Pictures that Represent Voices… Examining Impacts of Participatory Food Costing on Communities and Organizations

A Photovoice Project by Partners of the Nova Scotia Participatory Food Costing Project

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What is Food Costing and Why is it Important?

Food costing is an approach used in many provinces and regions across Canada to examine the cost and affordability of a basic nutritious diet, and to use this information to advocate for policy change to address food insecurity. Many use the National Nutritious Food Basket (NNFB) (1), a standardized tool developed by Health Canada, to collect the data from grocery stores about the cost of milk, meats and alternatives, bread, fruits and vegetables and other basic foods.

Food costing data provide valuable information to help monitor income-related food insecurity and identify vulnerable population groups. The cost of a basic nutritious food basket is factored into average incomes and expenses, (i.e., shelter, power, telephone, childcare and transportation, etc.) for households representing various gender and age groups. The resulting food costing data and “affordability scenarios” provide much-needed evidence to inform policy and program change (2-5).

Why does Nova Scotia use a Participatory Approach to Food Costing?

Across Canada, Nova Scotia is unique as it is the only province to use a Participatory Food Costing model (6). Participatory Food Costing means that people experiencing income-related food insecurity, (7) working with others who have an ability to impact the issue, play a major role in the food costing research. For example, people who have direct experience with food insecurity, or work with people experiencing food insecurity (i.e. staff at family resource centres, women’s centres and other community-based organizations) are involved with planning, decision-making, data collection and analysis, and communicating about and sharing the research findings. The food costing results are then used by project partners and others who may be able to influence programs and policies to strengthen food security in communities across Nova Scotia.

Nova Scotia is also unique in that the process of Participatory Food Costing includes a local foods component (8) with a set of questions on the NNFB to examine the availability and relative cost of locally produced and processed foods.

A participatory approach to food costing has been highly effective - it helps us better understand food insecurity both through the evidence collected and through the process of bringing partners from diverse backgrounds together to understand the issue and possible solutions (6). It also builds practical skills and provides local evidence that is meaningful to addressing food insecurity at a community level. The process of working together on all stages of the research, from data collection to the use of the findings, helps build capacity which is the confidence and ability to effect policy change at multiple levels, and ultimately contributes to efforts to build food security in Nova Scotia (9, 10, 10).

The Participatory Food Costing Project (PFCP) has undergone six data collection cycles in the last decade, and during this time, strong and enduring partnerships between university researchers, government partners and community members completing the “front line” work to address food insecurity have been built. These relationships have contributed to enhanced capacity for food security work at individual, community, organizational, and systems levels (11).
Comprehensive Evaluation: A priority for the PFCP

Through all food costing cycles, the PFCP has been engaged in what is being described as a developmental evaluation process. Developmental Evaluation differs from traditional approaches to evaluation in that it is an ongoing process to support learning and evaluation in complex and constantly changing situations (12). Gamble (2008) indicates that, “it is used in situations where the end goals may be unclear, adaptation to changing conditions is required, real-time feedback is needed, embracing uncertainty and dealing with complex and dynamic systems” is necessary (13). Food Security is a complex, multifaceted issue requiring a vision of systems as a whole, the engagement of a variety of actors across the system, and growing new “next practice solutions” (14). Through the PFCP, innovative, participatory approaches have been used to examine and address the complex topic of food security, making this project a good fit for developmental evaluation.

Due in part to the short-term grant dependent\(^1\) and evolving nature of PFC since 2001, a comprehensive evaluation of PFC in its entirety has not been undertaken but rather evaluation was part of individual project accountability and supported by student thesis work. However, since April 2011, and with the support of the Nova Scotia Department of Health and Wellness and the Nova Scotia Health Research Foundation, several important milestones have been reached in completing a comprehensive PFC evaluation, including developing an Outcome Mapping\(^2\) framework, and preparing a synthesis report of existing food costing evaluation materials and reports. The purpose of the synthesis report was to identify major PFCP successes as well as identify gaps and areas where further evaluative research would be needed. The findings revealed while that previous evaluations have clearly demonstrated positive impacts at the individual level, particularly among food costers, further evaluative research is necessary to determine how individual capacity building in the PFCP has led to capacity building at organizational, community and systems levels, and to examine the uptake of knowledge sharing at organizational, community and systems levels, and identify factors that might increase uptake of PFC information from the perspective of policy makers.

Knowing that family resource centre partners of the PFCP would have in-depth knowledge of changes that have occurred at organizational and community levels, it was decided that they should be called upon to help answer this question\(^3\). This data collection opportunity was also viewed as a way to test the photovoice method – an innovative and emerging Participatory Action Research technique – as an approach to evaluative research.

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\(^1\) The PFC Project was initially funded by Health Canada from 2001-2003; by the Nova Scotia Department of Health and Wellness (formerly the Department of Health Promotion and Protection) in 2004/2005 (funding included development of an ongoing and sustainable model for PFC (6) and Policy Backgrounder and Food Security Policy Lens (50) and by the Nova Scotia Department of Health and Wellness for all subsequent food costing cycles (2006-2009, 2009-2011 and 2011-2013).

\(^2\) Designed by the International Development Research Centre, Outcome Mapping is a method used to measure a project’s progress. It differs from traditional approaches in that it does not focus on measuring products of a program (e.g., policy change, poverty alleviation) and its effects on primary beneficiaries but on the changes in behaviours, relationships, actions, and/or activities of the people and organizations with whom a development program works directly (18).

