GAUGING ALIGNMENTS: AN ETHNOGRAPHICALLY INFORMED METHOD FOR PROCESS EVALUATION IN A COMMUNITY-BASED INTERVENTION

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Abstract: Community-based projects feature multidimensional interventions and interactions within unpredictable contexts. Process evaluations can shed light on variability in outcomes across sites and the reasons why some project outcomes fall short of expectations. The authors present an ethnographically informed study of the interactive project components in a pilot community-based falls prevention project that was implemented in 4 communities across Canada. Ethnographic descriptions and analyses of alignments between multilevelled project components allowed the researchers to better understand the mechanisms of project evolution at each site and variations in project momentum, mobilization, and sustainability across sites. Primary data sources consisted of project teleconference transcripts triangulated with log notes, field notes, and interviews. Descriptions and analyses of alignments may be instrumental to process evaluation. Project adjustments could then be made accordingly in propelling progress toward program objectives, informing program decisions, and in making sense of variability in program outcomes. Further exploration and operationalization of the alignment concept is recommended to advance knowledge about how to conduct process evaluations of complex interventions.

Résumé :   Les projets communautaires comportent des interventions et des interactions multidimensionnelles dans des contextes imprévisibles. Les évaluations des processus peuvent permettre de

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découvrir des résultats variables d'un site à l'autre et les raisons pour lesquelles les résultats de certains projets n'atteignent pas les attentes. Les auteurs présentent une étude influencée par l'ethnographie des composantes interactives du projet pilote communautaire de prévention des chutes qui a été mise en oeuvre dans 4 communautés partout au Canada. Les descriptions ethnographiques et les analyses de l'alignement entre les composantes multiniveaux du projet ont permis aux chercheurs de mieux comprendre les mécanismes de l'évolution du projet à chaque site et les variations dans le rythme, la mobilisation, et la durabilité du projet aux différents sites. Les principales sources de données étaient constituées de transcriptions de la téléconférence du projet triangulées avec les notes du registre, les observations sur le terrain, et les entrevues. Les descriptions et les analyses des alignements peuvent contribuer à l'évaluation du processus. Les ajustements au projet pourraient ainsi être effectués selon le rythme des progrès vers les objectifs du programme, les décisions éclairées à l'égard du programme, et l'interprétation de la variabilité des résultats du programme. On recommande une étude et une opérationnalisation plus approfondies du concept de l'alignement afin de faire avancer les connaissances sur la façon de procéder à des évaluations du processus d'interventions complexes.

INTRODUCTION

Many studies of large-scale community-based interventions have failed to report significant impacts (Edwards, Mill, & Kothari, 2004; Merzel & D'Affitti, 2003). Also puzzling is that community-based projects have not always followed predicted trajectories and different results have issued from similar community-based programs (DeGroff, Schooley, Chapel, & Poister, 2010; Reger-Nash, Bauman, Cooper, Chey, & Simon, 2006). Despite these enigmas that call for explanations, intervening and contextual factors that were thought to mediate the relationship between program and outcome have rarely been examined (Harachi, Abbott, Catalano, Haggerty, & Fleming, 1999). Seldom are existing relationships of project components represented or addressed in community-based programs and their evaluations (Potvin & Goldberg, 2007). Recent literature has begun to recognize that many programs need to be conceptualized as complex rather than simple linear interventions (Rogers, 2008). With community-based projects, interventions are multidimensional, involving unpredictable contexts that require attention and project adaptation to changing dynamic interactions characteristic of complicated and complex systems (Rogers, 2008). The tenets put forth in "realist evaluation" are that programs in reality are embedded in

open systems of multiple relationships (Pawson & Tilley, 1997). The mechanisms of effective programs need to be understood in terms of their contexts of personnel, political change, practitioners' learning and motivation, and a host of contextual variables (Pawson & Tilley, 1997). Thus, realist evaluation stresses the concepts of mechanism, context, outcome, and the pattern configuration formed by the three (Pawson & Tilley, 1997). While understanding the contributing influences of context and mechanism to the relative success or failure of a program outcome does not lead to fool-proof programs, such insights can nevertheless point to salient considerations in program implementations and evaluations in the real world to justify the time, money, and resources heavily invested in them.

Process evaluation is seen to be important in opening up the "black box" of program delivery to illuminate influences in eventual project outcomes and their variability across sites (Hong et al., 2005; Harachi et al., 1999). Yet dynamic interactions between program components and community characteristics are difficult to capture and have not yet figured centrally into process evaluations (Nilsen, 2005; Potvin & Goldberg, 2007). The aim of this article is to demonstrate how such interactive relationships can be observed and described. Typically, process evaluation considers more static indicators such as adherence to pre-established intervention protocols, the dose of intervention strategies delivered and received, and the quality of the program delivered (Dusenbury, Brannigan, Falco, & Hansen, 2003; Mowbray, Holter, Teague, & Bybee, 2003; Thompson, Kegler, & Holtgrave, 2006). In reality, each project site features its own constellation of actors, contexts, and contingencies. Given the complexity and multilevelled network of relationships in community-based interventions, methods are acutely needed to map and assess interactions of project components in terms of their synergies or conflicts that reflect the dynamic evolution of such interventions.

