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South West Food Community: understanding systemic change, and its associated challenges and successes, among food security projects

Johanna Rewa,¹ Amanda Devine,¹ Stephanie Godrich¹

Food security is defined as having physical, social and economic access to nutritious food to live a healthy life.¹ It is a 'wicked', complex, multifactorial problem with no clear solution.^{2,3} Food security is typically described as having four pillars: food availability, access, utilisation and stability.⁴ Food availability relates to price, quality, variety and promotion of food.^{5,6} Food access determinants include social support, transport, mobility and food being geographically and financially accessible to households.^{7,8} Food utilisation relates to food storage and handling, preparation and cooking, and is influenced by taste preferences, nutrition knowledge, cooking skills and time.^{5,9} The stability pillar relates to stability of the availability, access and utilisation pillars.

Food security in an Australian context

In Australia, food security can be difficult to achieve, with the national food insecurity prevalence reportedly 4%;¹⁰ however, research suggests the prevalence could be as high as one-third (36%).¹¹ Certain groups are particularly vulnerable, such as younger Australians (i.e. 25–34-year-olds), those with lower educational attainment and divorced or separated individuals, with the issue being experienced well beyond very low-income households.^{11,12} In rural and remote areas, food supply is varied and inconsistent. The cost of healthy food is up to 200% greater when compared to urban centres due to high freight cost, irregular deliveries, poor store management and competition.^{7,9}

Abstract

Objective: The South West Food Community (SWFC) project (2018) aimed to identify initiatives working to support food security in the South West region of Western Australia, and to enhance how these initiatives functioned as a system. The SWFC project used a Systemic Innovation Lab approach that, prior to this study, had not been evaluated. This evaluation aimed to: i) measure system transitions (changes) to initiatives; and ii) understand the challenges and successes associated with system transitions.

Methods: SWFC initiative leaders (n=46) such as directors, managers or coordinators, volunteers or committee members were invited to participate in this evaluation. Fifteen stakeholders completed the telephone interviews (32% response rate).

Results: Twenty-five desirable changes in practice were observed. Challenge and success statements determined themes of 'participation' and 'bureaucracy'. Participation sub-themes included: limited time; poor initiative attendance; community support; organisational support; and effective partnerships. Bureaucracy sub-themes included: regulation or policy requirements; limited resources; and funding opportunities.

Conclusion: The Australian-first SWFC project has the capacity to support region-to-region comparisons; this evaluation increases evidence for scaling to other regions.

Implications for public health: This approach can be used to increase collaboration between initiatives, support resource-sharing between organisations and enhance policies (at local government level) to support food security.

Key words: food security, systemic innovation, evaluation

A lack of connectivity within communities, the distance between each grocery store, poor road conditions and adverse weather events further contribute to poor food access.⁸ Individuals are required to travel extended distances to purchase healthy food when fresh food is unavailable, expensive or of poor quality at their local store.⁸ During adverse weather or when roads are closed, some communities may have to rely on unhealthy pre-prepared or packaged frozen meals or go without food for extended periods of time.⁹ Poor infrastructure and

power outages exacerbate the problem by affecting cold storage facilities, leading to food loss and poor quality.¹³ Financial difficulties occur within rural and remote communities due to the greater costs associated with geographical location and transport, high costs of rent and housing, and unexpected unemployment.⁸ Only 13.4% of children in regional and remote areas are consuming the adequate amount of vegetables, due to inadequate varieties of vegetable types in grocery stores, poor promotion in retail outlets and community

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settings, and a reliance on freighted produce.¹⁴ Collectively, these factors present numerous challenges associated with maintaining food security at a community level.¹⁵

The consequences associated with low food security

Low food security can result in negative individual consequences such as reduced physical, mental and spiritual health and wellbeing, leading to inequities in health and life expectancy.^{16,17} Food insecure children experience poorer development and academic performance, reduced social skills, lower self-esteem and self-efficacy, and greater weight gain.¹⁸⁻²⁰ Older adults experience limitations in performing daily activities.²⁰ At a community level, low food security is associated with mental health issues and feelings of distress, frustration and despair.²¹ Community-level food insecurity results in diminished community participation and feelings of isolation and alienation.²¹