\(^3\) Additional research is being completed in 2012-2013 to examine changes at organizational, community and systems levels with partners in public health services and to test a Participatory Videography approach to evaluative research (N. Pabani, MScAHN Independent Study Course and Thesis).
Photovoice: For Innovation, Participation and Evaluation

Photovoice is an emerging PAR methodology that uses photography, and where individuals produce visual narratives of their experiences regarding a phenomenon (15, 16). The purpose of photovoice is to enable community members, who may not otherwise be heard, to share their voices, by using photographs about everyday realities, which can be shared with policymakers and others with the ability to create change (17). Additional goals of photovoice research include: to record and reflect a community’s strengths and concerns (18); promote critical dialogue and knowledge about personal and community issues through large and small group discussion of photographs taken (19-21); and importantly, to reach and inform policymakers about the concerns and issues facing the community (22). This method is being explored in both community and academic settings for its potential to contribute to broad and creative knowledge dissemination and social action (18, 22-28).

Photovoice was first developed by Wang and her colleagues with rural Chinese women (28). Since then, visual methods have given voice to various communities including older adults (29), those living with HIV (30, 31), Indigenous populations (32, 33), and people who are homeless (34, 35). Other researchers have used photovoice to address varying concerns such as food security, nutrition and obesity (16, 36-40), women and health concerns (41, 42), immigrants and public housing(43), and lone mothers addressing community health (44, 45).

Photovoice has particular appeal to the PFCP for the following reasons:
1) It allows participants to fully engage as co-researchers. A benefit of the participatory methodology of photovoice is that it is flexible and able to adapt to multiple scenarios. The process can be adapted for different levels of participation and shorter or longer time periods. For the PFCP, the aim was for the method to be as participatory as possible, so the participants (co-researchers) had principal control over data collection and development of key themes.

2) It aligns well with the Developmental Evaluation approach of the PFCP. For the PFCP, it is important to explore the projects’ impacts at community and organizational levels; to do so, it is important for community partners have an equal voice, and photovoice is an effective way of doing this. Additionally, for evaluating individual behaviour change (as a requisite part of community and organizational change (46)), it is important to explore innovative research methods to do this, such as photovoice.

3) Photovoice training creates capacity-building opportunities. For this research, community members were trained in how to conduct photovoice research in their communities. Additionally, pilot testing this method created an opportunity for the PFCP partners to gain knowledge and expertise related to photovoice and record what was learned so that it may be of use to others.

4) Images have impact. Images teach by changing definitions and perceptions through discussions and visual impact of the photograph (22). Visual participatory methods have a greater chance to incorporate everyday lives and theory (47).
5) Photovoice creates enhanced possibilities for action and change. With photovoice, there are opportunities for innovative dissemination (such as through gallery presentations or magazine style reports) that can help to initiate individual and/or community action (22). Photovoice is likely to have a different impact than traditional research outputs; the associations and the contents of the images may spark conversations that change perceptions of policymakers and the broader society and may influence policy in a more non-linear fashion (22).

Methods

For this study, family resource centre partners of the PFCP were invited to participate as co-researchers. Five co-researchers (representing family resource centres from across Nova Scotia) agreed to participate to help answer the following research question: How has your involvement in the Participatory Food Costing Project impacted or contributed to changes within your community and/or organization? This research question was designed to contribute to a participatory, developmental evaluation of the PFCP.

Conducting this study involved three main initial components with the Co-researchers: 1) a training session on photovoice 2) data collection (co-researchers took photos in their communities) and 3) a facilitated discussion where the co-researchers presented their photos, discussed and critically reflected upon them as a group and in consideration of the research question, identified key themes that emerged through their discussion.

Training Session

The co-researchers from family resource centres were invited to FoodARC at MSVU to be trained in how to conduct photovoice research. The training session was facilitated by a Master’s thesis student who has knowledge and experience with both this method and group facilitation. To enhance capacity-building outcomes of this project, the co-researchers were also asked to invite a food coster4 or family resource centre staff to take part in the training. In total, 16 people were trained – five were co-researchers and the others were invited trainees.

Using the Food Costing photovoice manual5 (48), the theory and ethical considerations of photovoice research were explained, as well as the processes to be used and that could be used or adapted for future research. The participants also did a “practice run” where they captured images to answer the question “what does food security mean to you?” As well, the practice run included a mini analysis portion where the participants presented and discussed their photos and identified major themes that emerged. At the end of the training session, the co-researchers were introduced to the actual research question to be addressed: How has your involvement in the Participatory Food Costing Project impacted or contributed to changes within your community and/or organization?

Data Collection

Over a one week period (November 22 – 29, 2012) the co-researchers captured images in their community that they felt answered the actual research question. The co-researchers were encouraged to take as many

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4 Food costers are community partners (usually women associated with family resource centres who have had first-hand experience with food insecurity) who contribute to the PFCP by collecting data, providing input to shape the research and helping to share the findings.

5 The PFCP photovoice manual was adapted from the Activating Change Together for Community Food Security photovoice manual to support this study and future research.
photos as they liked, then select two photographs that they felt were the most important to share back with the larger group. As the co-researchers represented family resource centres from locations across Nova Scotia, data collection occurred in several communities including the Annapolis valley, Guysborough County, and Dartmouth.

