



Housed and Still Hungry: Barriers to Food Security for Individuals with Problematic Alcohol and Substance Use Living in Supportive Housing on Vancouver Island, British Columbia

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Abstract

The purpose of this research was to examine the barriers to food security for single adults with mental illness and/or problematic substance use who live in supported housing on Vancouver Island, British Columbia. The objectives were: (a) to examine the difference in the level of food security for tenants of neighbourhoods located in an urban versus a rural community; (b) to examine the barriers to food access experienced by the tenants; and (c) to examine which barriers have the greatest effect on the tenants. Using an explanatory case study design, the method employed was based on a community-based participatory research method with a social justice perspective as the framework. An explanatory matrix was used to illustrate the tenant identified barriers to food security and the social structures that affect these barriers. In addition, recommendations were made for integrating food security services and programs into supported housing projects. It was argued that food security is a matter of public health and an integrative approach was needed. A paradigm shift on a larger policy scale, was suggested to promote the health and well-being of tenants. An adequate holistic perspective with an integrate, long-term strategy linking all the determinants of health would result in health-in-all policies. This strategy could reduce the existing health inequalities that the tenants in supported housing experience.

Keywords: Food Security/Insecurity; Supportive Housing; Community-Based Participatory Research

Introduction

This work provided insight into the barriers to food security by exploring the lived experience of tenants residing in an urban and rural setting on Vancouver Island, British Columbia, Canada. The Food and Agricultural Organization of the United Nations states that food security “exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life” [1]. In British Columbia supported housing is defined as “housing that integrates long-term housing units with on-site support services that are available to residents of the housing project” [2]. Understanding the living conditions and identifying the barriers that impede food security will help to determine ways to improve food security for supported housing tenants. A key aim of this work is to create a framework for integrating food programs and services into supported housing to contribute to the health and well-being of the tenants.

To achieve these outcomes, an explanatory case study approach was used to examine food security in two supported housing projects. Robert Yin (1994) describes explanatory case study as a means by which research questions related to complex service and clinical systems can be answered. The use of an explanatory case study enables investigations into food security for tenants as well as the multiple facets of individual tenant food security. This study examined how the barriers to food security affected the tenants and the coping strategies they used to access food. The study was intended to be used to identify strategies for programs and services that the study participants identify as being valuable to them with the potential for implementation by other housing providers.

By outlining the different concepts of food security at the national, provincial and regional levels it was considered that a variety of food programs and services need to be integrated into supportive housing projects. It was further argued that food security is a public health issue requiring a health equity lens with a social

justice perspective. By discussing the intersection of food security and supportive housing requirements for individuals with mental health and/or problematic substance use. It was considered that the integration of food security programs and services into supported housing is beneficial for the overall well-being for these individuals.

Methodology

This study was conducted to determine the barriers faced in achieving food security for people living in supported housing projects in an urban and a rural community on Vancouver Island. These barriers were identified using a constructivist paradigm which states that truth is relative, that it is dependent on one's perspective and is built upon the premise of social construction or reality. The belief is that "reality is subjective and multiple and can only be seen by the participants in the study" [3]. Yin [4] described how case studies can be used to either, "a) predict similar results or b) predict contrasting results but for predictable reasons" [4]. According to Yin "each case should serve a specific purpose within the overall scope of inquiry: [4]. The phenomenon under study was the barriers to food security for the tenants of the housing projects and the resources available in their community context. The case study included two housing projects which were chosen because of their differing locations. Each housing project was considered a case; thus, it was possible to (a) explore differences within and between cases; (b) analyze data within each setting and across settings; and (c) examine the similarities and differences between the cases. Using a case study design, as described by Yin [4] the focus groups approach was employed, in addition to community mapping and one-on-one interviews, in order to achieve the purpose and objectives.

The case study methodology included an overarching participatory approach, combined with a social justice perspective for data collection and the use of an explanatory case study design to analyze the data. Each housing project was considered a single case and results from the two sites were compared to determine the barriers to food security that the tenants reported. The Managers of each housing project were also interviewed to determine what they saw as the barriers to food security and if they had suggestions to improve access to healthy food for their tenants. Community service providers, that the participants identified, in each location were also interviewed to determine if they were aware of barriers to food security for the clients they serve. Identification of the barriers and an explanation of the effect of these barriers on the well-being of the tenants was the aim of the study.

Social justice perspective

The decision to use a community-based research (CBR) approach combined with a social justice perspective arose both out of a desire to be involved in research with a social justice perspective and the interest in exploring alternative approaches to knowledge production. Again, the decision to use the principles of community-based research allowed the use a social justice lens while conducting the study. Combining principles of CBR with a social justice framework provided me with the ability to ensure that the study stayed focused on the topic of health equity and could be conducted in ways that enhanced an understanding of the participants lived experiences with food security. Drawing on Iris Marion Young's theory of social justice allowed an enhanced understanding of the inequalities that are relevant to the lives of tenants in a supported housing setting.

Community-based research methodology

A review of the work of Minkler and Wallerstein [5,6] and Israel, *et al* [7] suggest that in CBR, collaboration means that researchers and community members will be involved in some, or all the processes of defining the research question, choosing the research methods, conducting the research, analyzing the data, writing the report and using the research output for social action. In this case study, it was acknowledged that the tenants in the buildings were the "community" and they were the research "stakeholders" with whose help the study was designed. I also acknowledged the tenants residing in the buildings as the "community experts" and their "local" community knowledge provided valuable suggestions about the research. As part of the CBR aspects of this study, the tenants residing in the buildings helped to design the research questions and collaboration took place between some of those tenants and the research team.