This article describes a fresh, ethnographically informed approach focused on alignments of project components in a pilot multisite, multilevel community-based falls prevention study in Canada. We report the alignment description and analysis of four project sites and explain how alignments are associated with project momentum, outcomes, and sustainability in each site. Alignment here is defined as an interaction between key project components characterized by a good match, goodness-of-fit, rapport, resonance, correspondence, cooperation, or congruence. Positive and negative alignment can lead to synergies or conflicts. The potential of this method in process evaluation is discussed.

Research Questions

> The study began with two initial questions: (1) What were the turning points that influenced the project's implementation? (2) What factors facilitated and impeded the movement into the turning points in the project? A search for pivotal factors led to the observation that it was not individual project factors that were significant across sites, but rather the interactions among them, culminating in the discovery of alignments as an important description in tracking process.

Description of the Falls Prevention Pilot Project

> Overview

> The pilot was a community-based project undertaken in four communities across Canada over the course of one year. The project's goals were to increase the knowledge and acceptance of, and accessibility to, assistive devices for preventing falls among seniors. Assistive devices in this project included canes, hip protectors, bath mats, and grab bars. These devices were promoted within three business domains: retailers, homebuilders, and hotels/motels. Site coordinators who were health professionals in each community led activities of the project. To safeguard confidentiality, the sites are anonymized. The study was approved by the Health Sciences Research Ethics Board of the University of Ottawa.

> The Pilot Sites

> Each of the four pilot sites had unique demographics, strengths, and challenges. Site A was a small, closely knit, stable community that had been exposed to other falls prevention initiatives. Site B was a relatively small community with a large senior population, many of whom had moved there for retirement. Site C was a medium-sized and predominantly francophone community. Site D was an ethnically diverse metropolis that had had some previous falls prevention initiatives. The sites were situated in four Canadian provinces.

> Project Coordinators

> This project was managed by a national coordinator and four part-time site coordinators. The primary role of the national coordinator was to support the site coordinators as they worked to mobilize their communities to promote assistive devices. The general responsibilities of the site coordinators were to

- recruit a local Community Advisory Team (CAT) to help tailor the program to their community's needs and capacities. CAT members were recruited from senior and veteran groups, local health care providers, and the local business community. Team members volunteered their time and expertise in a multitude of ways including providing guidance to the project teams, assisting in setting priorities, making contacts, and problem-solving.
- recruit, train, and support senior volunteers to help with the mobilization of the community. Senior volunteers were recruited from senior groups, personal contacts, and veteran organizations. The role of the senior volunteers was to assist in recruiting and supporting businesses, and to support the site coordinator with community events, mobilize the community, and increase awareness of assistive devices and falls prevention.

Project Evaluation

Data collected for the project evaluation included the use of (a) log notes of contacts and activities recorded by site coordinators (e.g., number of volunteers, dates of CAT meetings, volunteer training, community and media events); (b) site coordinator field notes reflecting impressions of opportunities, challenges, and progress made in their sites; (c) interviews, surveys, and focus groups with community volunteers and businesses; (d) environmental scans of participating businesses to identify the types of assistive devices they sold and how these were promoted; and (e) transcripts and ethnographic descriptions of monthly project teleconferences of the national coordinator and the site coordinators recorded by an independent process observer, the first author of this article. The first four sets of data were used to complete the formal evaluation of the project reported to the funder. The fifth set of data from the teleconferences was used specifically to inform the process evaluation reported in this article, triangulated with the first four sets of data.

METHOD

Ethnographic methods have the advantage of capturing events, behaviours, and interactions holistically and in a contextualized fashion, making it a suitable tool for process evaluation (Hong et al., 2005; Richards & Morse, 2007). Unanticipated learning about processes and outcomes can be discovered with this method. Themes, patterns, or

issues can come to light with descriptive data (Creswell, 2009). Historically, ethnographic researchers studied a singular cultural group over an extended time period (Richards & Morse, 2007; Creswell, 2009). However, ethnography has evolved in terms of its subject and method (Fetterman, 2009; Richards & Morse, 2007). Observations, field notes, thick descriptions, and interviews are now being utilized to explore cohesive social and cultural units such as those found in institutions, occupational groups, and communities (Hong et al., 2005; Richards & Morse, 2007).

In this study, the process observer based her process evaluation on ethnographic techniques. These consisted of observations and transcriptions of the monthly telephone conferences of the national and site coordinators, recorded as field notes and ethnographic summaries, examination of the site coordinators' log notes and field notes for the project, and end-of-project interviews with the national coordinator and two researchers.

The process observer listened as a nonparticipant in the monthly telephone conferences (a total of 14 sessions) of the project team, consisting of the national and site coordinators and occasionally the project manager. Average length of sessions was 1.5 hours. The agenda of the conferences was set by the national coordinator of the project with input from the team. The telephone conferences were audiotaped. The information tracked by the ethnographer differed from that of minutes taken by the national coordinator. While the purpose of minutes was to record the content of topics discussed and decisions made during the telephone conferences to keep the team members informed, the ethnographic descriptions of these teleconferences made by the process observer aimed to describe the project's course of development and the multiple factors that impinged on the project, and themes that emerged from it.

