Evaluating the Fabreville Heart Health Program in Laval, Canada: a dialogue between two paradigms, positivism and constructivism

MINH NGUYET NGUYEN and JOANNE OTIS¹
Public Health Department of Laval, Quebec, Canada and ¹University of Quebec at Montreal, Montreal, Canada

SUMMARY
As part of the Canadian Federal-Provincial Initiative in Heart Health, the goal of the Fabreville Heart Health Program was to sensitize a district of Laval, Quebec’s second most populous city, to heart-healthy behaviours. The program was planned and implemented by a committee composed of Fabreville community leaders and professionals from the Public Health Department. Between 1992 and 1994, intervention objectives were defined by the department in terms of changing individual behaviours associated with cardiovascular risk factors, namely diet, sedentariness and smoking, as well as adapting physical and social environments to facilitate these changes. However, from 1994 to its conclusion in 1997, the program was re-oriented to engage the population in mobilizing their own community and taking charge of interventions themselves. Actions then became dependent on the interests and motivation of Fabreville residents to transform their lifestyles and aspects of their physical environment. The initial evaluation process, based on the positivist paradigm, was designed to measure changes in individual behaviours and certain physical environments, such as an increase in designated non-smoking areas. However, following the re-orientation towards community mobilization, it was decided that evaluation should go beyond the professional production of data to include a process of the collective construction of knowledge. Evaluation methodology then became based on the constructivist paradigm. Yet field constraints such as lack of community involvement in both leadership and process evaluation, and the need to ensure evaluation standards and fulfill sponsor obligations, compelled the Public Health Department to return to using a certain number of positivist methods. The ensuing inter-paradigm dialogue helped broaden the scope of evaluation and contributed to gaining a more in-depth understanding of the processes and outcomes of community mobilization.

Key words: community mobilization; constructivism; positivism; program evaluation

INTRODUCTION
Following a lengthy consultation process among the 10 Canadian provincial governments and professional, community and volunteer organizations, consensus was reached in 1988 on the importance of the prevention of heart disease on a Canada-wide scale (Santé et bien-être social du Canada, 1992). The result was the creation of the Federal-Provincial Initiative in Heart Health.

As part of this initiative, each province made a commitment to conduct a survey of cardiovascular risk factors on a representative sample of the population, then submit health promotion and intervention projects aimed at one or more communities. In the province of Québec, the survey was completed in 1990 (Santé Québec, 1994), and among the projects submitted, three were accepted in 1992 as part of the initiative (Potvin et al., 1992). The first project was conducted in a multicultural, disadvantaged city district, the second in a poor rural area, and the third in Laval,
a large, middle-class, mostly residential suburb located north of Montreal.

The Laval project was implemented in the Fabreville district between November 1992 and January 1997 (Béland et al., 1992). In 1992, the population of Fabreville was 15,000, comprising 3,500 households, the majority of which were French speaking. Annual household income exceeded the provincial average. Fabreville was chosen because it fulfilled income and educational criteria representative of a modal group of the Laval population. It also had prevention relevance because its population was young; 30.6% were <20 years of age and only 4.6% were >65 years of age. To assess the impact of interventions, Fabreville was to be compared with two control districts sampled for their similar distribution of age groups, ethnic composition and socio-economic characteristics.

INTERVENTION PROGRAM

To initiate the Fabreville Heart Health Program, an intervention planning and coordinating group was created in March 1993 (Cameron and Nguyen, 1998). The Fabreville Heart Health Committee was composed of 14 community leaders from various interest groups and organizations representing the health, education and business sectors, as well as community groups, and municipal and provincial officials. In collaboration with the Public Health Department (PHD), the committee designed an initial action plan to promote the heart health program to residents of the district. It had four distinct phases. First, a training program was given to volunteers who had been recruited by the committee to put the action plan into motion. Secondly, a press conference was held. Thirdly, a community leader wrote a weekly column published in a local newspaper. Finally, seven activities were conducted as follows.

1. Mailing of a heart health resource directory to the target population.
2. Distribution of a bookmark on diet in a supermarket and a credit union.
3. Launch of a poster contest in four elementary schools.
4. Organization of heart-healthy physical activities for 18- to 65-year-olds.
5. Yogurt tasting in a supermarket.
6. Demonstration and playing of The Heart Health Game in a supermarket.
7. Conducting of a self-administered heart-health risk test (Risko) in a bank and a credit union.