Traditional approaches to enhance food security

Traditionally, approaches to address low food security have focused on short-term, standalone strategies such as soup kitchens and food relief parcels.²² These types of approaches provide only a small financial benefit to households and can subject people to indignity. There is little evidence to suggest these types of approaches are effective in improving food security.²³ Further, they divert attention away from the extent and true causes of the problem.²³ Often, community projects and government policies to address the underlying determinants of food security have been unclear, unsustainable, poorly articulated, not fully implemented and/or have had limited effectiveness in addressing nutrition inequalities locally.^{8,24,25} Evidence suggests current strategies, such as government initiatives relating to agriculture, transport, trade and freight, are fraught with challenges to provide availability, access, utilisation and stability of community food supply.^{7,26} Broader, longer-term, systematic approaches to increase food security among the whole community, regardless of socioeconomic status, are required.²²

Novel approaches to enhance food security

Given that social problems are becoming more complex, there is a need to move beyond traditional approaches (i.e. individual initiatives) to a more systemic approach.³ Identified effective strategies to address wicked problems include: A place-based approach, incorporating an ongoing, dynamic process of collaborating with stakeholders from a diverse range of sectors to create supportive learning opportunities, promote behaviour change and transition to a more effective way of working.^{27,28,33} Community-led approaches that are designed to meet local conditions, involve community engagement and give voice to the community are needed to co-design effective solutions.²⁸⁻³⁰ Previous literature has outlined various lab types that address some of the above, but not all, components. Therefore, a lab type incorporating all aforementioned effective strategies is a Systemic Innovation Lab approach.³ This is a highly appropriate way to address wicked problems, given systemic change is required.³¹

A Systemic Innovation Lab approach is a novel approach that incorporates all appropriate lab features and facilitates strategies to address complex issues such as food insecurity.³² This methodology supports practitioners to use a systemic design and a solution ecosystem approach.³ A solution ecosystem approach is useful because it showcases all of the initiatives working to address one or more of the interconnected determinants of a complex problem, and all of the organisations working together on the initiatives.³² This non-linear approach increases the capacity of initiatives by acknowledging the uncertainty of complex problems and enabling adaptations to evolve when necessary.³² Therefore, this approach is useful to address any complex, wicked problem, such as climate change and obesity, given that wicked problems share common characteristics, such as having multiple, interrelated causes and a lack of one, clear solution, and being adaptive in nature.³¹ Building initiatives' adaptive capacity in addressing wicked problems is conducive to increased system functioning and performance.³¹ In practice, the approach includes six stages: Form, Explore, Map, Learn, Address and Share (FEMLAS).³ This process incorporates a place-based approach, supports coherent action between stakeholders, involves users as co-creators

and acknowledges that government is an enabler of change.³ As Form, Explore, Map and Learn stages have been described in detail in previous publications,³³ a summary will be provided herein. The Address stage will be the key focus for this publication, and as such, will be described in more detail. The Form stage includes forming the working team, establishing the project's geographical boundary, providing an initial mapping of initiatives, and creating a briefing paper to outline the background to the issue (i.e. food security; Form stage).³ The Explore stage involves conducting interviews with initiative leaders to collect initiative information (e.g. initiative description, partnering organisations, etc.) and evaluate them against 36 identified desirable characteristics to support a transition to a more effective way of addressing a complex issue. The 36 characteristics are categorised within specific Focus Areas, which have been outlined in previous literature.³³ A plain-language list of the Focus Areas is as follows: 1) Shaking up the current way of working; 2) Transitioning towards a new and better way of working; 3) Organisations working in new ways; 4) Locking in the new way of working; 5) Disseminating information throughout the system; 6) Aligning community organisations' work with government priorities; 7) Community organisations shaping government policies; 8) Government supporting community initiatives; and (9) Government sharing information about community initiatives.³³ Further detail about these Focus Areas has been previously published.^{31,32} The original interview questions used in the SWFC study mapped to the Focus Area characteristics have been published previously.³³ An example question included: "Does your initiative create a passion for the community to take action around food security?" (Focus Area 1, initiative characteristic 2). During the Map stage, data is uploaded into an online Tool for Systemic Change.³ During the Learn stage, the transition card is analysed to identify any 'windows of opportunity' to achieve systems change.³ Participants are provided with the report for their own initiative, demonstrating which Focus Areas and associated characteristics their initiative possesses and where windows of opportunity exist. A subsequent briefing paper is prepared for the Address stage, which primarily includes an action planning workshop where initiative leaders are supported to co-create

actions to fill the windows of opportunity for their initiatives.³ The Share stage involves the re-mapping of the transition card with the amended or newly developed initiatives from the Address stage.

