

Stakeholder Perspectives on the Effectiveness of the Victorian Salt Reduction Partnership: A Qualitative Study

Emalie Rosewame (✉ erosewame@georgeinstitute.org.au)

George Institute for Global Health

Wai-Kwan Chislett

George Institute for Global Health

Briar McKenzie

George Institute for Global Health

Jenny Reimers

Victorian Health Promotion Foundation

Kellie-Ann Jolly

National Heart Foundation of Australia

Kirstan Corben

Victorian Health Promotion Foundation

Kathy Trieu

George Institute for Global Health

Jacqui Webster

George Institute for Global Health

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Abstract

Background: Interventions to reduce population salt intake are feasible and cost-effective. The Victorian Salt Reduction Partnership implemented a complex, multi-faceted salt reduction intervention between 2014 and 2020 in the Australian state of Victoria. This study aimed to understand stakeholder perspectives on the effectiveness of the Victorian Salt Reduction Partnership.

Methods: Semi-structured interviews were conducted with Partnership and food industry stakeholders. The Consolidated Framework for Implementation Research was adapted for the Partnership intervention and used to guide the qualitative analysis.

Results: Fourteen Partnership and seven food industry stakeholders were interviewed. The Partnership was viewed as essential for intervention planning and decision-making and an enabler for intervention delivery. The goals of capacity building and collaborative action were perceived to have been achieved. The implementation team executed intended intervention activities and outputs, with some adaptations to strategy. Barriers and enablers to implementation were identified by interviewees, such as compatibility of individual, organisational and Partnership values and building positive relationships between the Partnership and food industry, respectively. Legal, political, social, environmental, technological and economic factors affecting intervention design, delivery and outcomes were identified.

Conclusions: Establishing a Partnership with diverse skills and experience facilitated collaborative action, capacity building and execution of the intervention. Monitoring and evaluating implementation informed strategy adaptations, which allowed optimisation of Partnership strategy. The importance of developing strong communication networks between strategic and implementation-levels was a key lesson.

Background

Salt reduction interventions have been identified as feasible, cost-effective approaches to reduce the non-communicable disease burden attributable to excess salt consumption (1, 2). Global estimates suggest salt intake is double the recommended daily maximum amount of 5 g per day (2, 3). In 2017, diets high in salt resulted in almost 3.2 million deaths and more than 70 million disability adjusted life years (DALYs) globally (4). High salt intakes cause high blood pressure, which was the attributable factor in more than 10 million global deaths and 381 million DALYs (4). In an effort to reduce the salt-related non-communicable disease burden, in 2013, United Nations Member States committed to the global target of a 30% relative reduction in average population salt intake by 2025 (5).

Despite this commitment, coordinated efforts to reduce salt intake in many countries, including Australia, have been lacking (6, 7). In the state of Victoria, salt intake was estimated at 8.9 g/day in adults (8) and 6.7 g/day in children (9), with men and boys consuming higher amounts than women and girls (8, 9) and both adults and children exceeding the recommended maximum salt intake (2). To coordinate actions to reduce salt intake, in 2014 the Victorian Salt Reduction Partnership (referred to as the Partnership) was established by the Victorian Health Promotion Foundation (VicHealth) (10). The Partnership, consisting of key organisations including VicHealth, The George Institute for Global Health (TGI), Heart Foundation, Deakin University Institute of Physical Activity and Nutrition (IPAN), and the Victorian Department of Health and Human Services, developed a multi-component intervention strategy, informed by global evidence, to reduce the average salt intake of Victorians by 1 gram per day by 2020 (10, 11). The Partnership project, which is described in further detail elsewhere (12), comprised six main action areas, including four intervention arms (consumer awareness campaign, generate public debate, food industry engagement, and advocacy and policy strengthening), building a strong partnership and a research and evaluation component (12, 13). The Heart Foundation was contracted by VicHealth to deliver the intervention arms with support from VicHealth and TGI. Partnership organisations, led by TGI, secured NHMRC funding to evaluate the intervention.

To monitor and evaluate the effectiveness of the intervention, a comprehensive process and outcome evaluation was designed, as described in the protocol (12). The aim of the process evaluation was to examine the reach, dose, fidelity, context, adoption and effectiveness of the intervention. This was done through the collection of routine administrative and cost data, impact assessments of consumer campaigns, product category reports, industry engagement, and advocacy activities, and analysis of stakeholder perspectives (12). Semi-structured stakeholder interviews were conducted with key stakeholders at two timepoints: (1) in the early stages of intervention implementation (March to May 2017 (14)) and (2) towards the end of the intervention (May to December 2019). This paper reports on the interviews undertaken in 2019. The primary objective was to understand stakeholder perceptions of the effectiveness of the Partnership in achieving its intended role and delivering a salt reduction intervention. Key lessons and learnings generated from this research will be used with a view to contributing to greater understanding of how strategic partnerships can facilitate implementation of public health and nutrition interventions through collaborative action and capacity building.

Methods

Sample and recruitment

Potential participants were stakeholders involved in designing and/or delivering the Partnership intervention or engaged through the Partnership intervention, including the food industry, identified by VicHealth and the Heart Foundation. A letter of invitation to participate, along with the participant information sheet and consent form, was emailed to the VicHealth's Partnership member contact list in April 2019, and Heart Foundation food industry contact list in August 2019. Participants agreed to participate by return email, including returning a signed consent form and agreeing to an interview time. Interviews were conducted from May to December 2019, either in person or online using Skype for Business or Zoom.