Data from the transcripts were analyzed initially using the categories of (a) *ongoing project themes*: themes emerging from the team's report and discussion; (b) *practical themes*: themes requiring action and immediate adjustments in the project; (c) *flagged themes*: themes requiring attention and consideration for future implementation; and (d) *group process themes*: themes pertaining to the group's emotional tone, interactions, and dynamics. At the end of each teleconference, the process observer wrote a summary of the session that described her interpretations of what transpired. Further and more extensive descriptions were written during the retrospective review of the project.

FINDINGS

In noting the turning points, three stages of the project were iden-
tified, which frame the dynamic processes that took place within
each site. Events and themes anteceding and following the turn-
ing points marked by the stages were scrutinized, resulting in the
identification of alignment pairs among the project components.
The four project sites are described in terms of project component
alignments to illustrate how such observations, descriptions, and
analysis can be used in a process evaluation to understand site
variability; and to inform and refine project development. Salient
project components were mapped as an interactive network of re-
lationships (Figure 1). "Pair alignments" of critical interactions of
project components that have a bearing on the project's progress
are described.

Figure 1
Project Network Interactions
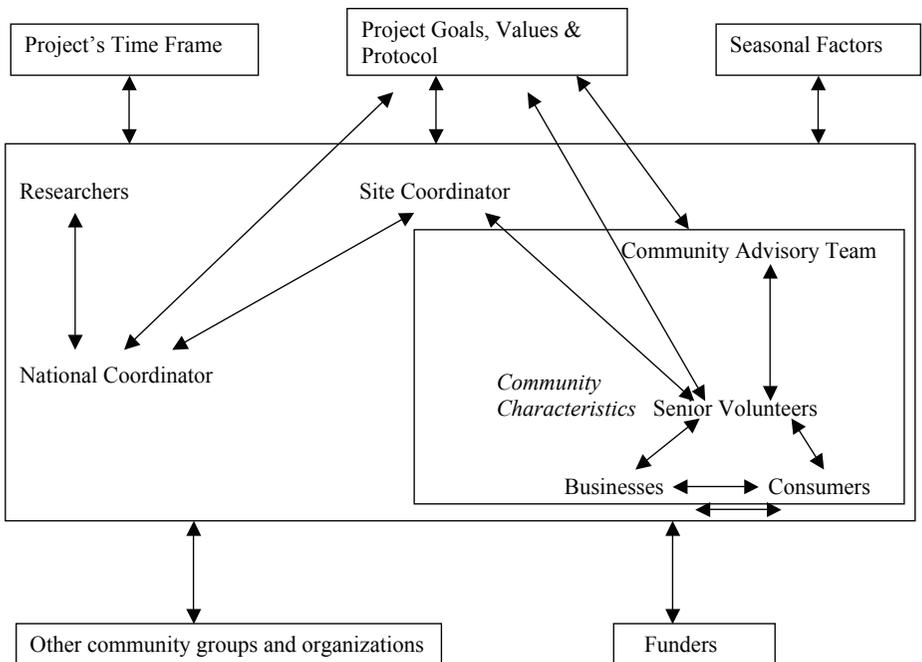
Stages of Implementation

Three distinct stages emerged from the analysis, each with its own tasks, struggles, tensions, and goals.

Recruitment Stage

Tasks of making community contacts, sparking interest in falls prevention, and recruiting CAT members and senior volunteers belonged in this stage. The mood of the site coordinators was on a roller-coaster. A positive response in recruitment represented a "high" against a great number of refusals. At this stage, the site coordinators needed substantial support through normalizing, cheering, and commiserating from other team members and the national coordinator. The site coordinators gauged their progress against each other and tried to learn from the others' approaches. Important alignments noted at this stage were those between the site coordinators' commitment and the project goals, the match between the site coordinators' experience and operating style and the requirements of the project, and the relationship of the site coordinators with their community. Each site began the project on a different footing depending on these early alignments and the ease with which adjustments were made to increase alignments that were not readily present. The strength of these early alignments influenced the momentum and results of the recruitment process.

Mobilization Stage

This stage consisted of the formation of the CAT, training of volunteers, and initial contact with businesses. The mobilization stage depended on the alignment of CAT members and volunteers with the project goals, their sense of buy-in and ownership of the project, and the support they received from the site coordinator to thoroughly internalize the project goals and messages. Cooperation and camaraderie among CAT and volunteers and their relationship with the site coordinator were important alignments that fostered enthusiasm and commitment to the project.

The timing for entering the active mobilization stage differed for each group. While some were able to meet the expected timeline for the project, others felt a lot of anxiety as they were unable to recruit any or all of the volunteers they needed.

Expansion and Closing Stage

The third stage comprised two sets of dynamics. On the one hand, it represented the stage in which the project's key messages were taken to businesses, hoteliers, builders, and community groups. On the other, it was time to bring the project to a close. The one-year time frame was not sufficient for any of the site coordinators to mobilize the community to its full potential and to maximize the project's impact and sustainability. The imminent closure of the project compromised the commitment businesses were willing to make in terms of stocking assistive devices without guarantee of ongoing customer demand. As this demand was uncertain, most businesses were more open to simply obtaining training and learning more about assistive devices rather than making major changes to their inventories.

The tasks for this stage were to ensure the sustainability of the project as far as possible and to bring closure to the planned implementation. Varying degrees and levels of changes were reached by each site.