Theoretical propositions

This explanatory case study was designed to explore the barriers to achieving food security faced by tenants living in supported housing. Yin [4] called hypotheses "theoretical propositions" which he believed "are the specifics or details within the scope of the study and are not necessarily mentioned in research questions". Thus, the propositions for this study were:

- Access and availability of food resources has a positive influence on the dietary choices of tenants in supported housing.
- Tenants in supported housing in rural communities have more barriers to food security than tenants living in supported housing in urban communities.

The study was designed this study around these propositions while keeping the focus on providing the opportunity for the tenants to describe their lived experiences of the barriers to achieving food security. The ultimate purpose of the study was to examine the differences and/or similarities in the barriers for tenants located in an urban versus a rural community as well as to examine which barriers have the greatest effect on the tenants.

Recruitment

Recruitment for this study was done in both locations with ongoing support from the housing staff. An information poster was designed and displayed on notice boards in each location and distributed to each unit, inviting tenants to attend an information session to learn more about the study. Two information sessions were held at each location, one in the afternoon and one in the evening, to discuss the research study and why their participation was important. The information session provided a verbal and written description of the study objectives and procedures. The research office contact information was given to each tenant to facilitate information exchange. It was ensured that the attendees understood the purpose of the research, what would be expected of them and the risks and benefits of their participation. All questions asked by the tenants were answered at this meeting where reinforcement was made to the effect that their participation was voluntary and that no personal information would be disclosed.

Tenant advisory committees

Establishing a tenant advisory committee, in each project, was one of the ways a participatory approach was implemented in this study. Tenants were asked to sit on the committee in an advisory role to provide comments and input on the construction of the interview and focus questions. This increased their participation in the study and provided the needed direction, advice and feedback. The implementation of a tenant advisory committee recognized the important role that tenant's knowledge played in the study. This provided opportunities for tenants to draw on their experience – lived or observed – within their community and offer valuable insights.

The advisory committee provided a lead role in designing the focus group and interview questions and also delivered input on the themes that emerged. Three tenants in the urban community and four tenants in the rural community formed the tenant advisory committees. Two meetings were held with each committee and a sample questionnaire for both the focus groups and one-on-

one interviews was provided. These sample questionnaires were designed using examples from other studies that had been done, particularly the work of Miewald [8] in the downtown eastside of Vancouver. The committee reviewed each question and through the discussion about each question, with tenants making comments and suggestions, a final questionnaire for the focus groups and one-on-one interviews was created. Once the focus groups and one-on-one interview data was transcribed, a third meeting was held with the advisory committees for their input on the emerging themes. The themes were accepted by the committee members as being relevant to their circumstances.

Informed consent

Informed voluntary consent was very valuable for me, as some people still associate a mental illness with the inability to provide informed consent. The diagnosis of a mental illness is not synonymous with incapacity or with loss of autonomy in decision-making. The tenants in supported housing who have a mental illness manage their own affairs and are sufficiently competent to retain decisional autonomy. Moser *et al.*, [9] provided convincing evidence that “a large percentage of individuals with psychiatric illnesses are able to make informed decisions regarding participation in research” ... [9]. The voluntary nature of the research was emphasized and their tenancy will not be in jeopardy if they do not participate was reinforced.

At the beginning of each focus group, the study's objectives and procedures were outlined and each item on the consent form was discussed with the opportunity for any questions or concerns to be addressed. The same procedure was conducted at the beginning of each one-on-one interview. Providing all the participants with all the necessary information, in a variety of ways, ensured that the tenants could make a fully informed decision about their participation.

Data collection

This study was conducted in two selected BC Housing sites, one in an urban community and one in a rural community. Fieldwork, consisting of focus groups, community mapping and semi-structured one-on-one interviews, was conducted to document and analyze the barriers that tenants encounter to achieve food security. All fieldwork was conducted within the framework of the University of Victoria's ethical guidelines. The guidelines used for this study were: a) confidentiality; b) informed voluntary consent; and c) right to refuse or withdraw at any time.

Data collection methods

Focus groups

Focus groups were selected to ascertain the perspectives and experiences of tenants in regard to food security. Using this method was a way to empower those tenants who have been marginalized and allow their lived experiences to be shared. Focus groups can also encourage participation from people who are reluctant to be interviewed on their own or who feel they have nothing to say. The use of focus groups in the context of community-based research places an “emphasis on participation and action linked to research” [7].

The focus groups were carried out over the course of an afternoon and evening in both locations. The focus groups were organized in a venue where the tenants normally meet because they would probably feel more at ease in familiar surroundings. The focus groups were designed to collect information to identify barriers to food security for the tenants in each site and, as a result, no demographic information was collected.

Focus groups were also selected for this study because they do not discriminate against people who cannot read or write well and are a method of data collection that are most able to be respectful and non-condescending. Many of the tenants lacked the experience of sharing their ideas in a group so directed facilitation was used to encourage quieter tenants to contribute while restraining the dominant ones. Efforts were made throughout the study to report the views and opinions of the tenants as accurately as possible, but it must be acknowledged that the research team’s role in the study inevitably influence both the nature of the data collected and its interpretation.

The focus group sessions were audio taped and the sessions were transcribed for analysis. Recording the sessions enabled the research team to be more attentive to the facilitation of the discussion and active listening skills could be used instead of trying to take notes. The focus groups were arranged shortly after the study information session and a staff member of the housing project arranged the time(s) and was present as an observer with tenant permission. It was the research team’s responsibility to make all the tenants feel safe and to facilitate the discussion.

Semi-structured questions, focusing on the barriers to accessing food resources and the coping strategies used by the individual tenants were asked. The questions asked tenants about their experiences and opinions regarding housing and food security. Some of

the tenants found certain questions difficult because they invited tenants to reflect on their abilities to access food and highlighted areas of inadequacy in their community.