**Ethical Considerations**

While capturing photos, the co-researchers paid attention to the following ethical guidelines: for any photos of people, the photo subjects were informed that this photo would be used for research purposes and communication of research results. Those over 16 years of age were required to sign a photo release form, for those under 16, permission from parents or guardians was obtained to use their image (see Appendix A for a copy of the consent form). Ethics approval for this study was obtained from the Mount Saint Vincent University Ethics Research Board.

**Facilitated Discussion of Photos and Development of Themes**

One week after the training session, the co-researchers were invited back to Mount Saint Vincent University for a group discussion (facilitated by the same person who conducted the initial training session). The purpose of this session was to discuss the co-researchers’ two selected photos as they related to the research question and identify the main themes that emerged from the conversation. With permission of the co-researchers, this session was audio-recorded and transcribed so that later, direct quotes could be drawn out to support the themes.

In a semi-structured focus group setting, an adapted PHOTO technique (48) was used to guide the conversation. With the PHOTO technique, the co-researcher shares his/her photograph by answering the following:

- **P**: Describe your photo?
- **H**: What is happening in your picture?
- **O**: Why did you take a picture of this?
- **T**: What does this picture tell us about your life?
- **O**: How can this picture provide opportunities for us to improve life?

For this study, the co-researchers filled out a PHOTO caption sheet (Appendix B) for each of their selected photos prior to the group discussion. The co-researchers used the forms to describe their photos, and at times, the facilitator posed additional questions to clarify the connection to the research question and fully explore the co-researcher’s meaning and intent for their photographs.

**Analysis**

During facilitated discussions, the photographs served as a place to begin conversation about how the PFCP has impacted or contributed to changes within the co-researcher’s community or organization. After discussion of all the photos, the co-researchers developed themes that they felt reflected their discussion and experiences. During the write-up of the results, the themes remained the same as those decided by the co-researchers, but for some, some sub-themes were specified to clarify and separate the main points the co-researchers wanted to capture in each theme.
Results

The themes developed by the co-researchers in responding to the research question - *How has your involvement in the Participatory Food Costing Project impacted or contributed to changes within your community and/or organization?* are as follows and are described in more detail below.

1) Participation in PFC has increased FRCs credibility and ability to contribute to food security work
2) Participatory Food Costing has provided an opportunity for those affected by food insecurity to be heard
3) Family resource centres have been able to use the food costing information to increase awareness of lack of affordability and access to food; educate and challenge stereotypes; advocate for change at multiple levels, including policy change; talk about the impact of food insecurity on emotional, physical and psychological health, including connection to chronic disease
4) The PFCP has highlighted the complexities of access to food and the inequities within Nova Scotia
5) For FRCs and the communities they work with, being involved in PFCP has highlighted the importance of considering local foods

Theme 1. Participation in PFC has increased family resource centres’ credibility and ability to contribute to food security work

In this theme, the co-researchers described two ways in which partnership with PFC has increased their capacity to address food insecurity by a) enhancing or validating the programming at their organizations and b) increasing their credibility to advocate for an anti-poverty agenda. As such, two subthemes have been included, “Enhancing or validating programming at family resource centres” and “Enhanced organizational credibility”.

Subtheme: Enhanced or validated programming at family resource centres

For some family resource centre co-researchers, being involved with PFCP has changed the way they run their programs. For example, one co-researcher described how they now introduce “bigger picture” questions into their food programs to help participants think about and express some of their food-system related issues, concerns or experiences.

*In terms of the impact of being involved in the food costing project on our food programming - one of the things that we have done is to include very basic prompting questions in our programming. It’s up to the moms if they want to have a discussion about this or not – it’s really up to them - but often during programming when they are finishing off the cooking, we have really great discussions about the affordability of food and the stress that people are under in trying to access food. (Co-researcher D, Transcript 1, para 135)*
All of the participating family resource centres have some level of food-related programming, including supplying meals for the children who attend their programs. For some of the organizations, being involved with PFC has bolstered their decision to provide snacks or meals for children because from the PFC findings they know that many low-income families in their community are likely struggling to provide nutritious food for their children.

*I think for me it was something that you said was we really have to remember that sometimes these kids do come to us hungry and they might all look ok. But we see that too, especially in FRC. At snack time or something, some of these children are really hungry! And it’s one way to preserve that dignity with the families, you know, to provide that healthy snack…..the project's [PFCP] made us more mindful of why we are really doing it.* (Co-researcher C, transcript1, para 10-16)

In 2005/06 with funding from the Public Health Agency of Canada PFCP partners piloted a “food security mentor” project with family resource centre partners in 11 provinces/territories across Canada affiliated with the Community Action Program for Children and the Canada Prenatal Nutrition Program, and as the co-researchers explained, this model of teaching and learning food skills and information about food insecurity has had a lasting impact on how family resource centres approach programming.