Interviews

Semi-structured interviews were conducted by two researchers, E.R., a PhD candidate and dietitian at TGI who was not directly involved in the Partnership, and W-K.C., a research assistant at TGI who was not previously involved in the project. The survey instrument was previously developed for interim stakeholder interviews in 2017 to understand perceived barriers and enablers to intervention implementation (14) and was built on instruments used in similar studies (15, 16). Questions centred on understanding the Partnership (effectiveness, structure and function), the process of executing the intervention, and internal and external factors affecting intervention design, delivery and outcomes. Questions were asked about each participant's roles and their perceptions on delivery and fulfilment of their roles. The semi-structured approach allowed interviewers to adapt the questions based on each participant's involvement in the Partnership, which enabled deeper knowledge in specific areas. Probing questions were asked to gain more information where necessary.

Interviews were audio recorded using a phone and laptop. Permission to record was sought from participants in the consent form and verbally at the beginning of the interview. The interviews were manually transcribed by Murray Transcription.

Data analysis

Participants were characterised according to their type of organisation: research, non-government organisation (NGO), state government or statutory authority (SGSA) or industry; and involvement in the Partnership: Members of the strategic partnership (SP), implementation team (I) and/or research team (R; Fig. 1)

Transcripts were de-identified and imported into NVivo for data management. Transcripts were thematically analysed by one researcher (E.R.), using a combination of deductive and inductive methods, with input from the research team (W-K.C., B.M., K.T. and J.W.). The Consolidated Framework for Implementation Research (CFIR), was used to guide the qualitative analysis of the interviews to better understand factors affecting program implementation (17) within the context of the main process evaluation framework (12). The CFIR is a comprehensive framework designed for evaluations of interventions to understand the effectiveness of intervention implementation and specifically "what factors influenced implementation and how implementation influenced performance of the intervention" (17). The CFIR consists of five domains: Intervention characteristics (e.g. design and development of the intervention), outer setting (contextual factors affecting intervention design, implementation and outcomes e.g. political and social factors), inner setting (e.g. networks and communication within the Partnership), characteristics of individuals (e.g. knowledge and beliefs about the intervention) and the process of implementation (e.g. execution of the intervention). To enable a more in-depth analysis of the CFIR process domain, elements of the broader process evaluation framework were incorporated (11). Constructs included in this analysis were: Stakeholder perceptions on achieving intervention aims (e.g. reach and dose), and fidelity and quality of the intervention. The CFIR domains and adapted constructs used in this analysis are displayed in Table 1. To ensure all meaningful data were captured, an inductive approach, line-by-line transcript analysis, was used to identify themes not already captured by the framework (18).

Table 1
Consolidated Framework for Implementation Research (CFIR) domains and adapted constructs

Domains	Adapted constructs ¹
Intervention characteristics	Intervention design and development
	Relative advantage
	Adaptability
Outer setting	Cosmopolitanism
	External policies and incentives: National level, state level
	Other outer setting factors: Political context, socio-cultural factors, environmental factors, technological factors.
Inner setting	Structural characteristics: Partnership structure, organisational roles and responsibilities, changes in personnel, organisational changes
	Networks and communications: Collaboration, communication
	Implementation: Compatibility, learning climate
	Readiness for implementation: Available resources
Characteristics of individuals	Knowledge and beliefs about the intervention
	Self-efficacy
	Individual identification with Partnership
Process	Planning
	Engaging the right stakeholders: Opinion leaders, formally appointed internal implementation leaders, champions, external change agents
	Executing the intervention: Achieving goals, enablers and barriers to delivery, fidelity, utility/quality
	Reflecting and evaluating
¹ Bold indicates additional construct	

Ethics and consent

This study was approved by the University of Sydney Human Ethics Research Committee (2016/770). Written informed consent was obtained from all participants prior to the interview.

Results

Sample

Twenty-four stakeholders from 11 partner organisations and 19 food industry stakeholders were invited to be interviewed. Sixteen Partnership stakeholders agreed to be interviewed, two declined as they felt they were not an active member of the partnership, one declined as they felt a colleague (already invited) was best placed to participate, two were no longer with their organisation, and three did not respond. An additional two stakeholders agreed to participate however did not complete the interview process. Seven food industry stakeholders agreed to be interviewed, two declined as they no longer worked for the company and 10 did not respond.

In total, 14 Partnership stakeholders across research, non-government and government organisations and seven food industry stakeholders were interviewed. Of the Partnership stakeholders interviewed, 12 were part of the strategic partnership, five were part of the implementation team and eight were part of the research team. Seven participants were members of more than one group and four were members of all three groups (Fig. 1). Of the seven food industry stakeholders, one was employed by a major retailer and 6 were from large food manufacturing companies (19). The average duration for Partnership interviews was 39 minutes and for industry interviews was 30 minutes. In general, food industry stakeholders were only able to speak about the industry engagement arm and were not aware of the broader Partnership strategy.