It was important to the research team to acknowledge and thank each participant in the focus group, but something concrete and more personal than just a gift card was wanted. It was decided to give each participant a basket containing food items from the four food groups of the Canada Food Guide. Each basket contained a placemat and the necessary ingredients to make one complete meal.

Community mapping

The second phase of the data collection was a community mapping exercise. All of the participants from the focus groups took part in this activity. A large map of the city was used and the tenants, placed colored push pins on the map representing where they access food. I led a discussion on why tenants chose locations and what they felt was missing in their neighborhood. This community mapping of neighborhood food resources was conducted to gain an overview of the resources in the area, as perceived by the tenants and provided a visual representation of the resources. This exercise enabled the research team to become aware of the social structures and charitable organizations that the tenants access in each community. The final maps offered a visual representation of the tenant’s knowledge of community resources and produced a picture of community strengths and weaknesses as the tenants see them. This exercise was audio recorded and later transcribed to develop an understanding of each neighborhood’s food environment from the multiple perspectives.

Community food service providers one-on-one interviews

The transcripts of the discussion that ensued during the community mapping exercises were reviewed to determine the names of the community and charitable service providers in each community that were mentioned by the participants. Each identified provider was contacted by telephone to arrange a meeting to explain the purpose of this study and ask if they would agree to be interviewed. The community service providers were asked questions about their organizational structure, sources of funding and the criteria for receiving services. They were also asked to identify any barriers to food security for their clients and to share their suggestions to reduce those barriers that had identified.

One-on-one interviews

The third phase of data collection involved one-to-one personal interviews with the tenants who agreed to participate in the study.

At the beginning of each interview, five to ten minutes was spent having a general conversation and reviewing the purpose of the interview. This helped to establish a trusting atmosphere which encouraged the participant to talk about his or her experience and several interview techniques such as probing, reflective listening and silence were used. On average the interviews lasted thirty to forty minutes and concluded when the tenant indicated that there was nothing further to add.

The interview questions were designed by the research team with the participation of the members of the Tenant Advisory Committee. The main advantage of using a one-on-one interview with questionnaire questions was to ensure more confidentiality for the tenants than was available in the focus groups.

All tenants in each project were asked at the information session if they wanted to participate in a one-on-one interview. The housing staff created a schedule for the interviews according to the times requested by the tenants. Interviews were conducted with the tenant either in their apartments or a private location which was comfortable to them. The interview data was audio-recorded and transcription of the raw data, included word-for-word quotations of the responses. This data was then used in the analysis to determine the main themes which was then examined to determine if the original predications were accurate.

Tenants were asked to sign a consent form agreeing to the interviews and acknowledging that the interview would be audio taped. Some of the questions were of a more personal nature and therefore participants might have felt uncomfortable answering them. It was my responsibility to provide safety, trust and respect for the tenant and the information shared. It also meant establishing a safe and comfortable environment for sharing the tenant's personal experiences and attitudes as they occurred. Some of the ways in which this was done was by providing a list of support services available and/or offering to have a support person sit in on the interview. Each tenant was given a food basket containing food items to make a spaghetti dinner to thank them for their participation.

The one-on-one interviews asked the tenants about their food security status, food access practices and dietary choices. Some tenants were uncomfortable revealing health problems or concerns and felt uncomfortable answering questions about their personal habits. At the start of each interview, the tenant was reassured that the answers to the questions would be completely confidential. Any personal information collected during the interviews

was only for demographic purposes and none of the information disclosed would be shared with anybody outside of the scope of the study. Each tenant participating in a one-on-one interview was informed that he or she was free to not answer questions and need simply indicate this wish and the question would be omitted. The tenant was also told that he or she could withdraw from the study at any time with no repercussions of any kind. Interview questions were provided to the tenants in advance and although they were offered to have a support person of their choosing to sit with them throughout the interview, no one chose this option. The tenant was also informed, before the start of the interview, that if they become upset the following options would be offered: a break; the chance to stop and reschedule; or the opportunity to stop their involvement entirely and once again no one chose these options.

Housing managers one-on-one interviews

The managers of both housing projects were interviewed to gain information about the facility and the programs and services that are in place in the building. They were asked if they knew of any barriers that the tenants have to food security and if they had any suggestions to enable access to food security for their tenants. Both managers stated housing conditions have a significant effect on tenant food security and both recognized the need for safe and healthy food for their tenant.

Data transcription

All the data collected was transcribed before the start of the analyzation. The process of transcribing the tape-recorded interviews, focus groups and community mapping discussions into an electronic computer file began within 48 hours of completing the interviews, focus groups and community mapping exercises. The transcripts with the audiotapes were compared for accuracy. In addition to the electronic files, a hard copy of each transcript was maintained to provide protection in the event of computer problems. Each participant was given a number code, for example U1(Urban), R1(Rural), UHP1(Urban Housing Provider), RHP 1 (Rural Housing Provider), UCSP 1 (Urban Community Service Provider), RCSP1(Rural Community Service Provider) and all identifying information was omitted from the transcripts. The audio-tapes and printed transcripts were also numerically coded to facilitate cross-referencing and were stored in a locked filing cabinet in the research team office.

Data analysis

Efforts were made throughout the study to report the views and opinions of the participants as accurately as possible, but it must be

acknowledged that the research team's role in the study inevitably influenced both the nature of the data collected and its interpretation. To better understand the possible biases, it was important for to examine how the research team's thinking about food security could influence the study results. As part of my graduate program I undertook an exploration of the literature on food security and housing. The research team did further reading on theories and methodologies of qualitative research was also done. Three candidacy papers on the topics from a critical perspective were also written. This enabled the development of a comprehensive understanding of the concept of food security and housing. A conscious attempt was made to maintain a capacity for openness because embedded in the idea of understanding is the importance of being aware of one's own prejudices.