Objective

In theory, a Systemic Innovation Lab approach has the potential to support system change to better address complex issues like low food security. To date, the approach has had limited practical application. To address this limitation, the SWFC project was implemented in mid-2018 to support systemic change within the food security system in the South West (SW) region of Western Australia (WA).³³ Though the novel methodology was implemented in practice throughout 2018, it had not been evaluated to ascertain its effectiveness in supporting systemic change; nor had it been implemented anywhere in Australia or internationally. Such insight would provide useful evidence, if the process was effective, to support further implementation of the approach in other regions of WA and throughout Australia. To address this clear gap in the current evidence base, the present study aimed to: i) evaluate the SWFC project by measuring system transitions (changes) among food security initiatives supporting healthy food availability, access and use in SW WA; and ii) understand the challenges and successes associated with making changes to food security initiative practice. Collectively, measuring these objectives would provide a greater understanding of the methodology in practice and why changes were or were not made to initiative practice.

Materials and methods

Design

This study used a mixed-methods approach incorporating a constructivist world view aiming to understand the multiple realities of participant experiences.³⁴ The research was exploratory and used systematic strategies (i.e. the interview protocol) to maximise emergent common responses.³⁵ The Social Performance Measurement Matrix³⁶ was used as a novel framework to inform how the evaluation was conducted; it examined the impact of the SWFC project on changes to initiatives' practice by measuring defined actions undertaken as a result of the action planning day (Address stage).

Participants and sampling strategies

Action planning workshop

Initial recruitment for SWFC participants ($n=51$) was undertaken by the SWFC project team compiling a Microsoft Excel database via an Internet (Google) search of community-level food security initiatives operating in the South West region of Western Australia.³³ The inclusion criteria included initiatives focusing on one or more food security pillars and their determinants.³³ Following data collection and analysis, participants were invited to an action planning forum.³³ Participants at the action planning forum ($n=20$) were provided with a briefing report of the SWFC process, a copy of the transition card and an individual summary report for their initiative/s and where it/they could be enhanced. The action planning workshop supported participants to develop actions, plans and strategies to implement the changes.³³

Evaluation interviews

A purposive sample of SWFC project participants ($n=46$) that were previously identified as being involved in initiatives supporting community-level food security from state and local government and community organisations were invited to re-engage and take part in individual or group semi-structured telephone interviews, with $n=15$ completing the telephone interviews (32% response rate).

Data collection

A qualitative approach was utilised to collect the data.³³ The researcher positioned themselves in the research and acknowledged that past experiences shape the interpretation of the findings by being aware and self-reflective during interviews, encouraging discourse and giving voice to the participants.³³

Action planning workshop

An action planning workshop was implemented as part of the SWFC project methodology Address stage on 5 December 2018. Attending participants ($n=20$) received a copy of their individualised initiative summary report and an overall map of projects. These reports depicted windows of opportunity that could be harnessed by that initiative to enhance food security. In the interest of time and participant burden, the full-day action planning workshop centred around the Focus Areas and associated characteristics that were highlighted in the

transition card as having substantial windows of opportunity (Focus Areas 3, 6, 7, 8 and 9). That is, as a system, the areas requiring most change. The facilitated action planning activity was conducted in small groups, with participants completing an action plan template with strategies they would implement to fulfil identified windows of opportunity. The action plan templates were personalised for each participant's initiative and listed the Focus Area characteristics highlighted by their initiative's summary report as windows of opportunity. The facilitators provided participants with written and verbal examples of how the initiative characteristics could be integrated into practice. A group discussion of strategy suggestions also occurred. Those participants who were unable to attend the action planning forum were sent an email with segmented recordings of the workshop and instructions and documents to complete their action plans.

Evaluation interviews

Data collection took place 2–19 July 2019 by one interviewer to determine what actions had taken place within the initiatives six months after the action planning forum (December 2018), determining system transitions and measuring project impact. Individual telephone interviews were conducted with all 15 participants using the interview protocol and were recorded using the 'Google Play Voice Recorder' application. The interviewer asked all questions to all interviewees during interviews that were, on average, 25 minutes in length. Example questions included: "Can you please provide any information about actions you have taken to enhance your initiative since the South West Food Community project action planning?" and "If there are still actions you outlined on your action plan that have not yet been addressed, do you have an action plan in place to address these? Why/Why not?"

Data analysis

Action planning workshop

The action plan comments gathered at the SWFC action planning workshop and collected by email from those unable to attend were consolidated and tabulated by Focus Area characteristic into a Microsoft Word document (Table 1). This provided an understanding of the key actions that participants intended to implement for each characteristic.