Alignments and Project's Momentum, Mobilization, and Sustainability

Momentum in a project is the speed and cumulative resources in a project's movement in the direction of its intended process and goals. A community project whose vehicle is community mobilization relies on a process that stimulates community members in engaging with planning, participating, implementing, and sustaining the initiative to improve the health of that community (http://sedc.org.pk/portal/general/theme_desc.php?themeid=44). A community is being mobilized when individuals and groups are able to work together in subscribing to the value of a shared vision and in appropriating their skills and resources toward common goals inspired by that vision. Sustainability exists when the key elements essential to a program continue over time in ongoing operations through processes of communication, education, and organizational adoption and then become routine (Cassidy, Leviton, & Hunter, 2006; Johnson, Hays, Center, & Daley, 2004). Table 1 illustrates the momentum, mobilization, and sustainability of the four sites in this pilot project. An alignment analysis of the four sites (Table 2) explains how the strength of alignments of various project components can help make sense of the variability in momentum, mobilization, and sustainability reflective of the project's progress among the sites within a prescribed 12-month time frame.

Table 1
Site Momentum, Mobilization, and Sustainability

	Momentum & Mobilization			
	Site A	Site B	Site C	Site D
Community Advisory Team	Completed third month • 12-member CAT recruited	Completed fourth month • 6-member CAT recruited	Completed fourth month • 11-member CAT recruited	Completed fourth month • 5-member CAT recruited
Senior volunteers' recruitment and training	Completed fourth month • 5 seniors recruited	Completed seventh month • 4 seniors recruited • 2 seniors dropped out at tenth month	No volunteers recruited (1 senior expressed an interest, but became ill and had to drop out)	No volunteers recruited
Businesses	18 businesses recruited by volunteers with support of site coordinator: • 8 pharmacies • 1 medical supply store • 5 hardware or building supply stores • 1 department store • 2 hotels • 1 bed and breakfast First contact made: fifth month No. of contacts made = 219	5 businesses recruited by site coordinator: • 2 pharmacies • 1 hardware store • 1 department store • 1 hotel First contact made: seventh month No. of contacts made = 50	11 businesses recruited by site coordinator: • 7 pharmacies • 1 department store • 1 hardware store • 1 hotel and • 1 builder First contact made: seventh month No. of contacts made = 104	9 businesses recruited by site coordinator: • 4 pharmacies • 1 home health care business • 1 department store • 1 hardware store • 2 hotels No. of contacts made = not available
Community awareness activities	• 9 presentations to community and health care groups • 6 articles in local and seniors newspapers • Displays at a community health fair	• 15 presentations to community and health care groups • Articles in local newspapers • A radio talk show • 2 cable television interviews • Displays at participating retail stores	• 6 presentations to community and health care groups • Displays at participating retail stores	• 16 presentations to community and health care groups • Display at a local seniors fair and a seniors skating club • Television news segment • Displays at participating retail stores

Main impact on businesses	• Increased awareness and knowledge of participating businesses on assistive devices • Increased visibility of grab bars and nonslip surfaces for bathtubs in stores (from specialty section to bathroom and plumbing)	• Increased awareness and knowledge of participating businesses on assistive devices	• Increased awareness and knowledge of participating businesses on assistive devices • Increased availability and visibility of bath benches and grab bars in stores (from specialty section to bathroom and plumbing)	• Increased awareness and knowledge of participating businesses on assistive devices • Significant improvement in promotion of assistive devices
Main Impacts on Hotelier	Hotel owners expressed increased awareness of assistive devices and their benefits with prevention	Hotelier installing grab bars in all rooms	Hotelier exploring purchase of safe mats for outside tub and completing insert for guest book on safety tips and availability of bath bench.	Hotels will gradually replace towel math mats for rubber backed and install more grab bars. Buy more portable bath seats, but adjustable with baths
Main Impacts on Builders	N/a	N/a	Contractor has added grab bars as an option for new condo and proper reinforcement behind tub and shower wall.	N/a
Main Impacts on CAT and volunteers	• Increased knowledge and awareness • Senior Volunteers took ownership for project and wanted to advocate for the project goals beyond project's close; • A health fair was staged in partnership with other community health organizations with participation of CAT members and volunteers	Increased knowledge and awareness	Increased knowledge and awareness	Increased knowledge and awareness

	Site A	Site B	Site C	Site D
Main Impacts on Community	Significant momentum for falls prevention right across the Site locale.	• Interest and collaboration with health insurance company • Interest by health sector of community Rehab & hospital Therapies to in get funding for community based falls prevention program	Public Health in region allocated staffing time (1day/week) to work on falls prevention for older adults	• Osteoporosis Clinic now promotes hip protection. • Local health center disseminates falls prevention materials • Training to staff at health center on falls prevention