*Facilitator (F): So how has your involvement in the PFCP contributed to this [breakfast] program? Maybe just see the need like of the kids needing to eat. I don't know that they get that at home all the time. I realize how much people spend on food, how much of their budget goes toward food* (Co-researcher A, para 6-7)

*We’ve really grabbed onto this [food mentoring approach] when we had that opportunity to get involved in that project, we really jumped on board with that. And maybe we might not have so much before have done that, but it did bring to the forefront that we do realize that it’s really starting at the basics with families.* (Co-researcher C, para 26)
This co-researcher explained that the food mentor component of the PFCP has inspired a “train the trainer” model at their Centre which has impacted many levels of FRC programming as well as community knowledge sharing and learning:

We are training participants and then they’re training other people, which is what a great skill to be able to give them right? They’re becoming like the teachers themselves. We take more of a mentoring approach now. Now we are working with our seniors too, we are starting to access that population. And they are going to be coming in and do some of this preserving for us. Because they do have that knowledge that’s getting lost. (Co-researcher C, para 26)

As a result of being involved with the PFCP, some family resource centres have expanded their programming to include community gardens and cooking programs, often falling under the “food mentoring” umbrella. Resultantly, many family resource centre attendees have learned new skills related to growing and harvesting food, and through the cooking programs, gain experience with taking vegetables from the garden, and turning them into nutritious meals:

We’ve started a community garden...we go and we've planted everything, and we were able to take that food aback to our centre. Sometimes we are eating it fresh, but of course this time of year we couldn't do that so have preserved a lot of it in freezing. And now we are going to do a lot of cooking throughout the winter, showing families what can be done with these simple fruits and vegetables. So it is all about what we can grow here, so we have the squash and the tomatoes and pumpkin. So we provide cooking programs for them. We use very basic tools, back to basics approach, where you try to make sure it’s things that are available to families. And often times the families will have a meal together. Sometimes they take the food home too...And they can try different things. It’s that same thing of letting them try something maybe they haven't tried before. (Co-researcher B, para 24)

As a result of the gardening, cooking and meal programs, the staff of family resource centres have noticed that many children and parents have expanded their palates to regularly include healthier foods. As one co-researcher commented, “We've seen a huge difference in the way these families have taken part in these programs and actually willing to try to get their children to eat.” (Co-researcher C, para 39).

When describing the photo above of the children around the table, co-researcher A told the group how, over time, the children had become more receptive to healthier snack options such as hummus. Co-researcher C also described how parents who access family resource centres are “worried about wasting their money on healthy food because kids wouldn't eat it” so as a response, family resource centres have developed recipes and cooking classes that incorporate healthy foods into meals that kids will eat. She has found that if parents and children try a new food at the family resource centre and like it, they are more likely to try it at home as well.
Subtheme: Enhanced Organizational Credibility

The participants felt that being involved with PFC has enhanced their organizational credibility and has supported them in becoming leaders in food security advocacy, research and programming:

*What I think of changes within our community or organization is that other agencies and other players in this whole thing are turning to us as FRC as the go-to-guys now, because we know what we are doing. They are looking to us now for answers.* (Co-researcher B, para 44)

*FRC are being recognized as major players in the food costing arena by our communities and other organizations because stuff that we’ve been saying before is now backed up by data. We’ve been saying it all along but now we’ve got data behind us.* (Co-researcher E, para 45)

Summary

Quantitative PFCP data has strengthened family resource centre staffs’ recognition that many families cannot afford healthy food, which has reinforced their decision to provide no-cost cooking, gardening and meal programs for families. From qualitative PFCP research [e.g. ((49))], they also know that people, especially women, often experience self-blame and isolation when living with food insecurity; because of this, family resource centre staff often introduce gentle questions and discussions into their regular programming to help parents tell their stories and introduce larger framing pieces to help them understand that their experience of poverty is not an individual short-coming, but part of a larger social problem. From the PFCP “food security mentor” approach, they have learned that a train-the-trainer model is effective for sharing knowledge and building food skills in their community, and has been widely implemented in family resource centres. The co-researchers also felt that through their involvement with the PFCP, their organizational credibility and ability to speak to food security issues has been built. This is due to the success of their programs and approaches, as well as the ability to use food costing data to support their advocacy and education work on food security.
Theme 2. The PFCP has provided an opportunity for everyone, most importantly those most affected by food insecurity, to be heard.

As a result of being involved with the PFCP, the co-researchers commented that their appreciation for participatory approaches has been enhanced, as well as their understanding that in order to address an issue like food security, it is critical to listen to and engage those who are affected by the issue.

> I think that often families that are, that experience poverty are just not listened too or considered that they don't have really anything important to add to the discussion. And I think that's far from the truth. So I think it's a good reminder that we need to be listening to people that live in those circumstances when we're trying to figure out how to make changes in society to make it better...I think that's one of the good things about the PFCP is that it is participatory. (Co-researcher D, para 50).

The co-researchers also discussed in detail the positive outcomes that they have seen among food costers who have participated in PFC. They attributed the positive outcomes to the participatory, inclusive nature of the PFCP:

> I think when you were speaking about the participants [food costers] and how great it's been for them, I think for a lot of them it's the first time that they have really been treated respectfully like by the whole organization as in real dollars for real childcare and all of that. And realizing that they needed to be able to pay childcare that day and

If we hadn't been involved I think I probably wouldn't have taken this picture at all. I think one of the things we have tried to do as an organization is really listen to our participants but I think... Yeah, I think that just being involved in the project has really highlighted the importance of having people who live that experience to be involved. I think that taking a picture that represented voice, wouldn't probably have occurred to me without the project highlighting that that is a big piece of it. (Co-researcher D, para 52)
not wait for a cheque two weeks down the road, because that was direct dollars out of their pockets waiting which equals less food and all of that stuff. I think that’s been a big impact on a lot of the participants. (Co-researcher B, para 54)

I think because I started as a volunteer [food coster] and it’s exactly like you were saying I wouldn’t have been able to do it without those financial supports whatsoever. It kept me, I wanted to come back because I really felt like I had a voice and that I was being listened to. It was so real to us and still continues to be so real to us as a family. Sometimes when you put a participant in that situation, skills start to emerge and you start to see these wonderful things start to happen because its giving them dignity and some respect for themselves that maybe has been missing for a little while. To be able to let them go a little bit further and now having the opportunity bring other parents on board. I’m really enjoying that whole process that I’ve seen through it over so many years. And still appreciate those supports that are in place. It is about giving people a voice and recognizing those wonderful things that they are so capable of doing. (Co-researcher C, para 58).