Case study data analysis cycle

This explanatory study was designed based on the case study method described by Robert Yin [4]. This method was chosen because it would be the best way to provide the data in the tenants own voices and reduce personal biases. Robert Yin updated his methods in 2011 and presented a five phased data analyzing cycle. The first phase – Compiling - begins by sorting the data collected. The second phase – Disassembling – breaks down the compiled data into smaller fragments. The third phase identifies substantive themes and reorganizes the data into the themes and is considered a – Reassembling – process. The fourth phase involves using the reassembled material to create a new narrative and is considered one of – Interpreting – the reassembled data. The final phase is considered – Concluding - drawing conclusions from the entire study.

Phase one – compiling

As part of the first phase of the data analysis cycle, all the tape recordings were listened to become familiar with the data and the transcripts were reread start to assimilate the information and create a database. Before the database was used the logic, consistency and accuracy of the entries was checked by answering the following questions: (a) what the distinctive features of the responses are; (b) how the collected data relates to the original theoretical propositions and; (c) were there new insights that emerged. All this information was put on to separate index cards for each data collection source. The index cards were then organized under the main topic areas and this information was entered into an excel spreadsheet and became the compiling database.

Phase two – disassembling

Code portions of the data were not chosen because “coding routines can produce their own distractions – for example, having to attend to the mechanics of the coding process rather than struggling to think about the data” (Yin, 2011, pg. 188). The three precautions of constant comparisons, trying to be alert to negative instances, developing rival explanations and continually posing questions about the data were taken.

Constant Comparisons – Constant comparisons involve looking for similarities and dissimilarities in the data items and questioning why these items are similar or dissimilar. Part of this process is also questioning why the items as being regarded as similar or dissimilar and include negative instances and rival thinking.

Negative Instances – involves uncovering items on the surface that might have seemed similar but on closer examination appear to be misfits. Uncovering items that on the surface might have seemed similar but on closer examination appeared not to be are considered negative instances. For example, two community service providers in two communities that belong to the same national organization were interviewed to determine if the organization provided the same services regardless of where they were located. The data showed that the two organizations deliver very different services and the negative instance couldn't be ignored.

Rival thinking – involves searching for alternative explanations for my initial observations. For example, participants were asked to share their personal experiences with food security with the realization that most of them did not use the services that were available to them. The initial thinking during the reassembling phase was that the participants were resistant to using the services, thus, the data had to be examined carefully for any rival explanations before arriving at the conclusion that resistance was the main explanation.

Posing questions

The disassembling process involved creating index cards identifying the relevant items and different topics. Each topic was reviewed to identify any other themes. All this information was entered into the database matrix which would help to clarify, in conceptual terms, the barriers to food security that emerged.

Phase three – reassembling

During the reassembling phase, the data was reviewed to search for patterns and how these patterns related to the original hypoth-

eses at the outset of the study. Part of this process was trying to answer some of the following questions: do the emerging patterns make sense? Are they changing the thinking? How the patterns are related to the theoretical concepts prosed? During this reassembling phase, the research team realized that what would be retrieved from the database would involve making choices based on their own judgments. The team also realized that they were considering lack of income as the largest barrier to food security for tenants. The team had to ask themselves whether this emerging theme really was the largest barrier.

To help answer these questions created an explanatory matrix as described by Miles, Huberman and Saldana (2014) was created. "An explanatory effects matrix is a broad brushstroke chart that serves as a step to answer why certain outcomes were achieved and what caused them" [10]. They placed a strong emphasis on data displays as "an organized, compressed assembly of information that allows conclusion drawing and action" [10]. An explanatory matrix would help to clarify, in conceptual terms, the barriers to food security that emerged. The matrix is a table of rows and columns, the rows represented the individual participant responses, the columns represent the interview questions and cells represent the actual data. The completed matrix permitted the team to examine the data to start to draw conclusions. The disassembled data was now reassembled in a conceptual form that was relevant to this study.

Phase four - interpreting

The fourth phase of the data analysis – interpreting – involved a comprehensive explanation of the data. As Yin (2011, p. 216) states "the whole interpretation is decimated to explaining how or why events came about". During this phase the team considered the completeness of the data – did it have a beginning, middle and end – and the fairness of the interpretation – does the interpretation fairly represent the data.

The data collected provided the team with the ability to make comparisons between the tenant's experiences with access to food resources in both communities. During the data analysis of the one-on-one interviews, the data from each housing setting was combined to understand how the barriers affected the tenants. A narrative explanation of the barriers by iteratively comparing the data to the study's propositions, conceptual framework and research questions was built. The goal of the data analysis was to establish inferences about the case and link the data to the propositions.

Phase five – concluding

The fifth analytic phase permitted the team to challenge the conventional stereotypes of people with mental illness and/or problematic substance use. The team was also able to provide information about the need for the integration of food security programs and services into supported housing.

Approaches to rigor

There are different criteria used to access the rigor of case study research [11]. The incorporation of Yin's tactics and the framework proposed by Lincoln and Guba [11], consisting of credibility, dependability, confirmability and transferability was chosen.

Credibility

Credibility refers to the value and believability of the findings and involves two processes; conducting the research in a believable manner and being able to demonstrate credibility Three strategies were used in the approach to credibility. The first strategy was triangulation of the data. This was done by converging the data from the different sources that included interviews, focus groups, and the literature review; data type, the audio recordings of the interviews and focus groups. The team was able to get corroborating evidence to support the propositions from the three independent measures. The second strategy was participant checking. This was done by allowing the participants to read the transcription of their interviews to ensure that the answers were accurately recorded. This was done before the data was analyzed so the participants could respond to their own words and not to be to recognize themselves or their particular experiences in the synthesized findings.