Sustainability

	Site A	Site B	Site C	Site D
Ongoing Initiatives after Termination	• A falls prevention committee is being established to continue with work beyond the project • Retailers will continue disseminating pamphlets • A Bed & Breakfast is currently making plans to make changes to their bathtubs (grab bars, non-slip mats)	• CAT members will likely promote assistive devices • The hotel will continue with installing grab bars in all of their guest rooms, • Stores will continue selling the devices they currently selling and will provide the pamphlet. • CAT members will be promoting the devices and the volunteers may continue discussing the devices with friends and acquaintances.	• The builder will continue to offer grab bars as an option for new condo and reinforcement behind tub and shower wall. • Hotelier is exploring buy safe mats for outside tub and completing insert for guest book on safety tips and availability of bath bench. • Retailers will continue disseminating pamphlets • Momentum for falls prevention has been secured a public health department that has allocated staffing time (1day/week) to work on falls prevention for older adults.	• A local health center will continue to disseminate information on falls prevention • Osteoporosis Clinic will continue to promote hip protection. • A participating drug store is working on improving displays of available devices. They have also committed to improving cane displays so accessories are displayed with canes. • Retailers will continue disseminating pamphlets • Hotels will gradually replace towel bath mats with rubber backed and install more grab bars. Buy more portable bath seats, but adjustable with baths

Table 2
Alignments in Sites

Alignments	Site A	Site B	Site C	Site D
Participants and project goals				
Site coordinator and goals	✓		✓	
Community Advisory Team and goals	✓		✓	
Senior volunteers and goals	✓			
Participants and community context				
Site coordinator and community context	✓		✓	
Volunteers and community context	✓			
Intragroup alignments				
National coordinator and site coordinators	✓	✓	✓	
CAT, senior volunteers, and site coordinator	✓			
Project timeline and seasonal factors adjustments	✓	✓	✓	
Material alignment enhancers	✓	✓	✓	NA
Social alignment enhancers	✓			NA
Community and Project at termination	✓		✓	NA

NA: data not available to researcher

Alignment Analysis of Four Sites

Site A

This site achieved the greatest degree of momentum, mobilization, and sustainability of all the sites. A 12-member Community Advisory Team was assembled early (in the third month). Volunteers were trained and businesses recruited earlier than any other site (fourth month). This site demonstrated the highest number of participating businesses ($n = 18$) and number of contacts made with businesses (218) through the combined efforts of CAT and volunteers together with the site coordinator. It was successful in encouraging businesses, especially retailers, to increase their supply of assistive devices and to modify their promotion of the devices to increase sales. At the closing of the project, a falls prevention committee was being established to continue the work which boded well for sustainability.

Alignment Analysis. Site A built on a base of solid alignments in successive stages of the project. During the recruitment stage, there was an initial propitious alignment between the site coordinator and her small and cohesive community. Her familiarity as a native with her community allowed her to find acceptance easily and to tap into its existing networks (e.g., churches) for recruitment of a CAT and volunteers. Receptivity also rested on her prior professional reputation and relationship with this community network. Furthermore, the community had experience with falls prevention initiatives and hence demonstrated a readiness and openness for this project, thus setting the stage for good alignment with project goals.

Site A's coordinator demonstrated a high degree of adaptability in realigning her goals and expectations with the dynamic needs of her community. She noted that her successes with an informal, person-to-person approach far outstripped her results from group presentations. Thus, she utilized personal contacts and time spent in a "refills" coffee shop to meet seniors who introduced her to others. She redefined success, modifying her goals yet staying in line with the project's overarching vision. In so doing she bolstered her own sense of optimism and confidence:

> This recruitment phase has been extremely time-consuming and frustrating at times. I was very discouraged, especially if I focused on the outcome, thinking I could probably have all businesses on board by now if doing it myself. However, there has been a lot of great feedback

provided from the community contacts as well as oppor-
tunities for education. I have tried to switch my focus of
process with varying degrees of success … I remain op-
timistic in general. The project may not look exactly like
we initially intended but [it's] not too far off path either.
Plus we gather lots of information with every contact (site
coordinator's field notes).

Good intragroup alignment among the volunteers was evident
throughout the project. The volunteers' training was successful in gar-
nering their buy-in, as the site coordinator incorporated their concerns
and suggestions into an adjusted protocol. For example, volunteers
voiced their discomfort at having to convince businesses of changes
they needed to make. The volunteers preferred to play an educating
role with businesses and also saw themselves as having something to
learn from businesses. They preferred to be called "project volunteers"
rather than "senior champions." These suggestions were incorporated
into the protocol, thus ensuring ongoing alignment between the vol-
unteers and project implementation.

The coordinator was vested in the care of her volunteers through
role modelling, phone supports, follow-ups, going out to businesses
together, giving feedback, and fine-tuning the volunteers' presenta-
tions to businesses. She worked with her volunteers to "reinforce
the information we need to provide to businesses and allow them to
more firmly grasp the process" (teleconference quote). These actions
increased chances of the volunteers' success and their pride in them-
selves and the project. This site coordinator expended considerable
efforts to ensure that volunteers were increasingly clear about the
key messages of the project in the mobilization stage. She also used
material and social enhancers such as sending cards to ill volunteers
and tokens of appreciation at Christmas to maintain a strong rela-
tionship with her team.

The health fair that was launched by the volunteers with other
community organizations toward the end of the project was both an
outcome of the implementation and a social enhancer for taking the
project even further. The site coordinator referred to the health fair
as a "definite asset" to the project and the "best public awareness we
have gained." It received enthusiastic "participation from the advisory
members and volunteers, businesses, and other organizations with
falls prevention initiatives" (site coordinator's field notes). In addi-
tion, it fostered a strong team spirit and a sense of accomplishment
among the volunteers and the site coordinator. The deepened iden-

tification with the project and the volunteers' pride in it gave rise to their voluntary promotion of the project beyond the project's official termination in establishing a falls prevention committee.