Similarly, other co-researchers described how in many cases, participating as a food coster has served as a stepping stone to increase confidence and become more involved with their local family resource centre. For some, the added confidence and involvement has helped them transition into employment and leadership roles in their communities:

I know we had somebody involved with the food costing a number of years ago. And ohh my, I remember the very first time I met her she wouldn't even come out of her house. She just called and she said I heard about you and I heard that you work with families and I just need to talk. So I went over and I talked and I had to go over a number of times before she actually come out to group. But then she did and she started making connections and then she got involved in the food costing, and then she got involved at - she went to a national conference and she spoke out. And she stood up and she said “I've been involved with this for a couple of years and when I first started I wouldn't even come out of my house” and she said “now I'm standing in front of you telling you this is me, this is my life. I can't afford to eat.” Not only that but now in her life she's left an abusive relationship...She’s out of that, she's looking after herself, she looks better than I've ever seen her. Her kids are doing great, she's got a job - that was not where she was headed. That's one person. A lot of the people that we have had as food costers have moved on to other things. They still keep in touch, but they are doing things that they never thought they would do in their lives as a result of being part of this project and being valued in a meaningful way. And by being valued by other people, they started to - I think anyway - started to value themselves a little bit more. You know like, maybe I am worth something and maybe it isn't just me and it isn't my fault. It's not my fault, this is created. (Co-researcher E, para 125)
Summary
From the stories and photos provided by the co-researchers, it is clear to see the powerful impact PFC has had on numerous food costers. For many, the simple act of being compensated for their travel and childcare as well as time and commitment to the project has helped them feel respected and the opportunity to share their stories and contribute to the project encouraged them to get more involved in their community. For some, being listened to and engaged through the PFCP was a gateway to the development of new confidence and skills which, though the courage of the women themselves, was a beginning of transforming their lives.
Theme 3. Family resource centres have been able to use the food costing research in numerous ways:

a) To increase awareness of affordability and access to food
b) To educate and challenge stereotypes
c) To advocate for change at multiple levels, including policy change
d) To talk about the effects of food insecurity as well as the impact a healthy diet has on emotional, physical and psychological health outcomes
e) To highlight the connection between food insecurity and chronic disease

The co-researchers have used food costing research to increase awareness of affordability and access to food:

Within the family resource centres, the co-researchers and other staff members have used their experience with the PFCP to introduce important questions which supported critical thinking about the food system, and access to food into family resource centre programming:

And we have talked about food in terms of those broader issues that might be kind of new for people. They might not have always thought about food in that sort of way, so why does local food cost more than something that’s travelled across the world? You know that sort of thing. So I think that’s the piece that the - that being involved in the food costing project has brought to our food programs...For the staff its sort of broadened how we think about, you know, offering that to families. And sometimes it has resulted in some great discussion around those other pieces. (Co-researcher D, para 135)

The co-researchers have also used the PFCP resources to educate and challenge stereotypes:

Within the family resource centre setting, the Food Costing Report has been used as part of the training for staff. “We have used the food costing report as an important education piece for our staff” (Co-researcher D, para 66)

Beyond the family resource centre setting, the co-researchers have used knowledge from the PFCP to educate others, including students and trainees in professional programs.

I've used it [the food costing report] to challenge stereotypes. So let’s talk about budgeting $230 a month for food and cleaning supplies and sun screen and whatever else you have to have. That’s your personal allowance [from Income Assistance]. It might be as high as $244, I'm not sure. But still seriously $244 a month and that includes everything including your cleaning supplies. ... I do use it to challenge stereotypes and I use it to educate people who are going to be going into the field. I am often asked to go into community colleges or university classes and talk about poverty and I always talk about the food costing data, I always talk about all of those kinds of things. (Co-researcher E, para 71)
We have shared [the food costing report] with students that we have doing placements at our centre. Particularly social work students, we always suggest they read it. (Co-researcher D, para 73)

The food costing information has also been used for broader community education, including use by burgeoning food security networks and to challenge assumptions that may exist within organizations such as food banks,

We just recently used [the Food Costing Report] - they are trying to start up a food security network thing in Guysborough County and they used [the report] as part of their presentation to the public. (Co-researcher A, para 67)

The other thing that has really been kind of interesting to me is that I have been invited in more than once to talk to food bank volunteers. It was kind of two-fold, one was the film that I often show and then the food costing data because the question or the assumption I guess maybe with a lot of people who are involved with food banks, and their hearts are in the right place, and I'm not criticizing them, is that people use the food bank all the time. As soon as they can, they do. And so if it’s every six weeks or if it’s every eight weeks which is totally ridiculous to me... And they use it every time, you see the same people over and over. And I say to them, well yeah. You’re part of their budget. Here’s what people have, here’s what things cost and there you go. And they are like oh. Oh didn't know. Well no you don't know. And I was invited to a [food bank] AGM too, like after I had done all of that. (Co-researcher E, para 71)

We, for our food bank we always have a guest speaker or whatever at our AGM. And this year it was me (laughing). And we advertised "what does it cost to eat healthy in Nova Scotia" and we had more people show up for that meeting than we've ever had for an AGM before. I presented the stuff on food costing. (Co-researcher B, para 72)

Through their experience with public education on food security issues, the co-researchers expressed frustration that often the response to poor nutrition that is often ‘assumed’ by the general public to exist among food insecure families, is that the problem can be solved through nutrition education or better family budgeting practices. They were frustrated that these solutions are often offered by people who have never lived with food insecurity, and they highlighted the importance of challenging these assumptions in their work and daily lives:

Co-researcher D: I get frustrated when the focus is just on educating people [living with food insecurity].