The third strategy was using an external debriefing process. The three members of the advisory committee reviewed the data to verify whether the findings were credible.

Dependability

Dependability refers to whether the process of the study and the data is consistent, reasonably stable over time and across research methods. The issues of quality and integrity by constantly were addressed by considering the following points:

- Were the research questions clear and was the study design congruent with them
- Was the team's role and status explicitly described?
- Was the data collected from multiple sources?
- Were the findings meaningful across data sources?

A diary was maintained to record the team's thoughts about the decisions made throughout the study. The thoughts and ideas documented during the data collection helped in the development of the final themes and sub themes.

Confirmability

The issues of neutrality and unacknowledged researcher biases were addressed by considering the following points:

- The study's methods and procedures were described explicitly and in detail
- It is possible to follow the sequence of how data was collected, processed and displayed
- The findings are explicitly linked
- There is a record of the study's methods and procedures
- The team has been as explicit and self-aware about personal assumptions, values and biases
- Competing or rival conclusions have been considered
- The data has been retained and is available for re-analysis by others.

Transferability

Transferability refers to whether findings can be transferred to another similar context or situation, while still preserving the meanings and inferences from the completed study. To determine if the conclusions from this study were transferable to other contexts the following points were considered:

- The characteristics of the sample of participants, settings, processes were fully described to permit comparisons with other samples
- The findings specify any limits on sample selection
- The processes and outcomes are applicable in comparable settings
- The findings are congruent with prior theory
- The findings include enough description for readers to assess the potential transferability and appropriateness for other settings

Conclusion from data analysis

Examination of the data showed that access and availability of food resources has an influence on the dietary choices of tenants in supported housing. The original proposition was that access and availability would have a positive influence on the tenant's

dietary choices. However, the relationship between the barriers to food resources did not provide a positive influence on the tenant's dietary choices. These barriers resulted in tenants having to make unhealthy food choices which negatively impacted their overall health. It was also proposed that tenants in supported housing in rural communities have more barriers to food security than tenants living in supported housing in urban communities. This proposition was also proved false. The Three A barriers were the same in both communities.

The identified barriers of lack of money, the amount of money the participants spend on food, difficulty in shopping in their neighbourhood and the quality of the food they received from charitable locations reinforces the need for the integration of food services and programs into supported housing projects. The problem of food security is intertwined with resource constraints. Making the health needs of tenants in supported housing a public health concern can help to create more effective strategies to reduce the health inequalities that tenants face, allowing them to more fully achieve their health potential which would consequently improve their quality of life.

Study results

Three A barriers

Examination of the data showed that access and availability of food resources has an influence on the dietary choices of tenants in supported housing. An analysis review of all the data sources resulted in the production of three broad themes called the "Three A Barriers" to food security comprising of a lack of: (1) Affordability of food; (2) Access to food and; (3) Availability of nutritionally adequate food. The original proposition was that access and availability would have a positive influence on the tenant's dietary choices. These barriers resulted in tenants having to make unhealthy food choices which negatively impacted their overall health. It was also proposed that tenants in rural communities have more barriers to food security than tenants living in urban communities. This proposition was proved false. The Three A barriers were the same in both communities.

Affordability of food

All the participants stated that they did not have enough to eat every day. Some said that not having enough money is what makes it difficult. They also all agreed that the time of the month when it is most difficult to buy food was the week before provincial or federal cheque issue day. A lack of income also meant having to make

choices to purchase overripe, fruit or vegetables or being limited to basic produce such as potatoes, carrots and apples. Sixty-one percent (61%) of the participants used grocery store coupons that are available in the local newspaper once a week. Although these coupons do offer food items at a discount price, any purchases of food at the grocery store involve only being able to purchase what is available with store coupons. The use of store coupons does not guarantee that the user will be able to purchase nutritional food or food of their choice.

Breakfast was the meal most often skipped and the choices for breakfast included oatmeal, or tea and toast. Sandwiches were the most common choices for lunch, and pasta was the choice for dinner. Any meat that the participants ate consisted of low-cost meat ends or items that could be fried, such as bologna or lower-priced bacon. The vegetables most often mentioned were potatoes and carrots because they were cheaper and lasted longer.

A table was created using the participant's information regarding the amount of money they spend each week on food and where they purchase or receive food. Comparing where the participants obtain their food and the amount of money spend on food will enable the community housing and charitable providers to better understand the relationship between the cost of food and the ability to maintain a healthy diet. The table indicated that the participants spend most of their income on food purchased at a grocery store.

Community charitable resources were the second highest location for receiving food. The table does not reflect that the amounts spent on food can fluctuate throughout the year for some individuals and in rural communities, seasonal variations in food availability can affect food expenditures.

For low income individuals, having enough to eat everyday can be a significant challenge. Participants in both communities stated that a lack of income meant having to make the choice to access charitable food resources. This choice can result in insufficient quantities of food or food which may not have a high nutritional value, making it almost impossible for the participants to maintain a healthy diet.

Lack of access to food

No participants in this study have vehicles, so they must walk, ride a bike or use public transit to access food resources. Thus, the difficulty of using public transit emerged as a theme. There is no public transportation on Sundays or holidays, limited service on Saturdays and day time routes are time consuming. Access to some

grocery stores requires transferring from one bus to another, which provides the ability to only carry one or two small bags of food. The participants also need to use the bus to go to the soup kitchen and/or food bank. However, nine participants said they are unable to use public transportation because they live with anxiety or paranoia. These mental illnesses cause them to experience stress in public situations and using public transit can heighten their feelings of stress. Two participants related experiences of being treated unjustly by bus drivers because of all the bags of groceries they were carrying. They also talked about experiences with other passengers on the bus, believing they were being looked down upon or rude comments being made to them.