Site B

Site B had a 6-member CAT that was assembled reasonably early in the project (the fourth month). Volunteer training did not take place until the seventh month, and businesses were recruited shortly thereafter. The project started tapering off in the tenth month with the dropout of two of its four volunteers. In all, five businesses were recruited for the project. Several community presentations and two well-received television interviews on assistive devices and falls prevention were made by the site coordinator over the course of the project. Businesses involved in the project increased their knowledge and awareness of the importance of assistive devices. Interest and awareness were raised with an insurance company, a hospital, and a community rehabilitation centre. However, no concrete plans for sustainability were established.

Alignment Analysis. Alignment of the Site B coordinator with the community context was tenuous at the start, as she was a newcomer to a community with a large proportion of retirees, many of whom were also newcomers themselves. The site coordinator's prior work experience was in institutional hospital settings, and she was less familiar with community networks.

Intragroup alignment between the national coordinator and site coordinator was very good at this site. The national coordinator was involved in supporting the site coordinator in adjusting her strategies and expectations to optimize her recruitment efforts in her community setting.

Alignment of the participants with their commitment to project goals and message was a challenge in this site. The coordinator described this community as not very cohesive, and it was reportedly known for its low voluntarism that made recruitment difficult. Among the four volunteers recruited, two volunteers were uncomfortable with the protocol of approaching businesses but did not voice their concerns during the training, which might have allowed for some adjustments. "I don't think I can convince the businesses to do anything," remarked one of the volunteers who withdrew (teleconference transcript).

The site coordinator expressed concerns about whether "the volunteers were understanding the process" even after the training. After a mall display put on with the volunteers, the site coordinator observed, "It became obvious to me that they (the volunteers) do not have a clear understanding of the project and what we are trying to accomplish!! We definitely needed more time and repetition with the training!!!" (site coordinator's field notes). From her observations of other projects, the coordinator commented that volunteers truly internalized the messages "only after the seniors were involved for 2–3 years! It definitely would have produced different results if we were able to do more intensive and more repetitive training with the seniors, both with the devices and with the project itself" (site coordinator field notes). In this case, the short project timeline compromised maturation of its participants in becoming imbued with the project's goals, values, and objectives.

Site C

A large 11-member CAT was recruited in the third month, but the site coordinator was unable to retain the one senior volunteer. As a result, all business contacts were made by the site coordinator herself. Eleven businesses participated in this project. Despite the number of businesses contacted, the lack of volunteers compromised the mobilization thrust of the project in obtaining buy-in and participation from community members. A key success in this site was the involvement of a builder from a seniors' condominium complex who agreed to reinforce bathtub walls for the retrofitting of grab bars and to make grab bars available to all new homeowners, including their installation. The site coordinator helped to focus the local public health agency's pre-existing plans to promote fall prevention efforts.

Alignment Analysis. The site coordinator had lived in the region in which her city was located for some time and had many well-established community connections. She had also worked in previous falls prevention projects and in public health. Hence she was well aligned with her community and with the project goals.

The failure to recruit volunteers could have been further explored in terms of the strategies the site coordinator used. It was difficult to retain one potential volunteer without the synergy of a peer group. In the absence of senior volunteers, the site coordinator made the adjustment to the protocol in order to approach businesses herself. This protocol change demonstrated good intragroup alignment between the

national coordinator and site coordinator, as they worked together, at first to extend the recruitment timeline and then to determine the advantages of the site coordinator approaching businesses herself, framed positively as an opportunity to compare the differences across sites. The national coordinator refocused the team during a teleconference on the larger vision of the project:

> Let it (the implementation) unfold like the onion that it is. Maybe the centre core is not the businesses and what are stocked, but a whole lot more awareness among really keen volunteers, connections made among organizations that were not talking to each other before, or two or three businesses who think this is cool and are beginning to give out more information. That may be what comes of it. (teleconference transcript)

This acceptance of departures from existing protocols and use of reframing to highlight the importance of what is undertaken served to maintain intragroup cohesion and morale of all the site coordinators. The national coordinator's normalizing reframes held the site coordinator's commitment to the project regardless of outputs and kept the spirit for the project buoyant. This example illustrates how flexibility rather than strict adherence to protocol can preserve existing synergies and maintain the forward momentum of an implementation.

Site D

This site had two site coordinators. The first site coordinator resigned from the project at midterm, which resulted in a five-month suspension of the project. Five CAT members and no volunteers were recruited. The interruption had a significant impact on the recruitment of volunteers and the cohesion and commitment of the CAT members. To partially accommodate the discontinuity in staffing, the mobilization process was extended for two months at this site. Although the CAT was recruited by the fourth month, it did not meet during the five-month interruption in project implementation. Nonetheless, the second site coordinator managed to recruit 11 businesses on her own. Outcomes assessed on individual businesses and health groups included their increased awareness and knowledge, promotion of assistive devices, and adoption of safer bath mats by hoteliers. Activities to help sustain efforts included collaboration with a local injury prevention coalition and local health centre that committed to ongoing dissemination of project educational materials.