Co-researcher E: Or helping them budget! Do you know what I do when I go into classes? Not always but often. I go in with the food costing information and I say ok so here’s a scenario, here’s a family, this is their situation - so like a paragraph right - and here’s how much it would cost according to the food costing information and this is how much it would cost to feed this family a month, this is their income, this you have to
spend on food. Figure out how you’re going to live... And people are like, “we don't have any” - yea exactly! So there is nothing left or very little left. They certainly would not have a roof over their head or anything like that. It really does illustrate for me that people do know, people do know, and stop telling them because that’s not the solution. (Participants E and D, para 141-142)

Again it’s around assumptions for me. And people making assumptions that people who are food insecure don't know what to do with food. Well this [photo from a community cooking program] illustrates to me that yes in fact they do. Because if you don't know what you’re doing, you don't measure salt in the palm of your hand. And I hear that from folks all the time. “Don't tell me what to eat. I know what I’m supposed to eat - I feel bad enough as it is.” It’s not that people don’t know, it’s not that people don’t – it’s that they are unable to.

The co-researchers also described using the PFCP information to advocate for change at multiple levels, including policy change:

The advocacy piece is a piece that is very important to us as a centre. I think that the food costing project has allowed the opportunity for moms, but also for us as organization to have another way to advocate for changes to policies around food and that sort of thing and bring a lot of awareness about the circumstances that people are actually trying to survive in really on a small amount of money (Co-researcher D, para 50)

Beyond their work at family resource centres, the co-researchers also used their understanding of the cost and affordability of food to challenge local policies, including those implemented in their local schools.

I was on the PTA [parent-teacher association] for our kids school and one of the teachers was giving the gold star award to the kids for bringing the healthiest lunch...And I went to the PTA and I said, it doesn't matter how much a kid [from a food insecure family] wants to bring a healthy lunch, they can't. They're never going to get your gold star. Even bringing that to the attention of that group made us think about the kids that come to school and don't have a lunch for whatever reason and that made us purchase food to have there so that no kid would go hungry at lunchtime. And who
would have seen that as part of all of this [the food costing project]? Right? But it was. (Co-researcher B, para 111-3)

The co-researchers also described some of the success they have had using the results of the PFCP in influencing provincial policies.

*I do think that some of this work also informed the policies that have come out in schools. Like the Healthy Eating Policy at school and certainly the one with daycares. I absolutely know that.* (Co-researcher E, transcript 2, section 118)

*I think that all of this like there has been so many connections made in the province. You know the Healthy Eating Nova Scotia, food costing is part of that and Thrive! is part, you know all of those things. And so it’s almost – like I think we are making an impact provincially around the recognition that a healthy diet early in life impacts positively on the emotional, physiological and physical health of our citizens.* (Co-researcher E, transcript 2, section 118)

The co-researchers also pointed out how the PFCP research has allowed them to talk about the effects of food insecurity as well as the impact a healthy diet has on emotional, physical and psychological health outcomes, including connections to chronic disease:

*The research has allowed us to talk about the effects of food insecurity as well as the impact a healthy diet has on emotional, physical and psychological health outcomes. And...the [supporting] research shows there is a solid connection between food insecurity and chronic disease.* (Co-researcher E, transcript 2, para 135)

As part of highlighting the connections between diet and health, the co-researchers reflected upon how their involvement with PFCP has provided opportunities for food costers/family resource centre participants to think about the impact of food insecurity on their lives.

*One of the things that came up with some of our food costers afterwards was this feeling of recognition that there was something bigger than just their personal situation that contributed to their experience with poverty and not having enough food. Sometimes people can be very hard on themselves and feel like it’s their fault and they certainly know that out there in the public that can be the perception. So I think that being involved in the PFCP, for one of our food costers in particular, helped her to see that other people do see that something bigger is at play here. And she might not have been able to articulate what that something else was before. But I think she felt really good about the acknowledgement that food insecurity was not her fault.* (Co-researcher D, Transcript 1, para 59)

For some food costers, being involved with the PFCP has had a positive impact on their emotional and mental health, as taking a broader perspective on food insecurity has provided some relief from guilt and self blame at a personal level.
Summary
The co-researchers provided many examples of how the PFCP data, supporting information and processes has been critical in their education, advocacy and policy change work around food security. Through the examples provided they can see how the PFCP research has had impacts at individual, organizational, community and provincial-level education and change.

Theme 4. The PFCP has highlighted the complexities of access to food and the inequities within our own province.

The following photos all refer to the complexity of the food system, and related to addressing the issue of food insecurity that each co-reseacher has come to appreciate through their involvement with the PFCP.