Using public transit involves knowing the bus schedules which can change periodically. Using public transit also limits an individuals' ability to purchase bulk items. As a result, using public transit can result in needing to spend half a day shopping, as well as, public transportation still requires exact bus fare. People receiving income assistance are entitled for reimbursement once a bus pass has been purchased but this requires budgeting once a year to cover the initial cost.

In each location, public transit was taken, and the time and number of transfers required to access food resources was documented. A table to illustrate the difficulty using public transit was created. The table illustrated that even if individuals have the ability in theory to get food at several different places, this can be hampered by long walks and a lack of transportation. The limiting conditions of fatigue and a lack of energy from not eating well and the need to put extreme efforts into getting what may be poor food can be a factor in a cycle leading to increasingly poor health.

The identified barriers of lack of money, the amount of money the participants spend on food, and difficulty in shopping in their neighbourhood reinforces the need for the integration of food services and programs into supported housing projects. The problem of food security is intertwined with resource constraints. Making the health needs of tenants in supported housing a public health concern can help to create more effective strategies to reduce the health inequalities that tenants face, allowing them to more fully achieve their health potential which would consequently improve their quality of life.

Discussion and Conclusion

The results of this study show that the barriers to food security among tenants of supported housing constitute a critical gap

along the health and housing continuum. The findings have several implications for decision and policy makers that would contribute to reducing the barriers to food security. The main implication for policy is the need for an integrative approach to population health for tenants. Incorporating food security services and programs into supported housing projects would be part of a comprehensive approach to improving the health of tenants. The application of a social justice perspective for the development of programs and resources makes it possible to address the barriers as a matter of health and well-being.

Strategies for services and programs

The findings from this study have several implications for decision and policy makers that would contribute to reducing the barriers to food security for tenants in supported housing. A change to how we view and understand food security and housing is suggested, as well as, recommending a shift on a larger scale; to change structural conditions to promote health and reduce health inequities for tenants living in supported housing. The lack availability and access to food resources are barriers to the food security of tenants living in supported housing and therefore these tenants are at a disadvantage. Public health still relies on individual or community progress and not on structural changes needed to improve food security. The integration of food security programs and services into supported housing projects could be a way to promote social justice and improve health equity for tenants in supported housing.

A member of the research team was a member of a provincial advisory committee with the goal of strengthening awareness and encouraging action to systematically integrate food security into social housing. The committee developed an action framework and resource guide. The goal of the framework was to provide practices and a broad range of ideas that housing providers can use to strengthen the food security of their tenants. The guiding principles at the core of this framework are:

- Integration into the planning process and operations
- Collaboration with other government agencies, community organizations and businesses
- To be respectful of individual choice and needs
- To provide reliable and consistent programs and services

The framework was adapted to provide direction, consistency, accountability and communicate the common understanding of the food security needs of tenants. The adapted framework has

some foundational components that would be common to all housing providers, such as articulating an organizational commitment to reducing food insecurity among the tenant population. It is critical to note that there will be movement along the continuum as no one stage is superior to another and that all the stages must evolve concurrently. This recognizes that each individual has a different place along the food security continuum and therefore has different barriers, needs and possibilities for addressing these. Recognizing these differences means adopting a comprehensive population approach to food security. A comprehensive approach is essential because one size does not fit all. What works in one building may not work in another and what works for one tenant may not work for another. Therefore, programs may need to be customized to each building and a broad spectrum of resources needs to be offered to accommodate the individual tenants in each building.

Short-term Relief	Community Capacity Building	Food System Change
Meal Provision Gleaning Programs	On-site Gardening Community Gardens Community Kitchens Buying Clubs Good Food Box	Development of Partnerships and Networks Modification of the Housing Food Environment

Table 1: A Framework of Options for Housing Providers.

The framework has some foundational components that would be common to all housing providers and would require an organizational commitment. Organizational commitment will require organizations to:

- Include food security in the organization’s vision, mission and/or key strategic objectives and initiatives
- Dedicate resources and mechanisms to improve food security
- Have an articulated strategy for addressing food security

Adherence to these principles, with the recognition that food security exists along a continuum, will require that housing providers:

- Have a food security standard which is flexible enough to allow for individual initiatives to come from the bottom up
- Need a multi-pronged approach that makes connections between other food and non-food programs

- Allow the opportunity for food choice and autonomy
- Know that an individual tenant's place along the continuum and their nutritional requirements will change over time and make allowances for this
- Understand that meal delivery programs may be necessary in some buildings

Stage one - short-term relief

Meal provision

In supported housing, some tenants need a direct connection to nutritiously prepared meals. One of the ways housing providers can make this connection is through meal provision and/or cooking programs. There are several different ways in which meals can be provided by housing operators. Meals can be:

- Delivered by an external organization
- Made off-site by the staff and delivered to tenants of the building(s)
- Made on-site by the staff and/or tenants

In-house cooking programs

In-house cooking programs provide the tenants with practical skill development in the areas of nutritious meal planning, preparation and shopping resources. Such a program could be designed to address the unique needs of each tenant, being consistent with the individuals' cultural values and norms. All sessions could offer meal planning ideas for breakfast, lunch and dinner and provide skill building, specialization for microwaves, as well recipe preparation using ingredients obtained at the food bank, soup kitchen and/or hampers, and discount grocery and department stores.