Alignment Analysis. Due to pre-existing experience in injury prevention, the community was well aligned with the project goals and timing. Alignment with the community context was difficult for both coordinators at this site. This site was a metropolis of many neighbourhoods with mixed age and ethnic groups. Because of the size and heterogeneity of the city, selecting the most promising target areas, target groups, and recruitment strategies was a challenge for the first site coordinator. This process required time for consultation and assessment, and perhaps would have benefited from the selection of a subpopulation to target recruitment and falls prevention strategies.

Intragroup alignment between the national coordinator and the first site coordinator was poor, but very good with the second site coordinator. Poor alignment initially included challenges experienced by the national coordinator in maintaining contact with the first site coordinator. Site coordinators used the teleconferences to voice concerns, make requests, and share successes; thus the collective acted as an ongoing frame of reference and container for participating coordinators to develop a relationship with other site coordinators. This site coordinator did not have the opportunity to develop a relationship with the other site coordinators. However, the second site coordinator maintained close contact with and obtained ongoing support from the national coordinator, although by that time the site coordinators were all finishing with the project. This connection with the national coordinator supported the continuation of the work in the site. Relationships between site coordinators and CAT members, and among the CAT member themselves, disintegrated with the resignation of the first site coordinator and the five-month hiatus.

Mapping Interaction of Project Components, Alignments, and Enhancers

The project can be conceived of as a network of multiple interactions of project components as displayed in Figure 1. Project development was mapped and understood in terms of the dynamic relationship between and among the project components: (a) project goals, values, protocol, and timelines; (b) seasonal factors; (c) community characteristics; (d) researchers; (e) national and site coordinators; (f) local volunteers—CAT and senior volunteers; (g) businesses and consumers; (h) funders; and (i) community groups and organizations. Thematic analysis of "pair alignments" across the four sites yielded the information below.

Alignment of Participant Characteristics and Project Goals

Compatibility between the project needs and goals and the site coordinator's goals, commitment, and experience promoted initial synergy to jump-start the implementation. For example, a period of uncertainty and frustration was evident during the early stage of the project while recruiting community volunteers. Level of commitment to the vision and goals of the project by both the site coordinators and the volunteers constituted an important alignment that influenced the energy for outreach to community and businesses. This commitment was reflected in frustration tolerance and participants' resilience in overcoming occasional setbacks and disappointing results.

Alignment of Site Coordinators with Community Characteristics

Communities each had their own characteristics of size, stability, homogeneity, cohesiveness, voluntarism, values, history, and degrees of readiness for falls prevention. These characteristics required varying degrees of preparatory groundwork before the implementation took place. For example, a large city (e.g., Site D) required a site coordinator to take time to assess and determine the strategic target areas for its implementation, whereas a small city required less effort to mobilize. A community's prior exposure to falls prevention projects presented greater readiness for the current intervention compared to one without such exposure. A smaller community with a high degree of voluntarism (e.g., Site A) proved to be easier to enter and to engage than communities that were larger, more diverse, or less cohesive.

The background and experience of the site coordinators, whether they were more familiar with working in a structured, institutional setting or in a community setting, influenced their comfort and degree of alignment with the demands of a community-based project with its need for tolerance for uncertainty, a learn-as-you-go way of working, and a high degree of adaptation and flexibility.

Site coordinators were challenged to align their expectations, goals, methods, and strategies with the unique characteristics of the community with which they worked. Expectations of progress and its timing needed to take these factors into account. In this regard, the prior existing relationship of the site coordinators with their respective communities appeared to be important to the mobilization process, supported by existing networks of contacts and associations. In the one case where the site coordinator was a relative newcomer, more time and effort were needed to plug into the senior networks.

In larger cities, the extent to which the site coordinator was a known member of the community did not seem to impact the development of the project as much as it did in a small community.

Intragroup Alignments

The degree of internal group cohesion in working teams contributed to the mutual support needed to mobilize the project and to absorb its occasional disappointments and setbacks. Group cohesion generates synergies and support, whether we are referring to site coordinators and their monthly teleconferences, or to senior volunteers with their peer group. The national coordinator played a crucial facilitator and leadership role in keeping the site coordinators in strong group alignment through her flexibility, support, structuring, guiding, celebrating, and respect for each participant's individual pace and tempo. The CATs lent support and advice to site coordinators in making promising community contacts to recruit volunteers and businesses.

Alignment of Project Timeline with Seasonal Factors

Timing project activities according to seasonal cycles was essential. Various minor adjustments were made in the project's timeline so as to align with seasonal factors, thereby reducing frustrations and capitalizing on returns. For example, getting volunteers to go out to businesses in the summer months was difficult due to their vacations. The period of April to mid-October was busy for those in the building industry, so the expectation for recruitment of businesses and builders was deferred to the fall. Because Christmas was a busy season for retailers, which made their participation precarious during this time, the team deferred the exit interviews with businesses until the new year.

Alignment of Community Context and Project Implementation

The alignment between the community context and overall project implementation was especially important to retain the goodwill of the multiple stakeholders of businesses, volunteers, and community, despite the fact that formal funding and support for the project was to terminate. "It seems like we have always been used as guinea pigs," remarked one volunteer cynically at termination because of the short project timeline (teleconference transcript). Volunteers' contributions and feelings at the end of the project, both positive and negative, were carefully and sensitively acknowledged in some cases and not discussed in others, as this was not stipulated in the protocol.