In the subsequent sections, we describe the key themes from the stakeholder interviews using the CFIR adapted constructs with supportive quotes. Themes are organised as follows: (1) the Partnership (inner setting, intervention characteristics and individual characteristics), (2) execution of the four intervention arms including achieving intervention aims (e.g. reach and dose), enablers and barriers to execution, and fidelity and quality of the intervention (process; Supplementary Table 1), (3) contextual factors affecting intervention design, delivery and

outcomes (outer setting; Supplementary Table 2). An overview of the Partnership program, and stakeholders' perceptions on the effectiveness of the intervention, is illustrated in the revised project logic model (Fig. 2).

Red text = new/modified from original. Green box – stakeholders thought this was achieved. Amber box – stakeholders thought this was partially achieved. Red – stakeholders thought this was not achieved.

The Partnership

Perceived effectiveness, structure and function of the Strategic Partnership

The establishment of the *Strategic Partnership* was described as one of the biggest successes of the project. Stakeholders believed that the *Strategic Partnership* was effective in achieving its goals of capacity building through the transfer of knowledge, skills and expertise between members, and collaborative action through the development and execution of a shared action plan. The *Strategic Partnership* was viewed by most as essential for intervention planning and decision-making processes that underpinned the execution of the intervention and perceived to be a 'background enabler' for intervention delivery.

Interviewees felt that having the "right" organisations and individuals involved, with a diverse range of skills and expertise, and creating a positive learning climate, where they were able to share ideas and provide input into the strategy, were important components for designing and delivering a feasible, evidence-based salt reduction intervention in Victoria. Strong engagement from organisational leaders and *salt champions* were enablers for establishing and sustaining momentum and enthusiasm for the project. The commitment of members of the *Strategic Partnership*, demonstrated through their consistent attendance at quarterly strategic meetings, was viewed as an enabler to achieving strong communication, joint decision making and collaborative action.

"I think you had the right organisations, strong leadership within those organisations and good expertise." (Research 2, membership: SP, I, R)

"The regular meetings were really good opportunities, they were well-run and focused and so I think they were fantastic opportunities to build momentum in the salt space and the hypertension space, we really hadn't had something like that for a really long time, so that was terrific." (NGO 8, membership: SP)

Most members spoke positively about the experience of being involved in the *Strategic Partnership* and the development of the shared action plan. Though one stakeholder shared that there was some healthy dispute between members. A few stakeholders questioned whether the agreed strategy contained the right interventions. They suggested that the intervention arms aiming to change the food environment, such as *Industry Engagement*, should have received greater focus and resources.

"Everyone's passionate who was around the table on this issue and of course you're going to have some heat, and that's part of it, it shouldn't all just be smooth sailing, you need people to question, challenge whether you need the consumer piece or do you just focus on the food reformulation or do you do the debate and the policies?" (NGO 7; membership: SP)

"I think the Heart Foundation to the extent that it delivered an intervention, did deliver an intervention pretty effectively, but whether the intervention was the intervention that needed delivering I think is a key question." (Research 4; membership: SP, R)

Differences in perspectives on the Partnership structure and function illustrated important communication and knowledge gaps. Some of the implementation team viewed the role of *Strategic Partnership* as less important, likely because day-to-day functioning and decision-making was carried out at the level of the implementation team. A few interviewees proposed this communication gap was the result of a high turnover of staff within the implementation team and suggested more could have been done to transfer knowledge and capacity to new implementation team members through better on-boarding processes.

"We could have done more in terms of really making sure the new people who came in were fully aware of what the precise goals of the partnership, the ways of working and that we did everything we could to ensure that the capacity was transferred for the relevant people...I think sometimes you just underestimate the benefits or stopping, taking stock, making sure that absolutely everybody in the partnership is on the same page and has all the relevant background information and knowledge and skills in order to ensure that the project continues on the same track, and I think potentially we could have spent some more time doing that." (Research 2, membership: SP, I, R)

These gaps resulted in a misunderstanding of the *Strategic Partnership's* roles and responsibilities by some, which was illustrated in how interviewees described contributions to the coordinated efforts for delivering the intervention.

Attend four meetings a year, we're just looking for their input, looking for their contribution, looking for where they might be able to amplify communication messages (SGSA 11, membership: SP, I, R)

All of the aspects of the partnership plan were developed through consultation with myself and the other strategic leaders. (SGSA 13, membership: SP)

Execution of the four intervention arms

Consumer Awareness Campaign

The *Consumer Awareness* arm aimed to increase public awareness of salt intakes, salt and health, dietary sources of salt and steps to reduce salt intake (12). The main approach was a three-phase digital campaign that targeted primary food providers within families with primary school-aged children (12). Stakeholder perceptions on the effectiveness of the *Consumer Awareness* campaign were mixed. Stakeholders involved in, or overseeing, intervention delivery shared that a digital campaign was strategically chosen for its cost effectiveness and efficiency in reaching the target audience. Eight interviewees expressed that the reach was “adequate” given the constraints of the chosen approach, including the budget, timeframe and target audience. Some of the intervention team shared specific achievements of the campaign, such as high recall of the key messages within the target population.