In June 1994, the PHD representatives saw that the original action plan might not bring about the desired results, and with the support of the Fabreville Heart Health Committee decided to re-orient the program to harness the potential of the people in the community to improve their own health (MacNeil, 1992). Three series of public fora were planned and organized for the Fabreville community to ‘get informed,’ ‘debate’ and ‘act’ in matters of heart health. The goal was to mobilize the population and have the people themselves take charge of actions that could generate health and well-being. The result was that three activities were conducted, as well as two lobbying initiatives.

1. Establishment of a walking club in November 1995 by an organizing committee composed of eight Fabreville volunteers and a representative of the PHD (Cameron, 1997). At the end of the program in January 1997, this club comprised nearly 100 members and offered a dozen walking itineraries. It became affiliated with the Québec Walking Federation and the Laval Association of Walking Clubs.
2. Planning and implementation of the ‘Projet Parc-Cœur’ (Heart-Park Program). The goal of this program was to make inexpensive physical activities available to children <5 years of age and their parents (Finn et al., 1996). From June to August 1996, the program was conducted by people hired with funding from a federal grant obtained by the PHD. Attendance for the 48 activity sessions was ~400 parents and children.
3. Holding of ‘Nutrition Get-Togethers’ (St-Onge, 1997). These meetings were planned and organized by a staff member of the PHD and a nutritionist from the district’s Community Health Centre (known as CLSC in Québec), in collaboration with the leaders and volunteers of two Fabreville community groups for seniors. The goal was to sensitize the clientele of these groups to a heart-healthy diet. Attendance was ~200 for the 15 meetings.
4. A letter from the Fabreville Heart Health Committee to the city councilors of Fabreville in March 1996, requesting that they pave an existing bicycle path to make it safer and more attractive to use (Cameron and Nguyen, 1998).
5. A letter from the Fabreville Heart Health Committee to organizations in the district in December 1996 to promote a new smoking cessation program being launched by the local Community Health Centre.

FROM POSITIVIST TO CONSTRUCTIVIST EVALUATION

Evaluation strategies at the beginning of the program were essentially based on the positivist paradigm (Béland et al., 1992). Through various research instruments they did the following.

1. Measured the impact of the intervention program on beliefs, attitudes, and perception of subjective norms and skills vis-à-vis the lifestyle habits of the target population (Nguyen et al., 1995a; Nguyen et al., 1996a; Nguyen et al., 1996b; Nguyen et al., 1998).

2. Measured the impact of three components: (i) the availability of low-fat foods in grocery and convenience stores; (ii) the availability of non-smoking areas in public places covered or not covered by the municipal by-laws governing smoking; and (iii) the availability and accessibility of heart healthy fitness equipment in recreation centres and school populations (Nguyen et al., 1995b; Nguyen et al., 1995c; Nguyen et al., 1995d).

3. Measured the reactions of the target population to the various components of the intervention program (Cameron and Nguyen, 1998).

4. Determined and explained the degree of penetration the program had had (Cameron and Nguyen, 1998).

After the PHD had decided to re-orient the program towards community mobilization in June 1994, these positivist evaluation strategies were judged to be inadequate for understanding its processes and outcomes.

First, the initial evaluation formulated by the PHD in 1992 measured the effects of the intervention program on predisposing, facilitating and reinforcing factors in adopting three lifestyle habits related to heart health: low-fat diet, smoking cessation and exercise. However, such a process did not allow for examining the outcomes of actions other than those related to individual behaviours. Therefore, after the program had been re-directed in 1994 towards responding to cardiovascular health needs as defined by Fabreville residents themselves, the PHD decided not to continue with the original positivist evaluation and to proceed with a constructivist one. With community mobilization, actions depended on citizens’ own interests and ideas. These actions—the walking club, Heart-Park Nutrition Get-Togethers, bicycle path and smoking cessation initiatives—were associated not only with individual behaviour change, but also with the evolving context in which the community-based actions were being conducted. These actions were based on consensus derived from the expressed needs of all the actors involved, flowing from discussions, critiques and negotiations (Dixon and Sindall, 1994). Constructivist methods would provide a more in-depth understanding of the social and community dynamics evolving with the actors. They would contribute to facilitating the transferability of the results obtained, and thereby improve their external validity (Creswell, 1994).