And I liked that it was slanted and crooked and bent over ... there are so many ways to interpret the whole thing. Like bent over with the weight of the problem. That we can't get everybody on board maybe. Many things are happening at once, no sun, cluster of apples, and lone apples. The elements and the tree show all the different things that happen all the time in this work that we do. Being family resource we are often caught in crisis. So we're - you know the cold hard facts like the snow is that we can't deal with that today, today we have to deal with what’s going on in this person's life. But the sun is in the background and always offering more. We need to work together to make a difference and more in many directions at once. Whether it’s bent over, whether it’s the storm tree in the back, or whatever, you can interpret it however you want to, it just spoke to me. (Co-researcher B, transcript 1, para 147)
The following photo also touches on the complexity of food inequality and the complexity of addressing the problem, including and through the PFCP:

This image depicts a hornet’s nest that has been built around apples

In further discussion of this image, Co-researcher E added:

*The fact that there's an apple inside that is the best part for me because, for me when you talk about how is it symbolic for food costing, it is about food and its everything that we do, food is at the centre... and all of these buzzing critters have come together around food - which is what we've done with food costing.*

She elaborated that the PFCP has accommodated the complexity of the issue by allowing and encouraging people from various backgrounds and perspectives to come together to work on improving food and food systems in Nova Scotia:

*Whether you're a food coster or a family resource person or a researcher - we've all come together around food. We don't all have to agree on all kinds of other things and we can all have our own opinions, but the bottom line for me is that we've come together around food. All kinds of different people with different ideas and different philosophies and different skills have all come together around food.* (Co-researcher E, paras 107-8)
In relation to this photo, Co-researcher E also commented on how the crossing branches could represent interconnections that are happening as a result of the PFCP:

_I do like all the connections - the interconnectedness that goes beyond – it’s almost like a ripple effect. Here’s the centre, food, here’s all the people and all the organizations that have come together around food and here’s the ripple and those connections are being made farther than we can see. We don’t know what they all are, we just know that they are happening. Because I see food and all of those issues in the media more and more all the time. Or people are talking about them more and more all the time. It’s like we are reaching this tipping point._ (Co-researcher E, para 110)

Co-researcher C shared the following sentiments about the complexities and inequalities related to food access in Nova Scotia:

_Through the food costing I realized that - you know because when I first went into it thinking ok I just wanna know what it’s going cost to feed a family - what does the government thinking it’s costing, and what the reality of it is. And just realizing there was so much more involved - so many more things to look at and you know just gaining knowledge about food banks and I’ve learned so much through the project that we share with families._ (Co-researcher C, para 152)

She added that the knowledge of inequalities gained through the PFCP is having an impact with the families she works with, by “maybe creating a little anger and lighting a little fire under their bums. Because they are starting to want to speak out”

**Highlighting the inequalities of the food system,** the photos below were taken by two different co-researchers, depicting different food bank models used at their family resource centre. The co-researcher who took the photo on the left expressed sadness that most of the foods are “no name” implying that people living with food insecurity deserve lesser-quality or less desired products.

_This is a shelf that sits in my office... I do a prenatal nutrition program and the participants get a food box once every 3 months while they are in the program. So this is the food that I select from. None of it, as you can see, is fresh or frozen anything because we just don’t have that option for giving it to them. So we try to take from the four food groups. I don't know, its... To me it’s kind of depressing that this is what they get. But to them - like it’s amazing how excited some people get over this box of groceries...sometimes it’s the less obvious people that you think that need it that really want it._ (Co-researcher A, para 115)
The co-researcher who took the photo on the right explained how her family resource centre food bank operates like more of a community cupboard, where people can add and take items with no tracking and questions asked. They use this model as an alternative to traditional food bank models, which co-researchers felt many family resource centre participants avoid at all costs.

Now this is very similar because this is our cupboard our centre. Ours is done a little bit different because it's just kind of an open thing. There's actually four big cupboards and we've just called it our trading posts. So sometimes parents will take something in and take something out, other times it's just like if you need it just go get it. We don't care. It's up to their discretion. They don't have to come to us and ask for it or anything, they just know it's there and they know it's open they can take what they want. The reason we started is just to help people to get along. Maybe from one check to another, when it's getting towards that end of the month or whatever. Because so many of our participants will not go to the food bank no matter what. They would rather starve than have to go over there and stand in that line up and basically beg for food. (Co-researcher C, para 128)

**Summary**

The co-researchers explained that through their involvement with the PFCP, they have learned that food insecurity is a complex problem lacking simple solutions. However, they feel that the PFCP, because it brings people from diverse perspectives and backgrounds together, provides an excellent platform for mutual learning, contribution and moving the work forward. In their daily work in family resource centres, the co-researchers also talked about the complications, inequalities and emotions involved with trying to help people in their community access food in ways that are respectful and empowering.
Theme 5. Being involved in PFCP has highlighted what "local" means and its importance to building food security

The local foods component of the PFCP was initiated in 2005, and expanded upon in each subsequent cycle of food costing. As an addition to the NNFB Survey Tool, food costers collect information on the relative cost and availability of locally produced foods (grown in the Maritime Provinces). Through the following exchange, we can see how introduction of the local foods component has influenced personal and organizational shifts in food procurement practices and thinking about food systems:

Co-researcher E: [the local foods component of PFCP has] shifted our philosophy, it shifted the way that we do things, its shifted the way that we view things, its shifted the way that we shop, its shifted the way that I shop personally.

Co-researcher B: Did it shift your menu?