“Nearly 50% of the target markets were reached with this campaign across the three years that we did an intervention, which is huge, and then of that, 82% of that are recalling one of our top key messages about that there’s processed food is high salt, that they need to be reading labels and looking for lower salt options, and eating fresh is best. So, there was some really good positive outcomes and they were achievements against objectives” (NGO 21, membership: SP, I, R)

However, overall, many felt the campaign was limited and did not have enough reach. Two participants stated that the campaign was ineffective in making a meaningful contribution to the overall Partnership goal of a one gram reduction in population salt intake. Amongst those who expressed scepticism towards the campaign’s effectiveness, challenges in delivering this intervention arm and engaging the targeted population were discussed. Five reasons were suggested by interviewees: (1) The target audience did not see the relevance for them because of the perception that high blood pressure was an older person’s problem; (2) the target audience was “bombarded” with digital health messaging from other sources; (3) absence of hard-hitting campaign messaging that did not “cut-through” other digital health messages that flooded media and social media spaces; and (4) limited campaign mediums (digital only) as a result of tight budgets; and (5) the intervention timeframe was too short (Supplementary Table 1).

“With the small number of people that that impacted then that was a good response, but it was a small number of people so at a population level I would say it was ineffective” (SGSA 10, membership: SP)

Generate Public Debate

The primary mechanism used to generate public debate was the delivery of product category reports that highlighted salt levels in processed foods based on supermarket surveys. These were disseminated in a series of media releases throughout the intervention period (7, 14). The stakeholder interviews demonstrated that the product category reports were perceived to be an effective central lever for consumer awareness raising, engaging the food industry and pursuing advocacy and policy asks through media advocacy strategies.

“I think the research has been particularly powerful and productive. It’s been a major part of the partnership and I think the quality of the research coming out, and the way in that’s being used to try and shape public debate, has been highly effective” (SGSA 13, membership: SP)

One stakeholder shared how the strategy to generate public debate was developed overtime and many interviewees didn’t differentiate it from the Consumer Awareness arm. Ten Partnership members discussed the utility of the product category reports in engaging media and industry. The reports were perceived to be a “star performer”, achieving more media and industry engagement than anticipated, and at low cost.

However, the majority of interviewees (10 Partnership stakeholders and three food industry stakeholders) also acknowledged a competitive media environment, which was “full of debates about ‘clean eating’” and “sugar”, as something that potentially hindered impact. Implementation team members identified that some individuals and organisations had changed focus from salt as a single nutrient towards general healthy eating principles, as a challenge that had created a misalignment between individual, organisational and Partnership objectives and values resulting in friction between some members. These “tensions” were resolved; however, delivery of this intervention arm was slowed and perceived as “challenging” at times (Supplementary Table 1).

“Some of the food categories that VicHealth and the George Institute would have liked to go out with didn’t sit well with the Heart Foundation’s philosophy, so we couldn’t pursue those opportunities.” (NGO 21, membership: SP, I, R)

Food Industry Engagement

The *Industry Engagement* strategy aimed to reduce salt levels in packaged and processed foods by supporting food manufacturers to reformulate. Overall, this strategy was viewed as effective in terms of innovative approaches to industry engagement and creating positive

relationships between public health organisations and the food industry. However, both strategic partnership members and program implementers identified challenges, including perceived changes to the strategy during the intervention.

Stakeholders cited a slow start to implementation of this intervention arm. A few suggested this was due to an initial lack of understanding of the food industry, how to engage them and which organisation would be responsible. Some interviewees said that the focus initially was on supporting small-to-medium manufacturers in Victoria to reformulate processed foods, but this was later expanded to include national and international manufacturers, in order to have an impact on the Australian food supply.

"If we had been thinking at the start around how can we effect the most change and target the big ones with these food category reports and then how do we effect the most change in Victoria by providing tools and resources and contacts for small to medium." (NGO 21, membership: SP, I, R)

Stakeholders spoke positively about the learning experience and the process of adapting the strategy to address industry needs identified throughout the intervention. Both Partnership members and food industry stakeholders spoke of the strong positive relationships that were created. One-to-one meetings were seen as important for building rapport and a two-way exchange of knowledge between the Partnership and food industry. Interviewees discussed how through these meetings, new knowledge and understanding of industry levers and capabilities were gained, which enabled the Partnership to adapt the industry engagement strategy to utilise levers and create services and resources to fill identified gaps in capabilities. This included: (1) the development of a guide for reformulation to support companies to undertake reformulation, (2) a benchmarking service to assess the nutritional profile of products and compare to competitors and to sodium targets, and (3) grants for small-to-medium manufacturers to financially support reformulation. In addition to increasing capacity, interviewees shared that the Partnership was able to demonstrate supportiveness of companies' positive progress towards sodium reduction through public case studies and showcases at events. This was perceived to further facilitate relationship building and help overcome the "us and them mentality" between public health organisations and the food industry.

"Your overall aim was to really support manufacturers and you wanted to provide us with the reformulation guide, you had an event that was really, really supportive of companies who were doing things well and that really helped us to get involved." (Industry 15)

Advocacy and Policy Strengthening

The *Policy and Advocacy* strategy was intended to "strengthen healthy policies" to improve the food environment, including food reformulation programs and institutional nutrition policies (13). Stakeholder perspectives on the effectiveness of this intervention arm were mixed, likely due to differences in understanding of the intended objectives and strategy.