Evaluation interviews

A thematic analysis³⁷ was used to analyse the interview data, including transcription and coding. The process involved the lead author transcribing all interviews and reading and re-reading the transcriptions to become fully immersed in the data and get a sense of the overall meaning.³³ QSR NVivo was used for data analysis. NVivo software works with rich text-based information where deep levels of analysis are required.³⁸ Transcribed interviews were uploaded into QSR NVivo³⁸ where segmenting sentences and paragraphs into

categories with a term based on the common responses of participants began. The coding process involved developing a small number of data-driven themes and synthesising code descriptions driven by the data, which encapsulated all data and identified the major findings³⁹ (Table 2). Saturation was confirmed at 15 interviews where no new information, concepts, themes or codes were identified.⁴⁰

Wicked Lab's online Tool for Systemic Change was used to identify if changes to initiatives in the food security solution ecosystem had occurred since the SWFC Systemic Innovation

Lab. Interview data relating to changes made to initiatives, in line with the Focus Area characteristics, were entered into the Tool for Systemic Change; producing a new 'transition card'.^{3,33}

To establish the authenticity, transferability, dependability and confirmability of this study, various strategies, i.e. transition card (quantitative) and thematic analysis (qualitative), were used to establish themes and perspectives.³³ A rich, thick description of the study methods and materials enables the study to be transferable to other research.³³ To ensure rigour, purposeful sampling was used to minimise bias, increase sample coverage and diversity within this population group, and provide a framework for analysis.³³ Past experiences were acknowledged by the researcher by practising self-awareness, reflection and explaining the participants lived experiences when interpreting the findings, establishing authenticity.^{33,41} The researcher understood that the results were subject to change, establishing dependability.³³ Dependability and confirmability were strengthened by creating a shared NVivo codebook so the research team reviewed, discussed and revised codes and their descriptions as an auditing process.³³

Ethics

Both the action planning phase of the research and the evaluation study were approved by the Edith Cowan University Human Research Ethics Committee (approval number: 2019-00400). Informed consent and permission to record the interviews were obtained for all participants.

Results

Participant demographics

Overall, the SWFC participants (n=51) were most often volunteers, volunteer leaders or committee members (n=13), followed by directors, managers or coordinators (n=11). Participants had worked, on average, three years in their field.³³

Fifteen participants took part in individual interviews; six being attendees at the action planning forum and nine non-attendees for this study. Interviewees were most often directors, managers, or coordinators (n=7) followed by volunteers or committee members (n=4), community development officers or support workers (n=3) and an

Table 1: Stakeholders' proposed actions from the action planning day.

Focus Area Characteristic	Proposed actions to enhance this Focus Area characteristic across the system
3.1 Creating a connection through language and symbols.	Increased promotion of their logo; communicating this through signage, newsletters, stories, songs, social media or blogs.
3.2 Involving role models to support action to address food insecurity	Establishment of a community health network; utilising experienced and knowledgeable people as role models; develop champions and ambassadors of produce and developing partnerships.
3.3 Enabling information exchanges between various stakeholders	Developing a summary of users; communicating with food businesses and Local Government Authorities (LGA); hosting fortnightly gatherings to share ideas and information; inviting LGA staff to attend meetings; and developing a new health hub that includes a community kitchen and café.
3.4 Enabling resources and capabilities to recombine.	Developing a network of local food security initiatives to share common messaging; cross-promoting themed days through the LGA website and social media pages; collaborating with research institutions and universities; hosting a training event with LGA staff and community.
6.1 Assisting public administrators to frame policies in a manner which enables community adaptation of policies	LGA promoting initiatives via social media; linking initiative goals and objectives to LGA strategic and public health plans; conducting a workshop with LGA Elected Members.
6.2 Enabling the ideas and views of community members to align with the challenges being addressed by governments	Aiming to understand how policies are communicated within government departments; facilitating a "one stop shop" for funding applications.
6.3 Encouraging and assisting government staff who have direct contact with community members to take into account their ideas	Supporting and providing spaces/locations for discussion; delivery of a presentation to LGA staff; incorporating information in an LGA public health plan or website; promotion through networks; seeking local initiative providers; provision of information about legislation.
7.1 Assisting elected members to write or talk about policies in a way that allows the community to change them	Finding alignment with a community strategic plan; outlining an initiative with LGA staff; utilising statistics in funding applications.
7.2 Assisting elected members to take into account the ideas of community members	Inviting LGA Elected Members to events and discussion of LGA involvement with communities; present on the initiative at Council briefings; working with stakeholders to communicate the initiative.
8.1 Encouraging and assisting government workers who work directly with community members to use the knowledge and ideas of community members	Liaising with LGAs; learning more about LGA staff roles; setting up plans before speaking with LGA, such as having a solution linking back to an LGA plan; invite government agencies like LGA to participate in program
8.2 Bridging community-led activities and projects to the strategic plans of governments	Evaluating community sessions and communicating the outcome to LGAs; reporting to LGAs on program success; linking with LGA strategic community plans through funding; investigating how initiatives are aligned with LGA strategic plans.
8.3 Gathering, retaining and reusing community knowledge and ideas in other contexts.	Investigating how initiative could link with other initiatives; discussing initiative with LGA, community consultations to review and inform an LGA Public Health Plan.
9.1 Encouraging and assisting elected members to use the knowledge, ideas and innovations of community members	Development of infographics and event registers; collaboration with other health services to feedback evaluation findings; engaging LGAs to provide information and updates on initiatives that align with their Strategic Plans; involve Elected Members in initiatives and send them information on the benefits of initiatives and health; engage a Counsellor in the initiative and explain to them what the initiative is; gathering community feedback on initiatives and adapting them to meet community needs.
9.2 Collecting and utilising community information that is relevant to the local government area	Improving an LGA website; feeding back issues encountered by initiative to LGA.