Co-researcher E: Yes. It shifted our menu. We don't use processed foods... It has also impacted the staff. Certainly the outreach staff, but also the centre staff view food differently. (para 157-159)

I took a picture of the [sticker/barcode] because it’s from my area. So it’s local. ...So the reason I took this picture was because since we have been involved with the food costing, one of the things that we have done, and it’s not official written down and it needs to be, but we’ve really taken a hard look at what we practice. We’ve really looked at what we do in terms of our food purchasing and in terms of our menus, in terms of all of things that we do around food. So we have apples when they are in season, we have apples that are from our community. We go to the market and get them or we go to the local farmers markets that are open year round. (Participant E, transcript 1, para 80)
The following photo also speaks to increased awareness of local foods, and also some of the frustrations with local food systems:

This for me is about - well first it’s about homemade, it’s about local again. Because the blueberries are just up around the corner. The blueberries are less than 5 km away. And for 10 years there has been discussion in our community about getting local blueberries into the schools and they can't figure it out. (Participant E, transcript 1, para 155)

Elaborating on this theme, Co-researcher E made links to how local foods, policy change and PFCP resources are and should be connected:

And I just can't get over the bureaucracy that stops blueberries that are right there from being accessed in our schools. When it’s as simple as driving down the road. So for me it’s about challenging policies and getting at that level. Like I know the food costing – that’s part of what we are doing. The policy lens [Thought about food? Understanding the relationship between food security and well-being in Nova Scotia: A background paper and policy lens] that was created in terms of looking at what is it that we need to think about whenever we are making decisions around whatever it is. (Co-researcher E, transcript 1, para 155)

Summary
For some family resources centres, the local foods component of the PFCP has had a profound impact on their organizational policies and practices. PFC resources were also cited as important tools for helping to create policy change, particularly around local foods.
**Discussion and Conclusion**

The rich and varied results derived from this research are indicative of the positive results we have had with piloting photovoice methodology with our family resource centre partners. This creative research process contributed to rich and lively conversations and provided the co-researches with an opportunity for reflective thinking on their work and the value of the partnership between family resource centres and the PFCP.

In terms of PFCP evaluation, this research has illuminated how the PFCP has contributed to change on many levels. Through photos and discussions, the co-researchers explained how:

- On an individual level, the participatory approach of the PFCP has helped food costers feel respected, gain confidence and make positive changes in their lives.
- At an organizational level, PFCP research has encouraged programming and policies changes within family resource centres.
- At the community level, the family resource partners have engaged in a great deal of advocacy and education on food security, which has been supported and bolstered by PFCP research.
- And at a systems level, the co-researchers provided examples of how PFCP research and advocacy efforts of family resource centre staff, researchers and other community members has contributed to putting food security on the provincial policy agenda.

This research has strengthened the decade-long partnership with family resource centres, and like other methods piloted through the PFCP, it is hoped that moving forward, photovoice will be incorporated into family resource centres’ programming and have benefits for participants. This research has also demonstrates the importance of using participatory approaches within the PFCP. Working in such a collaborative manner has helped to broaden the conversation about food security and it has helped to build capacity within project partners and at an organizational level. Also, as demonstrated by the co-researchers, advocacy work related to food security has been broadened. This research supports the notion that using participatory action research approaches are essential to continued monitoring of food insecurity and to building food security in Nova Scotia.

Moving forward, it is hoped that this work will help to push boundaries and forge connections, and as one co-researcher commented “to demystified and blur the lines between academia and the community” (Participant E, para 19). As with any project and partnership there is always room for growth and improvement, but we are confident that this research has provided evidence of major food security successes that have been achieved through the partnership between family resource centres and the PFCP.
**Recommendations**

**For PFCP practices**, it is recommended to continue to use photovoice in PFCP research. For co-researchers, using a photovoice approach can be beneficial as it can be a creative outlet and create space for reflexive thinking. In terms of utility in research, this approach also fostered meaningful conversations which led to rich research results. The participatory co-researcher approach was also useful, as it allowed the participants to engage in data analysis and develop their own themes, assuring that the presented research results are as true to the co-researchers experiences as possible. An additional suggestion, pending funding, is to assist co-researchers with training other community members on how to do photovoice research within their organization or community.

**For sharing the findings of this research**, several knowledge sharing steps have already taken place, for example: a draft of this report has been shared with the co-researchers, who approved and validated the content; and several large posters of photos and captions from this research have been created and were shared at a Charitable Foods Event, “Talk – Understand, Resolve – Move: The Role of the Charitable Food Sector in Community Food Security” in March 2013. Moving forward, other recommendations for sharing findings include: presenting the above mentioned posters at other events, sharing this report more broadly, and develop and publish an academic paper stemming from this research.
Appendix A - Photography Subject Consent Form

I, __________________________, give permission for __________________________, acting on behalf of the Nova Scotia Participatory Food Costing Project (PFCP), Nova Scotia Participatory Food Costing Evaluation: Using photovoice to understand community and systems level impact, to take my photograph. By signing my name below, I understand and agree that unless otherwise stated in writing, the PFCP assumes that permission is granted to use my photographs for project related reports, exhibits and presentations that are likely to result from this project. I understand that researchers, policy makers, students, and possibly people from my community will see my photo.

Signature: __________________________
Date: __________________________

If subject is a minor
Parental Consent:
Name (printed): __________________________

Signature: __________________________
Date: __________________________
Appendix B: PHOTO Caption Worksheet

Photographer: ____________________________________________

☐ Subject Consent Form  ☐ Private Property Consent Form

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