Two program implementers shared how the policy and advocacy activities were initially carried out at a state-level, however the Partnership identified that key levers for certain food policies were at different levels of government and that there was a mis-match between what was planned and what was achievable at a state-level. Specifically, stakeholders spoke about food reformulation programs being a federal matter and many suggested this advocacy could have been more successful if it had a national focus from the outset, though some recognised the challenges associated with the funding coming from the state for a Victorian-specific intervention. Contrastingly, one strategic member spoke of the planned strategy as always intending to target both the federal and state governments and two strategic members shared that very little progress was made towards integrating salt reduction into state-based policies, including institutional nutrition policies.

"At the very beginning of the project, it was very Victoria focused... but along the way the decision was made... it's a national thing, if they're going to make that policy, it's going to be Federal policy." (NGO 5, membership: SP, I, R)

"I reckon if we'd just gone, "You know what, to make an impact in Victoria what we need to do is we need to change things nationally," we just spent all of our time and effort just focusing on bringing the Victorian State government, regulators, power and influence to bear on Canberra and indeed on the other states, to actually change things for the whole country, maybe that would have been more successful." (Research 4, membership: SP, R)

Participants talked about the development of an advocacy asks document, that was perceived to be vital in bringing the organisations together and forging a consensus on the way forward for the Partnership. However, the utility of the document, and indeed the overall strategy, was a contested topic, with some viewing it as a "milestone" and others a "statement of the obvious". Many shared how the Partnership had "affected things that have been going on", such as providing feedback on the draft sodium reduction targets proposed by the Australian federal government's Healthy Food Partnership in 2018. However, some stated the main advocacy ask of getting the government to establish targets for salt was not achieved within the intervention period. Many identified a lack of coordinated advocacy actions and clear allocation of roles and responsibilities to have hindered intervention delivery. Uncertainty regarding which organisation was driving the strategy and when organisations were advocating as part of the Partnership or alone were suggested to have held up intervention delivery and led to sparse communication of advocacy activities between members, resulting in a lack of coordinated action. The lack of allocation of roles created uncertainty amongst

individual members as to who was responsible for carrying out the advocacy activities and who was responsible for making sure they were executed.

"We developed a clear statement, which outlines what the key asks of the strategic partnership were, but then we didn't identify peer roles or allocate specific responsibilities to the different partnership members in terms of who was going to take that forward." (Research 2, membership: SP, I, R)

"There is lots of benefits to a partnership working together on strategic advocacy. I think we've utilised that quite well on some occasions but perhaps not as well as we would throughout the whole project, and I think this is probably a challenge for these sorts of partnerships in general." (Research 2, membership: SP, I, R)

Contextual factors affecting intervention design, delivery and outcomes

Stakeholders identified legal, political, social, environmental, technological and economic factors affecting intervention design, delivery and outcomes. Key themes and supporting quotes are provided in Supplementary Table 2.

The state and national food policy environments were frequently discussed and perceived to shape the intervention design, hinder intervention delivery and prevent the Partnership achieving outcomes. At the state level, attempts to embed salt as a priority in current institutional nutrition policies (e.g. schools, hospitals and public sector workplaces) were thought by one stakeholder to be hindered by an inability to access relevant organisations to understand what programs were being implemented and a lack of available data on implementation or effectiveness. At the national level, slow progress by the government's Healthy Food Partnership in setting and implementing nutrient reformulation targets was viewed as a barrier to effective action in two ways. Firstly, the announcement of the Healthy Food Partnership and its proposed program of work in 2016, required the Partnership to adapt the *Advocacy and Policy* strategy to the shift in the policy environment. Subsequently, the slow progress in setting targets, including a lengthy public consultation, impeded further advocacy attempts for policy change within the intervention timeframe. Secondly, the slow progress in target setting hindered *Industry Engagement* by the Partnership. Participants indicated that if targets had been in place there would have been an acceleration of industry reformulation activity and higher demand for the Partnership to support companies to reduce salt in food, and ultimately a greater impact on the food supply. Although one participant stated that the Partnership was able to put in place a strategy and *"identify a program of work to engage industry at the same time as waiting for the targets"* (Research 2).

The political and social climate was viewed as not conducive to achieving Partnership aims. Many stakeholders spoke about *"a lack of recognition of salt as a population health priority in the Australian context"* (SGSA 13). Some speculated that a crowded and competitive nutrition space in the public domain hindered the Partnership from achieving political and social traction, with sugar and obesity being more *"top of mind"* issues. Some spoke of the link between consumer demand and government and industry action. They suggested that a lack of public push for policy change continues to allow politicians to ignore salt as a health priority and a lack of public demand for healthy foods continues to allow industry to produce processed foods high in salt. A few stakeholders viewed a key role of the Partnership to be continued advocacy on the importance of salt reduction to consumers, government and industry, building a business case for when policy window opens.

"The reality is [salt reduction] is still a priority, it needs to be a priority, and like in tobacco control or any other public health area often it can take twenty or thirty years for the advocacy to reach a critical mass and then find a sympathetic minister or a sympathetic government or a sympathetic community and the timing is right and suddenly you get an opportunity." (SGSA 13)

Discussion

This research, based on in-depth interviews with 14 Partnership members and seven food industry stakeholders, has provided valuable insights into stakeholder perceptions on a partnership approach to implementing a salt reduction intervention. Use of CFIR enabled understanding of factors affecting program implementation and how these factors were perceived to influence Partnership effectiveness. This has added to our knowledge on successes and challenges of working as a partnership to deliver a multi-faceted public health intervention and provided valuable lessons for future initiatives.