Frozen meal program

One of our projects provides one meal a day to tenants and left overs are now packaged and sold to tenants in our other projects. Periodically the chef will prepare extra menu items to ensure that there are frozen meals available. Such meal provision and education programs would incur costs to the housing providers as food costs may not be included as a line item in most operating agreements, so creative budgeting will be needed. The importance of partnerships to cover food costs would be necessary to implement these programs.

Stage two - community capacity building

On-site gardening

Gardening can provide opportunities for creativity, self-expression, social interaction and improving self-esteem. An abundance

of produce can be shared with other tenants and tenants can help one another with the tending of the garden. Coupled with nutrition education, on-site or community gardening has the ability to improve the diets and the health of the tenants, by providing the opportunity to grow the foods they know and enjoy. Community gardens can play an important role in the lives of the tenants. Some of the health benefits of community gardening relate to: the physical health of participants; better access to food" improved nutrition, increased physical activity and improved mental health. The gardens could be seen as a place where communication with people from other areas could begin, using food and shared experiences as a starting point for understanding. This could help bring the tenants out of isolation and serve as a starting point for broader discussions of community issues.

A community garden essentially involves a piece of land or space, a rooftop for example, where people come together to share a role in the maintenance and operation of the garden. There are many different types of community gardens. For example, the plots could be individually assigned to tenants for their own personal use or the whole garden could be collectively cultivated for a broader purpose.

Community kitchens

Community kitchens could be organized in each housing project to provide an opportunity for tenants to prepare meals to be eaten together or taken home for later consumption. Community kitchens have the potential to adapt to the individual needs of the tenants in the project. Programs could range in focus from cooking skills and preparation to social aspects and support networks. These programs would require a communal kitchen space, kitchen amenities, food and staff, food safety and nutrition knowledge. For some housing project tenants, full-time staff coordination and flexible participation would be needed. This would allow tenants to participate when they can and in whatever way they can. For some tenants that means cleaning up instead of cooking and some days it means just eating.

Food buying clubs

The purpose of any bulk buying club is to provide nutritious food at a lower cost for the tenants. Tenants can pool resources to purchase bulk food at reduced prices and some staff involvement will be necessary. There are three common types of bulk buying programs: Good Food Boxes, Food Co-operatives and Bulk Buying Clubs. A bulk buying club would be tenants with similar food preferences who come together to buy food in bulk. Traditionally,

all participants of a bulk buying club are involved in the planning, shopping, sorting and delivering of food. These clubs enable individuals to work with a group of people to get more with their food dollars.

An in-house store could help improve food security for the tenants by increasing physical and economic access to adequate amounts of healthy foods. An on-site store is a smaller, more affordable alternative to grocery stores or a farmer's market. It can provide more variety and be more affordable for some tenants than a buying club. Tenants can buy what they want in the quantity they need. For example, coffee. This would require staff involvement, with tenant input.

Good food boxes

A Good Food Box is one example of the food distribution role that non-profit housing providers could undertake. A good food box program in a supported housing project could provide a variety of fresh produce at affordable. The housing provider could also offer a "cooking out of the box" cooking program using the ingredients from the box.

Stage three – food system change

Edible landscaping

Edible landscaping would provide the tenants with a free and potentially abundant source of healthy, fresh produce. My definition of edible landscaping is the utilization of food-producing plants, trees and vines in place of traditional landscaping. Edible landscaping for the supported housing projects would mean replacing plants that are strictly ornamental with plants that produce food. This could be done with long-term planning using replacement reserves under the operating agreements.

Development of partnerships and networks

A partnership is defined as a relationship where two or more parties, having common and compatible goals, agree to work together for a purpose. Partnerships with community agencies, other non-profit organizations and businesses in the community can help support food security initiatives for the tenants. Partner agencies can provide space, staff time, storage facilities, transportation, volunteers and food at discount prices. The suggestions are:

- Stores and distributors which can offer discounts or donations of food, materials and space
- Regional nutritionists and/or community rehabilitation workers can provide expert knowledge about healthy food and nutrition

- Churches, service clubs and non-profit organizations which can offer resources, guidance, donations, transportation and networking opportunities

Strategies for policy

The main implication for policy from this study is the need for an integrative approach to population health equity for tenants in supported housing. Simply put, it involves a comprehensive approach to all social determinants of health with health organizations analyzing possibilities and taking actions. Historically, the dominant approach in health promotion has been to focus mainly on education and behavior change to influence healthy eating habits. This is often in the absence of any coherent policy framework that strives to make healthy choices easy or even possible. Such public health initiatives measure success based on individual human health outcomes but neglect the root causes of poverty and income inequality. This individualizing approach shifts the responsibility for health provision away from the provincial government and onto community organizations or individuals. The current public policy lacks a holistic perspective and in order to address food policy adequately, it is necessary to produce an integrated, long-term strategy that links all the determinants of health. The result would be a health-in-all-polices integrated approach.

Although there is a clear linkage between income levels and food security, unlike recommended allowances for housing, at this time there is no established upper limit beyond which households are considered spending too much on food. Although poverty reduction appears to be the key tool in addressing food insecurity, poverty rates and indicators of food insecurity are not synonymous. Poverty rates do not measure the level of food insecurity or the dietary adequacy of the food purchased. Poverty rates also tell nothing about non-income related coping strategies, availability, access and appropriate use and storage of food. Furthermore, most studies determine food costs annually, but the amounts spent on food can fluctuate throughout the year for some individuals and in rural communities, seasonal variations in food availability can affect food expenditures.

The lack of income mentioned by the participants involves more than just a lack of money to purchase food. Income greatly impacts food accessibility, which in turn influences food consumption, especially of nutritious food required to keep healthy. Individuals who have limited physical and economic access to safe, nutritious and personally acceptable food and people in low-income groups are most vulnerable to food insecurity. The association between pov-

erty and food insecurity has also been well documented and many researchers have noted that individuals relying on government income assistance and living in social housing are not protected from the experience of food insecurity.