Secondly, the initial positivist evaluation was based on the postulate that the object of evaluation could be observed, described, measured and judged ‘objectively’, indeed uniquely from the point of view of the PHD. Only professional knowledge would contribute to the evaluation process. There would be no input from the other actors, namely representatives of the actual target population. However, given the new context of community mobilization, it was felt that information and understanding could also be constructed from the perceptions of these various actors. Citizen knowledge, on an equal footing with professional knowledge (Corin, 1995; Lehoux et al., 1995), could therefore be harnessed for the evaluation process. Constructivist methods would allow the collective building of knowledge that would contribute to the ultimate goal of improving the heart health of people as individuals and as a group.

Thirdly, the initial evaluation was based on a quasi-experimental model, with pre- and post-tests, and two comparison groups. This type of positivist process tends towards the organization of data for decision-making by external decision-makers at the end of a program (Guba and Lincoln, 1989). By its very nature, conducting this type of evaluation leaves little room for the collective construction of knowledge to feed action and make adaptations en route. Therefore, the PHD decided to re-define its role and consider itself one of the partners in the process. This would result in calling into question major components...
of the program, or at least certain intervention strategies put into place, during the entire course of the program. Hence, it seemed essential to change the evaluation process to one of the collective building of knowledge, the ultimate objective being an awareness on the part of all the actors of the ongoing efficacy of their actions.

CONSTRUCTIVIST EVALUATION

In 1994, when the heart health program was being re-oriented towards community mobilization, the PHD re-examined and re-directed the evaluation process to make it more compatible with the reality of the activity program, and introduced strategies based on the constructivist paradigm to monitor progress in a concerted fashion: health professionals and citizens working together, mainly by keeping records of discussions and negotiations in logbooks, producing meeting and analytical reports, and conducting brainstormings or group discussions (Fetterman, 2001).

Labonté and Robertson describe the parameters of such an approach as follows:

[The] ontology [of a constructivist paradigm] is relativist, meaning that realities are socially constructed, ungoverned by universal laws; these realities are ‘local and specific, dependent for their form and content on the persons who hold them’. In a constructivist epistemology, the researcher is part of the reality that is being researched, such that the research findings are a creation of the inquiry process itself rather than a collection of external, already existing ‘facts’. Its methodology is hermeneutic, that is, interpretive, and dialectic, in that it involves a constant comparison of differing interpretations. It is a process of iteration, analysis, critique, reiteration, reanalysis, synthesis, and so on. (Labonté and Robertson, 1996)

However, the problem with the Fabreville Heart Health Program after it became constructivist in approach was that real constraints arose that did not allow for completely abandoning the initial evaluation model based on the positivist paradigm. Community actors did not want to, nor did they adequately contribute to the constructivist evaluation process either during or after the interventions. Constructivist theory met with difficulty in practice. Therefore, the PHD had no choice but to resort to using a number of positivist evaluation tools. The constructivist approach had functioned quite well in the planning and implementing phases, but not in the operation phase.

CONSTRUCTIVIST CONSTRAINTS AND A RETURN TO PARTIAL POSITIVIST EVALUATION

1. First limitation: lack of community involvement

Among the various action programs that were identified in public fora as being favourable for heart health, the only one that attracted volunteers to contribute to the organization and management process was the establishment of a walking club in the district. For the other two, the HeartPark Program and Nutrition Get-Togethers, the PHD had to hire a health professional to plan and conduct them, given the lack of community interest shown in managing these.

In planning these programs, the public health professional set up focus groups with the heads of the community organizations who had agreed to participate. They were solicited for their opinions and recommendations on the form, content and orientation of the programs. Thus, client needs, feasibility and receptiveness of the programs could be assessed. The health professional kept records of these discussions in logbooks, and meeting and analytical reports.

However, community involvement in the evaluation program was minimal, to such a point that it jeopardized the whole process. When reports were requested from participants, few were done, and the ones that were sent in were so terse as to be ineffective for evaluation purposes (Cameron and Nguyen, 1998). Therefore the PHD had no choice but to formulate interview questions and conduct the evaluation themselves. Hence, the perceptions of the participants were evaluated only after the activities had run their course.

Although the PHD had acknowledged that experiences could be perceived differently by the actors involved, and that ‘reality’ could be construed as subjective, varied and complex, in practical terms this constructivist approach did not function well with regards to meeting basic evaluation objectives during the operation phase. Only a return to positivist tools provided acceptable assessment outcomes. Understanding the efficacy of the heart health interventions was not entirely the fruit of the collective building of knowledge during the run of the programs. In the end, the evaluation process tended to be a

Heart disease is the primary cause of mortality in Canada (Heart and Stroke Foundation of Canada, 1995). The incidence and associated mortality of this disease greatly increases with age. As mentioned before, Fabreville was a district with a young population. The PHD had actually counted on the young people in this community to undertake preventive actions on heart health. However, it is possible that because of its relative youth, the Fabreville population felt heart health was not a major concern in their daily lives, and saw no need to get actively involved in heart disease prevention programs.