education professional (n=1). The majority of interviewees reported working for not for profit organisations (n=7), followed by local government (n=2), business (n=2) and formal community groups (n=2).

Proposed initiative changes (actions) to be implemented

Table 1 outlines the actions proposed by stakeholders at the SWFC action planning day that they intended to implement thereafter, according to the various Focus Area characteristics.

Actual actions undertaken

Figure 1 provides a visual representation of the ‘transition card’ of initiatives (y-axis) and their associated Focus Area characteristics (x-axis) from the evaluation of the SWFC project. The visual representation identifies windows of opportunity that have been filled, indicated by the black outlined boxes, after the action planning forum in the Address stage of the SWFC project.

Twenty-five desirable changes in practice across 15 initiatives had occurred since the SWFC project Explore stage baseline interviews. New actions took place within Focus Areas one, two, three, six, seven, eight and nine. An overview of the changes that were reported to have occurred within each Focus Area is provided below:

Focus Area One – Shaking up the current way of working

Four initiatives addressed Focus Area one. Two initiatives addressed characteristic 1.2, for example, by collaborating with local fruit and vegetable growers who dropped off items at a community centre to be on-sold, increasing access and affordability, and the

hiring out of two more community garden beds. For example:

We still work with people who produce fruit and veggie and even the last few weeks this lady who grows avocados has been bringing in her avocados and ... we encourage that and people with their eggs. (Interviewee 1 explaining action undertaken in Focus Area 1.2)

One change was made to characteristic 1.6 by an initiative leader undertaking social enterprise professional development, prompting thinking outside of the normal

scope and the generation of new ideas. From this, new funding opportunities and partnerships with other organisations were being explored to enhance the community centre.

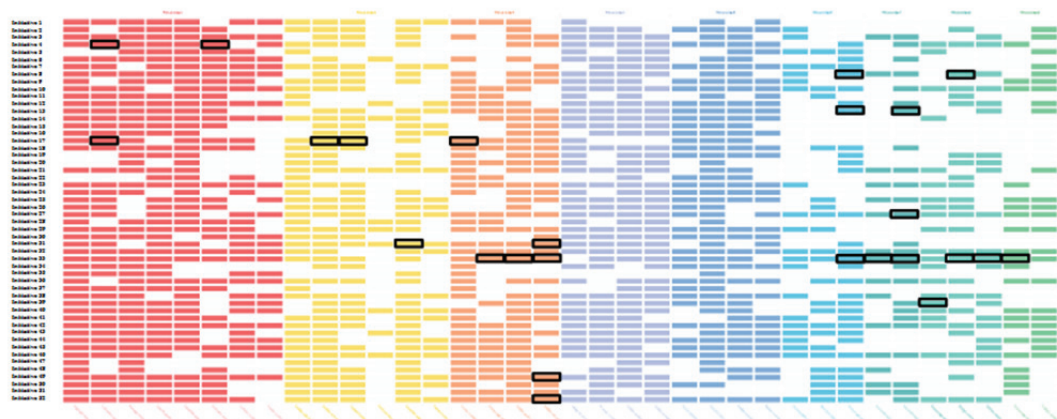
Focus Area Two – Moving to a new and better way of working

One initiative addressed characteristic 2.2, by bringing together students within the community garden to generate ideas and promoting the development and implementation of the ideas. One

Table 2: Successes and challenges themes and sub-themes.