As well, people living in supported housing may also face additional barriers to food security as they may have limited facilities to store, prepare and cook food and fewer opportunities to purchase food. Further, some individuals do not have the basic skills of menu planning or food budgeting.

A lack of income means having to make choices where to purchase food, what food the individual can afford to purchase and when food can be purchased. A lack of income also means having to make the choice to access charitable food resources which can result in insufficient quantities of food or food which was described by some participants as mostly junk (doughnuts, cookies and fruit cakes). Accessing food from charitable locations also means not being able to choose preferred foods. Because community food resources are so dependent on charity or donated products, there is no guarantee of the stock levels or type of food distributed at any one location at a particular time. This makes community food resources unreliable as a food outlet for the tenants of social housing, who can depend on these resources for day to day food. These organizations cannot be expected to reliably supply tenants with sufficient calories, let alone nutritious, balanced meals. Food banks and soup kitchens can only distribute what they can obtain, and reliable systems to collect and distribute food to those who need it, when they need it, where they need it, are not always in place. While food banks are adapting to changing times by providing services that go beyond the simple provision of food and provide an essential service in their communities, they are only a partial and, in some cases, an imperfect solution to food insecurity. Community charitable food resources are stop gap measures to address problems that stem from broader social policies, but are not solutions, in and of themselves.

The violation of health equity cannot be judged merely by looking at inequality in health. A social justice perspective can provide human rights protection for tenants in social housing who can be powerless and dependent on others to address their complex vulnerabilities. The concept of health equity is an ethical principle consistent with and closely related to human rights principles. According to human rights principles, all people should be valued and equally possess certain rights. Equalizing opportunities for

tenants to be healthy is grounded in the human rights concept of non-discrimination.

Health Canada has recognized both food security and housing as social determinants of health and the need for better intervention services for these two determinants was reinforced by this study. It is well established that safe affordable housing and food security can promote the health and well-being of tenants living in social housing. If we truly believe in human rights for all citizens, then we must adopt social justice theories that allow equal access to all citizens, regardless of their personal circumstances. This will require each housing provider to determine the levels of food insecurity for tenants and create interventions to raise the levels of food security. One of the ways to support these interventions is by having food security principles integrated into social housing policies. These policies will provide the opportunity for realistic interventions that can reduce the barriers that tenants in social housing face.

Core public health programs incorporated into social housing programs could reduce the gaps in the health equity of the tenants and therefore increase the tenant's well-being. Shifting the focus of health promotion onto the well-being of tenants, rather than illness treating could help to overcome some of the barriers these tenants face in achieving food security.

Therefore, recognizing the need for safe and healthy food and the combination of housing and food security can promote the health and well-being of tenants. Making the health needs of tenants in social housing a public health concern can help to create more effective strategies to reduce the health inequalities that tenants face, allowing them to more fully achieve their health potential which would consequently improve their quality of life. Use of the social determinants of health to improve the well-being of tenants, rather than treating illness, could help to overcome some of the barriers these tenants face in achieving food security. I am suggesting a change to how we view and understand food security and housing and recommending a shift on a larger scale; to change structural conditions.

Consistent with literature reviewed for this study, the findings from this study highlighted that the relationship between the availability of food resources and health of the participants was important. This study showed that tenants living in social housing often face both periods when income and food are easily accessible and times when income and food is scarce. As well, the results from this study did indicate that, the participant's food insecurity tends

to follow a predictable sequence from worrying about not having enough money to buy food, to compromising the quality of food they eat, and then reducing the quantity of food they have. I argue that the identified barriers of lack of money, the amount of money the participants spend on food, difficulty in shopping in their neighborhood and the quality of the food they received from charitable locations reinforces the need for the integration of food services and programs into housing projects.

The use of a social justice perspective allows for the concern that the social structural nature of health influences tenants living in social housing. Using a social justice perspective entails creating programs and resources that address the determinants of health and the determinants of inequities will need to reflect what is known about the multiple structural factors that create and perpetuate health inequities. Therefore, the focus of equity is on the social determinants and changing the social conditions, not just with creating equal opportunities for food security for each tenant.

Given the close relationship between food and health, any factors that interfere with people's access to healthy food could impact greatly on their health. Incorporating food security into social housing would be part of a comprehensive approach to improving the health of tenants. The application of a social justice perspective for the development of programs and resources makes it possible to address inequalities in access to food as a matter of health and well-being. The concepts of social justice show a need to shift from the distribution of existing material resources to a focus on identifying and changing social structures. Once identified, these shifts can be the basis for enhanced action on the social determinants of health. Food security programs and services with a social justice perspective will directly contribute to more successful and stable tenancies, tenant health and well-being, and overall population health.

Health equity in food security is related to values and principles concerned with ethically sound choices and these principles promote equity by not placing people in a situation of disadvantage that can affect their health. The lack of availability and access to food resources are barriers to the food security of tenants living in social housing and therefore these tenants are at a disadvantage. Health inequity is the result of unjust structural conditions that put disadvantaged groups at an increased risk of ill health. The integration of food programs and services into social housing projects could be a way to promote social justice and improve health

equity for tenants. Food security for tenants in social housing is about more than the provision of food; food security is a matter of public health. This study has shown the need for the integration of food services into the social housing programs, as well as the need for coordination among agencies to reduce the barriers to food security.

Understanding of the benefits of housing on the health of tenants can lead to policy changes for the integrating food services and programs into social housing projects. These policy changes will greatly reduce the expenditure of public health dollars and increase the overall health and well-being of this population.

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