The Partnership

Stakeholders viewed the establishment of the Partnership as essential for intervention planning, design and development, and an enabler for intervention delivery. Previous nutrition coalitions in Australia have tended to be homogenous in knowledge and skills with most members being from a nutrition background (20); whereas, effective health partnerships engage diverse members who bring a wide range of skill sets and knowledge (21, 22). Consistent with this perspective, Partnership members viewed their diversity as a strength. The Partnership brought together skills and expertise in diverse areas such as communications, campaign management, public health interventions, disease prevention and treatment, advocacy and research. By working together, an effective and diverse partnership can achieve better outcomes than any individual or organisation can alone by sharing knowledge and skills, more-efficiently utilising available resources and executing joint activities (23).

Interviewees described how the diversity within the group facilitated the cultivation of a positive learning climate and they spoke positively about their ability to contribute to the strategy and their role in executing the Partnership's plan. Thus, the effectiveness of intervention implementation was facilitated by the establishment of a Partnership with diverse members who were able to contribute their knowledge, skills and expertise, which enabled effective collaborative action and intervention execution.

Execution of the intervention

The interviewees felt the planned activities of each intervention arm were executed and the intended outputs were generated, though some recalled adaptations and additions over the implementation period, and this was viewed as an achievement. However, there were varied beliefs regarding the translation of outputs to anticipated outcomes across the intervention arms (12). This may reflect the delay between outputs and outcomes commonly seen in public health and policy interventions, but is also likely due to (1) internal factors, such as Partnership communication networks, (2) contextual factors, such as the social and political context, and (3) intervention fidelity, which were highlighted in the interviews.

Communication networks within the Partnership

The Partnership demonstrated some common features of effective collaborative frameworks, such as member commitment, communication structures, openness, planning, a shared vision, and clear decision-making processes (24). For example, interviewees described clear benefits associated with being a member of the Partnership, such as fulfilling organisational health promotion goals, which were important in facilitating commitment to the Partnership and collaborative working (23, 25). Stakeholders also described some qualities that could have been improved. Interviewees discussed communication challenges encountered between members working at the strategic level and program implementers. Despite quarterly strategic meetings, there was a lack of clarity around the overall vision of the intervention, with stakeholders from these distinct groups holding different views of action area aims and objectives, and individual's roles and responsibilities (22). Hunter and Perkins propose that a lack of connection between members at the strategic-level and implementation-level is a barrier to effective partnership working due to a lack of transfer of knowledge, skills and expertise between groups (26). They found that strategic partners were focused on achieving the strategic goals and targets, while those involved in intervention delivery operated in a more organic way, distinct from the objectives set at the strategic level (26). This was evident within the current Partnership. Strategic-level members mostly spoke about achieving strategic aims and objectives that were determined at the outset, some of which were viewed as too ambitious; while program implementers seemed to have varied understandings of the strategic goals and were more focused on meeting organisational and individual contractual obligations (e.g. key performance indicators). The disparity between individuals' perspectives on Partnership goals highlights a crucial gap between the expectations of the strategic partners and the ability of the program implementers to respond.

Furthermore, program implementers and strategic partnership members held different perspectives on each other's roles. For example, strategic leaders viewed their role as central to the intervention design and delivery, while program implementers thought of the role of strategic partners as less important. Program implementers shared details about their decision-making processes, which tended to be made at the implementation team level and independently of the strategic goals. These decisions, combined with staff turnover and poor handover within the implementation team, resulted in subsequent changes to the intervention plan and ultimately changed the ways in which the intervention team thought about and executed the overall Partnership plan. Given shared understanding of clear aims and objectives, and delegation of roles and responsibilities, are factors that facilitate Partnership functioning (25, 26), the differences in individual perspectives that were highlighted in the interviews, may have reduced the effectiveness of the Partnership. Without having a solid understanding of the anticipated outcomes, the intervention team were working towards generating the outputs they were contracted to produce rather than striving to achieve the planned strategic outcomes through the outputs (26, 27). This highlights the need for partnerships to ensure relationships and the transfer of knowledge and skills are maintained between those at strategic levels and those responsible for intervention delivery (26).

Contextual factors

The importance of planning and implementing an appropriate intervention for the context was highlighted, as well as planning within the constraints of a chosen intervention approach, such as within the limitations of a state-based program. This salt reduction project utilised a partnership approach to execute a four-armed salt reduction intervention plus monitoring and evaluation. Around the world, countries are employing multi-dimensional salt reduction strategies to reduce excessive population-level salt intakes and the associated disease burden (28). The Partnership approach comprised evidence-based salt reduction strategies that have been previously identified, including: Measuring and monitoring salt use and knowledge, attitudes and behaviours of Victorians and salt levels in the Australian food supply, engaging the food industry to reformulate products, influencing the establishment of sodium targets for foods and front-of-pack labelling in Australia, consumer education to empower individuals to change their salt use behaviours and supporting the creation of healthy food environments in public institutions (29). Simply implementing a multi-faceted evidence-based intervention is not enough to achieve public health outcomes in a complex real-world setting where contextual factors are at play (27). Tseng suggests it is not just about what works, but "what works for whom, under what conditions and at what cost" (30). The challenge of applying a multi-dimensional salt reduction strategy within one Australian state from a state-based perspective was a common theme in this study. In Australia, the delegation of power between state/territory governments