Critical successes and challenges associated with a change in practice			
	Barrier or Enabler	Sub theme	Description
Theme description Bureaucracy can have an impact on actions being undertaken by initiative leaders due to procedures and established methods in large organisations or governments.	Barrier	Limited resources	Barriers to taking action both in the workplace and the SWFC process included limited staff, funding, infrastructure or appropriate, clear resources. The sense of frustration about this came through in these coded comments.
	Barrier	Regulations or policies required for new initiatives	The implementation of current or future policies or regulations required to make changes at an initiative, organisational or government level.
	Enabler	Funding opportunities	New funding or grants enable initiatives to implement changes they wish to make or continue running as per usual.
Theme description Participation at all levels of initiative change can have an impact of whether or not actions are undertaken. From the development stage through to implementation, participation is a factor in both initiation and the stalling of actions.	Barrier	Limited time	There was a sense that both volunteers and employed staff are time poor and do not have any extra time to dedicate to making changes, attending meetings or complete tasks outside of their working hours even if they see a need or have a desire to do so.
	Barrier	Poor attendance	Without community participation from community, organisations and team members, initiative change will not be supported.
	Enabler	Organisational support	Organisational support enables positive engagements and professional development to promote successful changes which gives staff and volunteers the support needed.
	Enabler	Community support	Community support drives most action on initiatives because if the support is there then participation and acceptance of new initiatives will enable success.
	Enabler	Partnerships	Partnerships with other organisations, schools, initiative leaders, local businesses, council or colleagues promotes collaboration between interested parties to enable actions to take place which increases food security or reduces waste.

Figure 1: Transition card post-evaluation (August 2019) demonstrating changes to practice..



initiative filled the gap of characteristic 2.3 by running events where students collaborated on various projects within the community garden. One initiative filled the gap of characteristic 2.5 by creating a new community network addressing food availability and accessibility:

So, we have these people come together to see if people are duplicating what is already been done ... and see what we can do ... to see if there was enough community interest ... to possibly getting a food hub together. (Interviewee 13 explaining action undertaken in Focus Area 2.5)

Focus Area Three – Organisations working in new and more effective ways with each other

Seven initiatives addressed Focus Area three. Characteristic 3.1 was filled by one initiative that erected new signage in all common areas, with the aim of creating a shared understanding of the issue. One initiative reportedly addressed characteristic 3.2 by holding weekly cooking demonstrations with visiting cooks and masterclasses about making the most of affordable, seasonal fresh food, and buying local and in bulk where available. Characteristic 3.3 was addressed by one initiative, with the interviewee outlining they had organised local committee meetings with industry leaders, LGA, social services and organisations that aimed to address food insecurity. For example:

This committee meet quarterly and will report to and advise council. The association will ensure that food security is a topic that is on the agenda. (Interviewee 9 explaining action undertaken in Focus Area 3.3)

Four initiatives addressed characteristic 3.4, for example, when an initiative brought local organisations together to see what each is doing to ensure they are not duplicating food security programs, and to create a combined front to support food security action.

Focus Area Six – Helping the work undertaken by community organisations to align with government priorities

Three initiatives reportedly addressed characteristic 6.3. Examples included LGA surveying community members to gain insight into their health priorities, engagement at the local library, and regular council committee meetings where community members ideas and perspectives could be offered to council:

So, a survey has just gone out which hopefully people will respond to ... to give us an idea

about what people think their health priorities are and what they think ... we should be doing. (Interviewee 6 explaining action undertaken in Focus Area 6.3)

Focus Area Seven – Creating government policies that are shaped by community organisations

Four initiatives filled gaps in Focus Area seven. One initiative addressed characteristic 7.1 by working closely with council to advise on policies and highlighting the need to address food security. Characteristic 7.2 was filled by three initiatives. Example actions included an initiative of approaching LGA to discuss incorporating their strategies into the Public Health Plan, which has developed and progressed through to implementation, and working closely with council, advising them on community perspectives through regular committee meetings. For example:

I've been working quite closely with the Shire, more so it actually started out as a relationship to do with the Live Lighter campaign ... and try and get them on board" (Interviewee 1 explaining the action undertaken in Focus Area 7.2)

Focus Area Eight – Government using community knowledge and ideas

Focus Area eight was addressed by four initiatives. Characteristic 8.1 was filled by one initiative (local government) running workshops with community members to assist in establishing their LGA's Public Health Plan. Characteristic 8.2 was filled by two initiatives. Examples included a community initiative implementing various projects that aligned with LGA strategies, which subsequently gained support from LGA; and through aligning a campaign with the council's public health strategies. For example:

Our key priorities align with their projects in terms with public health. (Interviewee 6 explaining the action undertaken in Focus Area 8.2)

Characteristic 8.3 was filled by an initiative using community knowledge and ideas to implement a number of initiatives.