Implementation that focused predominantly on outputs and outcomes tended to lose sight of acknowledging the feelings, tones, moods, and overhanging issues of the participants. Acknowledging feedback and emotions such as frustrations experienced by the volunteers could serve to restore relationships between the site coordinator, the project, and volunteers for future collaborations. Such feedback would also help refine the project's next cycle.

Material Alignment Enhancers

Different objects and symbols enhanced links between participants and the project. For volunteers, material enhancers included business cards, project portfolios, prewritten letters of introduction, and information packages for them to share with businesses. These enhancers afforded the volunteers a sense of professionalism and positive affiliation with the project. Businesses were provided with information handouts to share with their clients and posters to display in their windows, reflecting their participation in the project. Material tokens of the project gave volunteers and businesses institutional legitimacy. Advertisements, articles in the local newspaper, and television interviews enhanced the project's visibility in the community and seemed to help with the recruitment of both volunteers and businesses.

Social Alignment Enhancers

Informal tokens of appreciation seemed to increase group cohesion and the sense of connection volunteers had with the project. These tokens and gestures included refreshments at meetings, note cards, follow-up phone calls to volunteers who were sick or absent, and small gifts and vouchers of appreciation at midterm and at the conclusion of the project. A cumulation of material and social tokens resulted in the development of a group project identity and project identification. Social enhancers such as gatherings and parties with refreshments were opportunities to promote work on the project in creative and enthusiastic ways.

Trustworthiness

Trustworthiness of the thematic analysis of alignments was obtained through ensuring that (a) the ethnographic accounts based on the teleconference transcripts were corroborated with the site coordinators' field notes and log notes, and (b) the alignment analyses were triangulated with the input of three project team members. The

national coordinator's feedback and corroboration with the project's development and alignment analyses were obtained in a retrospective interview one month after the project's conclusion. Similarly, a retrospective meeting with the project's researchers (second and third authors of this article) was conducted to corroborate the findings on the momentum, mobilization, and sustainability for each site.

DISCUSSION

Large-scale community-based health interventions have consistently demonstrated disappointingly modest results despite meticulous attention to project design and conceptual foundation (Merzel & D'Affitti, 2003). Experts in this area have called for innovative methods and conceptual frameworks to better understand the precise ways and influences that lead to a project's outcome, incorporating the influence of contextual factors (Atienza & King, 2002; Merzel & D'Affitti, 2003; Pawson & Tilley, 1997). Noting the importance of empowerment and intersectoral collaboration (Leung, Yen, & Minkler, 2004; Minkler, Vasquez, Tajik, & Petersen, 2008), participatory interventions have come to inform many community-based project designs in this decade. However, challenges remain at various levels of participation that are not always well-defined (Kreuter, Lezin, & Young, 2000; Minkler, 2005; Naylor, Wharf-Higgins, Blair, Green, & O'Connor, 2002). Hence, the need to monitor and describe relational dynamics in project implementation has become an increasing priority (Potvin & Goldberg, 2007).

This article features alignment descriptions and analyses as a potentially informative and flexible method of process evaluation that can attend to the dynamic and emergent process of complicated and complex community-based projects. Beginning with the identification of key project components in a project's network—including actors, project goals, context, timeline, and other contextual variables unique to each site—the process evaluator can combine observations with ethnographic descriptions of how these various components interact as the project unfolds. The process evaluator's observations can be corroborated with project participants' field notes, log notes, and interviews to assess the quality of alignments. Quality of alignments can help make sense of variations in project outputs and outcomes across sites formatively and retrospectively. This is not to suggest that the quality of alignments alone explains or determines project outcomes. Rather it is one indicator, among other factors, that can contribute to an understanding of the mechanism created by the con-

textual interactions in outcome differences. Disjunctures and conflicts between project components and stakeholders can then be addressed and repaired so as to bring the project back on track. Strategies that create synergistic alignments can be shared among sites. We can learn from each implementation and take steps to realign what seems askew, or accept that certain implementations may have too many misalignments working against them and use alignments analysis to inform decisions to focus investments in sites that are more promising. Alignment descriptions and analyses are hence of value to process and formative evaluation. In this study, alignments in terms of frequency or strength were not quantified. Future studies are merited to further develop the alignment concept and its operationalization. The development of quantitative measures to triangulate qualitative descriptions would increase validation of the use of alignments descriptions and analysis in process evaluation.

Primary alignments in this study were alignment of participant characteristics with project goals; alignment of key program personnel (i.e., site coordinators' background, prior relationship, expectations, methods, and strategies) with community characteristics; and intragroup alignments among members of various subgroups in the project. In addition, the alignment between the project and the community is also important in terms of sustainability. These relationships appeared to have a bearing on the momentum, mobilization, and potential sustainability of a project. Balancing project fidelity with the exercise of flexibility to tailor implementations to local contexts is a topic that calls for thoughtful discussion (Dusenbury et al., 2003; Mowbray et al., 2003).

Describing and analyzing relationship alignments hold promise as a method for process evaluation if we subscribe to the view that community-based interventions operate as multidimensional and complex open systems. Alignment analysis may be a tool worthy of further exploration to allow project mechanisms and outcomes to be understood more realistically and accurately within a project's complex relational dynamics in formative and summative evaluations.

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