and the Commonwealth government is complex. Legislative and regulatory responsibilities for health policy and health care are split between state and federal governments (31), which has resulted in challenges executing public health responses both now and in the past (32). The delivery of the *Policy and Advocacy* arm was hindered by complexities around this division of power, where some desired activities needed to be executed at the federal-level (e.g. advocating for sodium targets) and others at the state-level (e.g. integrating salt reduction into institutional nutrition policies). Partnership resources for this intervention arm were divided and stretched between the two approaches, and ultimately this resulted in a greater focus on federal government advocacy and inattention to the state-based goal. This example demonstrates the need to understand the context of the intervention – the legal and political mechanisms that influence public health agendas – in order to plan an appropriate intervention that fits within the context and engages with these mechanisms, prior to commencing the intervention.

Further to this, the political and social climates were viewed as barriers to achieving planned outcomes; particularly policy change, given the lack of public and political push for salt reduction. To achieve nutrition policy change, gaining public support, and demonstrating it to policymakers, is crucial for generating political will (33). As a newly-formed coalition, the Partnership firstly needed to gain credibility and trust from the public (33). This is often hard for nutrition coalitions to achieve as there is a perception from the public that the nutrition message is constantly changing and there is lack of consensus among nutrition professionals (33). Members believed a focus on salt reduction alone made it difficult to compete with more topical issues such as sugar and obesity. The public nutrition space was described as “crowded” by mixed messaging from various special interest groups making it difficult for the intervention’s messages to stand out and for the Partnership to build a credible reputation, which likely limited its influence on public will. Interestingly, even with substantial support and longer-term advocacy efforts, public health and nutrition professionals have not managed to influence the government to implement a national nutrition policy (34). It is important to note, that the Partnership was able to influence the government’s sodium target setting process, and subsequent to the intervention (May 2020), the government announced 27 sodium reduction targets (35). This suggests public health and nutrition coalitions can influence policies already on policymakers’ agendas but illustrates the challenge in generating the public and political will needed to get policies onto decision-makers’ agendas.

Fidelity of the intervention

A monitoring and evaluation process was actualised to ensure intervention fidelity and generate the evidence needed to support decision-making to optimise the effectiveness of the Partnership intervention throughout the implementation period. Our analysis revealed that the program implementers were able to incorporate feedback and adapt components of the intervention plan in response to Partnership monitoring and evaluation efforts (14). For example, the need for a more strategic approach that would have greater impact on the food supply by targeting both small and medium businesses as well as larger manufacturers through a variety of different engagement methods was identified in an interim assessment (14). Effective partnerships have clear strategic plans, which are supported by robust monitoring and evaluation procedures, to determine how the partnership is performing and how intervention delivery is going throughout the intervention to establish if any modifications are needed (26). Planned and unplanned adaptations are often made prior to interventions (e.g. for a specific audience or context) and during interventions (e.g. to optimise effectiveness) (36). Adaptations to intervention plans can have a positive or negative impact on the intervention’s effectiveness (37, 38). Following the intervention, stakeholders viewed the food industry strategy adaptation as one of the key successes and a facilitator in achieving Partnership outcomes. However, not all recommended changes were executed by the implementation team, which suggests there were missed opportunities to increase the impact of the Partnership intervention. For instance, in 2017 and 2019 stakeholders identified a need for stronger, strategic consumer-messaging that conveyed the serious health risks of high salt (14); however, perceptions on the strength of awareness-raising messages remained unchanged throughout the interventions. Program implementers did not comment on why such feedback was not incorporated; however, this was potentially due to a change in key personnel. They did speak about an unsuccessful attempt to shift consumers along the Transtheoretical Model stages of change (39) through the three campaign waves. While the Transtheoretical Model can be applied to public health interventions to try to accelerate the rate of behaviour change, only a small proportion of the population will be willing to contemplate making a change and an even smaller proportion will be ready to take action within the intervention timeframe, leading to varied successes in changing dietary behaviour in populations (40). This is an example of prioritising intervention fidelity over adaptation and optimisation, and raises questions about whether the Partnership could have made further progress towards its consumer awareness goals if the interim feedback had been applied.

Strengths and limitations

The strengths of this study include that the interview tool had been previously used for the 2017 interviews (14) and was built on survey instruments used in previous studies (15, 16). The semi-structured approach allowed interviewers to ask tailored questions to each interviewee given their involvement in the Partnership and ask probing questions to gain further information based on participant responses. The qualitative analysis was guided by the CFIR, which facilitated the identification and understanding of the internal and contextual factors that influenced intervention implementation and effectiveness (17). Some limitations are noted. Although all Partnership members were invited to participate and there was a variety of strategic, implementation and research members, most interviewees were from organisations involved in implementation or evaluation. All food manufacturers engaged by the implementation team were also invited to participate, however the seven stakeholders interviewed were from larger companies and their experiences may not be representative of all companies engaged.