Focus Area Nine – The government sharing information about community initiatives operating in their area

Only one initiative addressed characteristic 9.1 by encouraging councillors to use community ideas through different committee meetings, (i.e. sustainable economy committee and industry leaders

committee), leading to local government sharing information about their initiative.

Critical Successes and Challenges associated with making initiative changes

The evaluation also provided important insights into why changes were or were not made to practice through the identification of critical successes and challenges associated with transitioning to enhance food availability, access and use in the SW region. The two overarching themes of 'participation' and 'bureaucracy' were identified, based on interviewees' comments. Both themes included sub-themes that either impeded or enabled changes to practice (Table 2).

Participation

The theme 'participation can impede or enable actions' related to participation at all levels of initiative change and from the development stage through to implementation. Participation was a factor in both initiation and the stalling of actions. This theme included the barrier sub-themes of limited time and poor attendance, and enabling sub-themes of community support, organisational support and effective partnerships.

Limited time (n=18 coded statements)

Limited time was regarded as a barrier by interviewees; there was a sense that both volunteers and employed staff were time-poor and had limited extra time to dedicate to make changes to practice, attend meetings or complete tasks outside of their working hours, even if desired. An example of this was explained by Interviewee 10 who outlined their voluntary involvement in an event organising committee. The challenge was that the majority of the committee members were either employed or lacked time to commit to meetings and organisation tasks or were older and lacked the energy to implement new actions.

Poor attendance (n=13 coded statements)

Poor attendance was a common response from interviewees and responders indicated a lack of participation from the community, within organisations and from team members as barriers to implementing change. The main concern was community participation as, without this, the sense was that initiative change would not be supported. This was explained by Interviewee 5 (a Farmers Market manager), who described their frustration of

people being really excited about a new idea or project, but then not attending after the project was implemented.

Community support node (n=16 coded statements)

Community support was a driving force on initiative leaders because if there was support, or perceived support for new initiatives, then there was likely more participation from community and organisation members surrounding the development, implementation and acceptance of new actions, promoting initiation. An example of this was when a local government co-ordinator explained the impact that a supportive community can have on implementing new projects. They described their community as being really active, creating an environment where new projects would be supported due to good communication between the community and local government.

Organisational support node (n=14 coded statements)

Interviewees described organisational support as an environment that enabled positive engagements and professional development, which was more likely to lead to successful changes in practice. Organisational support gave both employed staff and community volunteers the support required to implement actions. Interviewee 8 explained that having the support and involvement from another committee within their organisation regarding the community garden enabled them to access more funding and run more events.

Effective partnerships node (n=19 coded statements)

Effective partnerships with other organisations, schools, initiative leaders, local businesses, council or colleagues promoted collaboration between stakeholders invested in a common goal and enabled initiative actions to take place, increasing food security or reducing waste. Interviewee 4 described a new partnership that had been established to address food insecurity. The group encompassed like-minded, community leaders with knowledge regarding food insecurity within the local area who will collaborate on a new initiative to increase food accessibility.

Bureaucracy

The theme 'bureaucracy can impede or enable actions' related to impacted actions being undertaken by initiative leaders due to procedures and established methods within organisations or governments. This theme included the barriers of regulation or policy requirements and limited resources and the enabler of funding opportunities.

Regulation or policy requirement node (n=7 coded statements)

Regulations or policies were barriers to the implementation of initiative change. This sub-theme encompassed comments that stated initiative, organisational or governmental regulations or policies were limiting when trying to implement changes or meet expectations. Interviewee 5 explained that when trying to implement a more regular fresh produce market, policies such as insurances and LGA permits were time-consuming and frustrating.

Limited resources node (n=14 coded statements)

Barriers to taking action on initiative changes, both within the workplace and associated with the SWFC process, were encompassed in the sub-theme of limited resources (e.g. limited staff, funding, infrastructure or appropriate and clear resources). The sense of frustration was conveyed in the coded comment by Interviewee 15, who described the challenge of working at their organisation with limited resources such as skeleton staff and a low budget. This limited their capacity to generate new ideas and initiate actions on projects they saw value in.

Funding opportunities node (n=5 coded statements)

Interviewees suggested that new funding opportunities or grants enabled initiatives to implement changes they wished to make or to continue running as per usual. Interviewee 3 reported helping to obtain funding for a community garden to ensure the garden could remain in operation.

Discussion

This evaluation study aimed to understand the changes made to initiatives participating in the SWFC project and understand the critical successes and challenges associated with transitioning towards food security action to enhance food availability, access

and use in the SW region. The study identified changes to practice among 15 food security initiatives participating in the SWFC project, across multiple project Focus Areas, such as 'Shaking up the current way of working', 'Moving to a new and better way of working' and 'Organisations working in new and more effective ways with each other'. Challenges associated with making changes to practice identified by our participants included limited time and poor initiative attendance, regulation or policy requirements and limited resources. Successes included community support, organisational support, effective partnerships and funding opportunities.