2. Second limitation: reluctance of community volunteers to act as community change agents

After the PHD had decided to re-orient the heart health program, the intent was to develop the community’s savoir faire in the planning, implementation and evaluation of prevention activities vis-à-vis cardiovascular disease so the community could take charge of the program and ensure its continuity when the public health professionals had left (Fawcett et al., 2000).

As indicated above, the only heart-healthy activity that managed to attract citizen volunteer managers was the organization of a district walking club. The PHD hired a professional to assist the volunteer committee in planning and setting up the club. For a period of 18 months, this person collated records of discussions, negotiations and meetings and produced analytical reports. These provided feedback to build consensus and fuel action.

However, the public health professional was unable to motivate the volunteers to participate in the evaluation process. These volunteer managers put forward the following reasons for not being more actively involved: (i) volunteer organizers were working together for the first time; (ii) the executive committee had a very high rate of turnover and little management experience; (iii) they considered bureaucratic tasks to be too demanding, and wanted to keep them to a minimum; and (iv) they preferred to devote their time and energy to implementing concrete actions to make the walking club function rather than attending meetings and doing paperwork.

At the end of the health professional contract, once the walking club was in operation, the volunteers did not submit sufficient data to monitor the progress of these activities. Very little feedback was received from them to integrate analyses of previous interviews with subsequent ones. The volunteers kept indicating that they felt overwhelmed by the number and frequency of the measurement instruments they had to administer (Dickson and Green, 2001). They did not have the expertise to conduct an evaluation and had no intention of acquiring the skills needed to collect data. They insisted it was the work of health professionals and that they would prefer to delegate this responsibility to the PHD. Such attitudes rendered the community dependent on professionals to make any decisions on the heart health intervention program, and did not ensure its continuity when the PHD could no longer run it (Koné et al., 2000).

The planning and implementation of the walking club emerged from a collective production of knowledge based on the constructivist approach. This knowledge was used to build consensus for transforming the interventions, an example being the shortening of the route so as not to discourage participants. However, knowledge acquired after the club began to operate was not the result of the collective construction of perceptions of the experience. It was only possible to assess the steps taken by the volunteers in managing the walking club through retrospective group interviews or questionnaires based strictly on questions formulated by the PHD (Cameron and Nguyen, 1998). Field constraints forced evaluators to resort to using tools of both the positivist and the constructivist paradigms.

Fabreville is a district of Laval, a satellite city in the Greater Montreal Region. It has many characteristics of a bedroom community, with middle-class families in which both spouses work outside the neighbourhood and have small children at home. In general, these families have little time to devote to community involvement. Residents of this district primarily have a mentality of consumers of services. Few may have had a history of, or be used to, volunteering. It is possible that because of the above deep-rooted behaviours, they were certainly interested in being involved in a clearly defined, regularly scheduled activity like a walking club, but were less willing to be, or at the very least were ambivalent about, managing the evaluation process and acting on its results. In short, they may have been less willing to act as community change agents who would assume the role of being in
charge of the heart-health and well-being of their community at large.

3. Third limitation: exigencies of the grant
The PHD had decided to re-orient the heart health program to have the community better understand the activities that had been implemented and obtain their input into the management of the intervention program so it could respond to local needs.

However, the Fabreville Heart Health Program had received a grant as a demonstration program. It was essential to verify the hypotheses regarding changes in lifestyle habits targeted by the interventions as well as those concerned with community mobilization and self-management. The external funding agencies viewed the program as having two goals: the production of data and the advancement of knowledge given the hypotheses.

The issue was whether the PHD should respond to the exigencies of the grant while respecting scientific vigour, and at the same time negotiate the involvement of community actors in the collection of data (Koné et al., 2000; Minkler, 2000). In this context, it was possible that many health professionals have a tendency to maintain control of their evaluation process and volunteers perceive that the process serves the interests of the former rather than their own (Eisinger and Senturia, 2001).

