimately led to clinicians assuming roles of leadership in research. For example, the Network certainly had an influence on the decision of clinicians to pursue graduate education and research bursaries, and directly assisted clinicians to become project leaders.

Organizational Development

Common themes interpreted as processes were the planning and development of projects. Planning by Network members was broad, and includes assigning members to specific roles within a project, e.g. planning future meetings. On seven occasions, five different members reported frustration and confusion regarding four projects. A common outcome associated with the Network was the development of members' projects, such as applying for funding and presenting the projects at conferences. However, despite initial planning by core group members, there was frustration at the amount of work required and clinicians were confused by the ethics approval process. Despite this, all the work performed by the members eventually led to tangible results which encouraged the core group, especially the researchers.

Table 1. Processes and outcomes of Organizational Participatory Research in the McGill Practice Based Research Network.

	Processes	Outcomes
Leadership	<ul style="list-style-type: none"> Identifying and addressing clinician concerns about research and the Network Core group members recruiting new members Researchers promoting communication 	<ul style="list-style-type: none"> Confusion due to poor communication Clinicians assuming roles of leadership in research Membership increase and decrease
Organizational Development	<ul style="list-style-type: none"> Core group members identifying project concerns Planning as a strategy for organizational development 	<ul style="list-style-type: none"> Project progression and development Frustration and confusion regarding project development
Partnership	<ul style="list-style-type: none"> Clinicians identifying challenges to relations Researchers helping clinicians improve relations Researcher identifying challenges to relations 	<ul style="list-style-type: none"> Collaboration between researchers and clinicians Researcher reflecting upon the partnership with clinicians Divide between clinicians and researchers due to poor relations
Resource Allocation	<ul style="list-style-type: none"> Managing time and workload Managing funding and finances 	<ul style="list-style-type: none"> Poor time management Accommodating to time restraints
Workforce Development	<ul style="list-style-type: none"> Researcher teaching clinicians Use of technology 	<ul style="list-style-type: none"> Core group members networking Positive learning experiences

Partnership

All documents suggested partnership was important to every member participating in the meetings. There were three themes interpreted as partnership processes: clinicians identifying challenges to their relationships, researchers helping clinicians, and researchers identifying challenges to their relationships. As a result of partnership processes, a major theme interpreted as an outcome was the collaboration between researchers and clinicians though, there were disagreements between clinicians and researchers (nine members, 21 times). One example of a disagreement between researcher and clinician was having different interpretations of project results. In diaries, coordinators often reflected upon the partnership between clinicians and researchers. For instance, a coordinator diary entry stated, “my take-home message from the workshop is to think more and continuously about what the Network members are getting out of it and what they want to get out of it”.

Resource Allocation

The management of money, time and workloads were defined as resource allocation processes. Time and workload were fundamental themes to the resource allocation process. Both clinicians and researchers attempted to manage funding issues, which was interpreted as a resource allocation process. The most significant barrier to the development of the Network was the time and workload constraints of clinicians resulting in difficulty scheduling meetings for coordinators. A coordinator sent an email saying, “I think there will be no meeting since no one else is available from the core group”. Nonetheless, members accommodated to the time constraints, such as meeting in smaller groups.

Workforce Development

Workforce development in this context would be learning, networking and using technology. Workforce development processes interpreted as themes were twofold: clinicians learning from researchers in the use of reference management software, and members used technology such as Skype for meetings and Dropbox for document sharing. Workforce development created unique networking opportunities with outside groups, for example resulting in presentations in local forums. The meeting minutes described a discussion regarding vignettes for learning: “Consult specialists in continuing education to see how this material can be turned into teaching material”. These experiences resulted in positive learning experiences for many members.

Discussion

Our analysis suggested key processes and outcomes within the five domain Capacity Building Framework associated with OPR in the Network. Specifically, results suggested benefits outweighed the efforts for both researchers and clinicians. An important process identified was planning of projects, while major outcomes were clinicians assuming leadership roles in research and collaboration between researchers and clinicians. The results suggested that there were a number of important benefits to the Network following the OPR approach such as clinician empowerment and co-decision making.

This collaboration followed the central concepts originally presented by Kurt Lewin (1). The core group discussed and planned projects together and clinicians with original research ideas were supported by the Network (process), which led to the completion of practice-based research projects (outcome). The Network had made a contribution to the research of both researchers and clinicians.

There were some limitations to this study. Members' viewpoints might have been omitted or underrepresented in the data, e.g., due to missed meetings or notes. In addition, coordinators' viewpoints and experiences were prominent as they constituted the majority of the data (e.g., coordinators sent out more emails than others).

Based on this descriptive qualitative study, a number of recommendations may be made. First, there may be different mailing lists for members with different participation preferences. Members should have the choice to subscribe to mailing lists that suit their interests. Additionally, an archive of coordinator announcements and relevant email discussion should be made available. A customized mailing list and archive could allow researchers to promote communication within the group in a dynamic way. Second, a wiki or a blog could be implemented. A website that integrated communication, research and feedback tools could promote interest in and accessibility to the Network. This could address the frustration that coordinators experience with regards to time management. Third, researchers should take on a humbler approach regarding their role in the Network, and should actively seek learning opportunities from clinicians. This would allow collaboration between clinicians and researchers to form more naturally. Finally, the results of this analysis were used to propose an *Annual Network Assessment Questionnaire* that was revised by core group members. The

questionnaire would allow members of the group to better plan future projects and assess their own work.

This qualitative descriptive study was relevant to the Network. It allowed an in-depth analysis of the Network's dynamics using the Capacity Building Framework, and led to a summary of processes and outcomes associated with its use of OPR. To ensure rigor, the results were discussed with the Network's coordinator and director. This study could directly influence the practices and policies of the Network.

Acknowledgements

I would like to thank Dr. Paula Bush and Dr. Ellen Rosenberg for their invaluable input and assistance in this project. Funding was provided by the Clarke McLeod Scholarship.

References

1. Lewin K. Action research and minority problems. *J Soc Issues* 1946 Nov 1;2(4):34-46.
2. Waterman H, Tillen D, Dickson R, De Koning K. Action research: a systematic review and guidance for assessment. *Health Technol Assess*. 2000 Dec;5(23):iii-157.
3. Bush PL, Pluye P, Loignon C, et al. Organizational Participatory Research: Is it worth it? Poster session presented at: 42- Annual Meeting of the North American Primary Care Research Group; 2014 Nov 21-25; New York, NY.
4. Hawe P. A Framework for building capacity to improve health. New South Wales Health Department, Sydney. 2001.
5. Sandelowski M. Focus on research methods-whatever happened to qualitative description?. *Res Nurs Health*. 2000 Aug;23(4):334-40.
6. Fereday J, Muir-Cochrane E. Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *Int J Qual Methods*. 2006 Mar 1;5(1):80-92