The successes identified in the evaluation interviews may provide insight into why a large number of changes reportedly occurred in Focus Area three, due to support and effective partnerships within and outside organisations being a driving force for initiative change. Likewise, the small number of changes seen within Focus Area nine – 'The government sharing information about community initiatives operating in their area' – may be due to the identified barriers of limited time, limited resources and policy requirements at a government level. The findings relating to changes to practice are consistent with other community development studies, which demonstrate that organisations across various sectors (private, public and social) are collaborating to address complex social issues and that local community can play a role in changing practice in local systems.^{42,43} A previous evaluation study identified that to make changes to practice within a complex system, each initiative must understand they are one of many stakeholders contributing toward a certain outcome and a part of a larger system.⁴⁴ Stakeholder collaboration can also guide change and increase program sustainability in a complex local adaptive system, and social networks built on trust, cooperation, effective negotiation, shared values and resource sharing can enable stakeholders to focus on the public good.⁴⁵

The themes identified in this study are consistent with other community development evaluation studies in Tasmania (Australia), North India and Scotland that identified effective partnerships and found that government funding led to successful outcomes for community food security initiatives.⁴⁶⁻⁴⁸ Adams and Taylor (2019) found that collaboration was essential for effective local food systems and that an

innovative, diverse response was required to address community food security.⁴⁶ The authors recommended that all levels of government should preference social procurement contracts that enhance local food systems.⁴⁶ Similarly, the North Indian study identified that effective partnerships promoted resource sharing and mobilisation, training opportunities and government networking and led to successful community health programs.⁴⁷ Limited time; lack of participation; lack of support from the community, local organisations and government; and limited resources were reported as factors that reduced the effectiveness of community development programs.^{47,48} To counter these issues, the study reported a need to increase resourcing and service provision to enable nutritious food access for at-risk population groups.⁴⁶

A possible reason why initiatives in our study did not possess desirable characteristics was due to bureaucracy within organisations, particularly at a government level. This is supported by an evaluation of a Scottish community development health program that identified a lack of organisational and governmental support due to organisational restructuring, the hierarchy of stakeholders, the differences in stakeholders expectations and the misinterpretation of program aims as key contributors.⁴⁸ In addition, markers of success included organisational and governmental support through funding and time led to successful intermediate outcomes that translated to long-term outcomes.⁴⁸

Our study also highlighted the importance of the volunteers to support initiative changes. We found employed staff reported a lack of time to support additional voluntary duties even if desired. This was consistent with findings from an American study that identified people who were employed full time or work inflexible hours have less time to dedicate to volunteering roles,⁴⁹ impeding the progress of actions and negatively impacting the sustainability of projects.

Strengths and limitations

Strengths of this evaluation study included the use of the Social Performance Measurement Matrix to inform the evaluation design, measuring changes (impact) to initiatives. Data were gathered from initiative leaders across varying local industries ranging from volunteers to LGA, enabling different perspectives, and there

was a broad investigation of all SWFC project components. Limitations included the small sample size, limiting generalisability. Further, some language relating to Focus Area characteristics used in SWFC baseline interviews was potentially difficult for some participants, potentially affecting the responses provided. While a number of initiatives had made changes to practice since the SWFC project action planning day, it was difficult to determine categorically if this was a direct result of the SWFC project alone.

Implications and recommendations

Recommendations include: i) replication of the Systemic Innovation Lab approach in other geographical contexts to extend its applicability, with due consideration of local conditions; ii) consolidation and simplification of interview questions during the initial SWFC baseline data collection and consideration of an online data collection process as opposed to face-to-face or telephone interviewing; and iii) LGA's supporting community-based projects through funding opportunities and promoting resource sharing to increase stakeholder collaboration, community awareness and support, and food availability and access.

Conclusions

This evaluation identified that a Systemic Innovation Lab approach can be used to increase connection and collaboration between food security initiatives, support resource sharing between community organisations and enhance policies/plans at a LGA level to support healthy food availability, access and use. This particular approach and the outlined strategies could potentially be transferrable and used in other organisations, governments and communities with differing complex issues; however, further research is needed to establish the approach's efficacy in various contexts and in addressing other complex problems. The Australian-first SWFC project has the capacity to support region-to-region comparisons; this evaluation increases evidence for scaling to other regions of Western Australia and potentially other Australian states and territories.

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