It is also possible that the lack of involvement on the part of the community volunteers in the evaluation process suited some health professionals in the PHD. When the heart health project was being conducted, there was less reference in the literature to constructivist approaches during these years, and what articles did exist on the subject were relatively theoretical. Some professionals felt they did not have the tools to introduce a constructivist approach to their collaborators (Mercier, 1995). They emphasized that this was their first experience in the field with a constructivist approach and they did not necessarily feel comfortable changing their role from judge to mediator in negotiations on the major components of the project. Thus, the evaluation process tended to be an overlap of the two different approaches, positivism and constructivism.

4. Fourth limitation: budget
According to Sullivan et al.: 

Several researchers have reported that their success in community-based research was based on taking time to develop relationships, develop ground rules for collaboration, foster trust, share power, maintain open communication, respect community expertise, and be open to researching community-identified priorities. (Sullivan et al., 2001)

The Fabreville Heart Health Program had received a grant as a demonstration program. The PHD had managed this project with a pre-set budget for a period between November 1992 and January 1997. In June 1994, when it had been decided to re-orient the program to have the community take charge of their heart health and arrive at a consensus of knowledge, the project still had two and a half years remaining until the end of the project and submission of the final report to the funding agency. During this short period of time, the PHD had to identify actions fostering heart health, set up the intervention program, and assess its implementation and efficacy. In this context, it was necessary to increase the number of meetings and time spent in discussions and negotiations (Ferrelli et al., 1997; Schulz et al., 1998). As underlined by Eisenger and Santuria:

We’ve learned that it is not simply a matter of asking people to come to the table. And that’s still a challenge ahead. How do you entice people to want to be involved? (Eisenger and Santuria, 2001)

It was therefore possible that the PHD did not have enough time at their disposal to familiarize themselves and develop shared values with their community partners. Near the end of 1996, because of the budget limits and time constraints of the grant, the PHD could not afford to pay a health professional to accompany the volunteers in the organization of activities and collection of data. Since volunteers were not providing data to evaluate the progress of the project, the PHD decided to use measurement instruments to gather the opinions of the volunteers from their own questionnaires, observation notes, focus groups, individual and group interviews (Lindsey and McGuiness, 1998). Thus, again, the overall evaluation of the program tended towards the overlap of two different approaches: positivism and constructivism.

CONCLUSION

Certain authors consider positivism and constructivism as opposites because of their significantly different approaches to the acquisition of
knowledge (Guba and Lincoln, 1994; Levy, 1994; Groulx, 1997). In the context of the Fabreville program, the evaluators acknowledged the seemingly polarized and axiomatic positions of the two paradigms. As O’Neill suggests:

Whatever their ontological, epistemological, methodological or technical approaches, they only have meaning in the field of health promotion if we have seen them being used in action. (O’Neill, 1996)

After the program was re-oriented towards community mobilization, the Laval PHD increased its sensitivity to questions and requests on the part of its partners in order to generate feedback and bring about change in a concerted fashion: professionals and citizens working together. The PHD wanted the community to assume the ‘role of change agent’ (Allard, 1991). However, field constraints forced evaluators to resort to using both positivist and constructivist approaches. An inter-paradigm ‘dialogue’ was required to obtain data that would otherwise have been lacking if the researchers had relied on the rudiments of a single paradigm. It helped gain a better understanding of the processes and effects of mobilizing the target population towards heart-health awareness and concrete action. The program evaluators therefore share Gendron’s reflective observation:

The combination of paradigms refers to an overlap rather than a fusion—the components of each paradigm remain distinct and functional in themselves. This allows the scope of a study to be widened. The various facets of a phenomenon can be examined while leaving room for contradictions to emerge, leading to new perspectives and knowledge. (Gendron, 1996)

ACKNOWLEDGEMENTS

The members of the coordinating committee of the Projet Québécois de Démonstration en Santé du Cœur (PQDSC) were R. Lessard, B. Lachance, G. Paradis, L. Potvin, L. Renaud, J. O’Loughlin, F. Filiatrault, M. N. Nguyen, J. Pelletier and J. Moisan. The Fabreville Heart Health Program was conducted as part of the PQDSC. The PQDSC was jointly financed by the National Health Research and Development Program (Canada), the Quebec Ministry of Health and Social Services (Québec) and the Heart and Stroke Foundation of Quebec.

Address for correspondence:
Minh Nguyet Nguyen
Direction de la santé publique
Régie régionale de la santé et des services sociaux de Laval
800 Boulevard Chomedey
Tour A, 2e étage
Chomedey
Laval
Québec
Canada H7V 3Y4
E-mail: nguyet_nguyen@ssss.gouv.qc.ca

REFERENCES