Conclusions

The establishment of a Partnership with diverse skills and experience facilitated collaborative action and intervention delivery. Monitoring and evaluating implementation informed strategy adaptations which allowed optimisation of Partnership strategy. Future partnerships should consider the importance of developing strong communication networks, particularly between strategic and implementation-levels, interventions that fit the context and utilise available contextual mechanisms, and the balance between intervention adaptation and maintaining intervention fidelity.

List Of Abbreviations

DALY: Disability-adjusted life year

TGI: The George Institute for Global Health

IPAN: Institute for Physical Activity and Nutrition

SGSA: State government or statutory agency

CFIR: Consolidated Framework for Implementation Research

Declarations

Ethics approval and consent to participate

This study was approved by the University of Sydney Human Ethics Research Committee (2016/770) and performed in accordance with the Declaration of Helsinki. Written informed consent was obtained from all participants prior to the interview.

Consent for publication

Not applicable

Availability of data and materials

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Competing interests

J.W. is Director of the World Health Organization (WHO) Collaborating Centre on Population Salt Reduction. VicHealth initiated and funded the Victorian Salt Reduction Partnership, J.R. and K.C. were not involved in interviewing stakeholders, analysing the data or reporting the results. All other authors declare that they have no competing interests.

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Authors' contributions

E.R., B.M., K.T., J.R. and J.W. contributed to the design of the study. E.R. and W-K.C. conducted the interviews. E.R. analysed and interpreted the data and drafted the manuscript. All authors, E.R., W-K.C., B.M., J.R., K-A.J., K.C., K.T. and J.W., contributed to the final manuscript by providing input into the interpretation of the data, reviewing, and editing the manuscript. All authors have read and approved the final manuscript.

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Figures

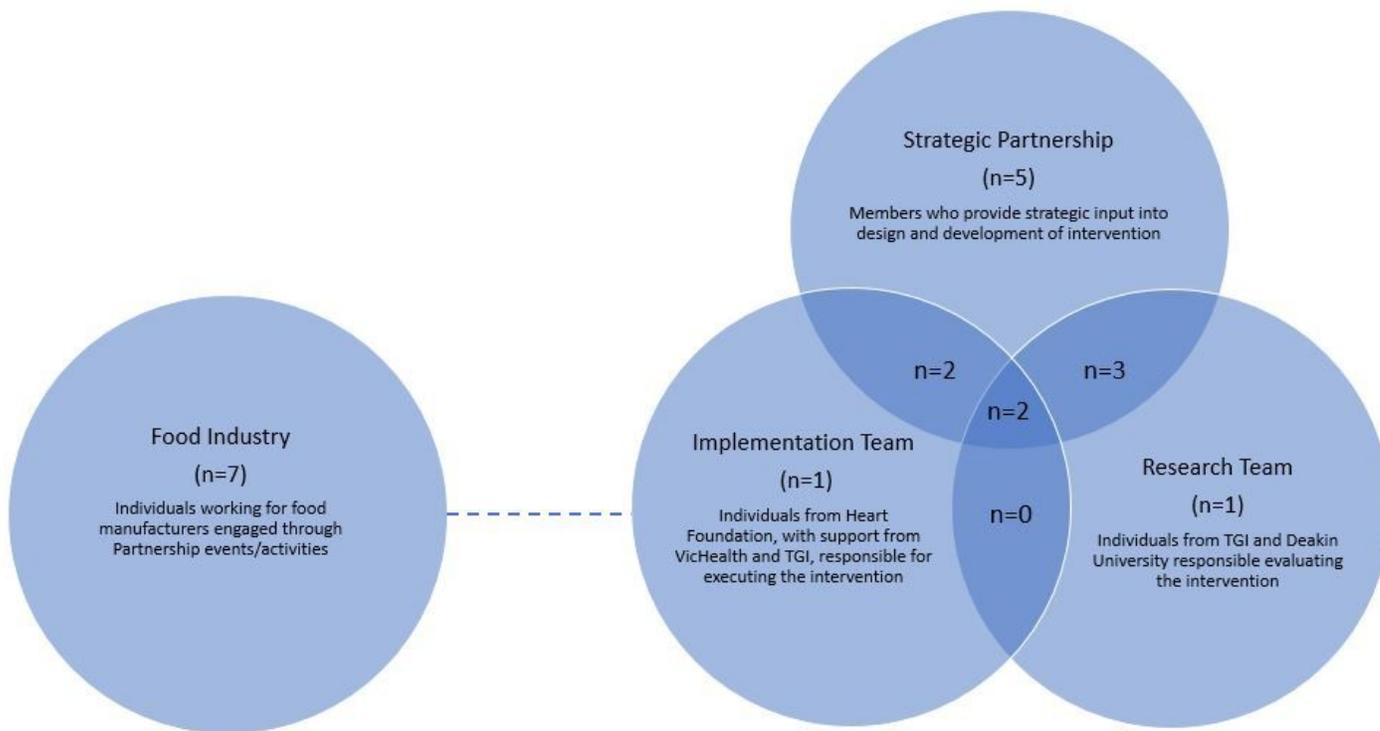


Figure 1

Partnership structure and roles and responsibilities.

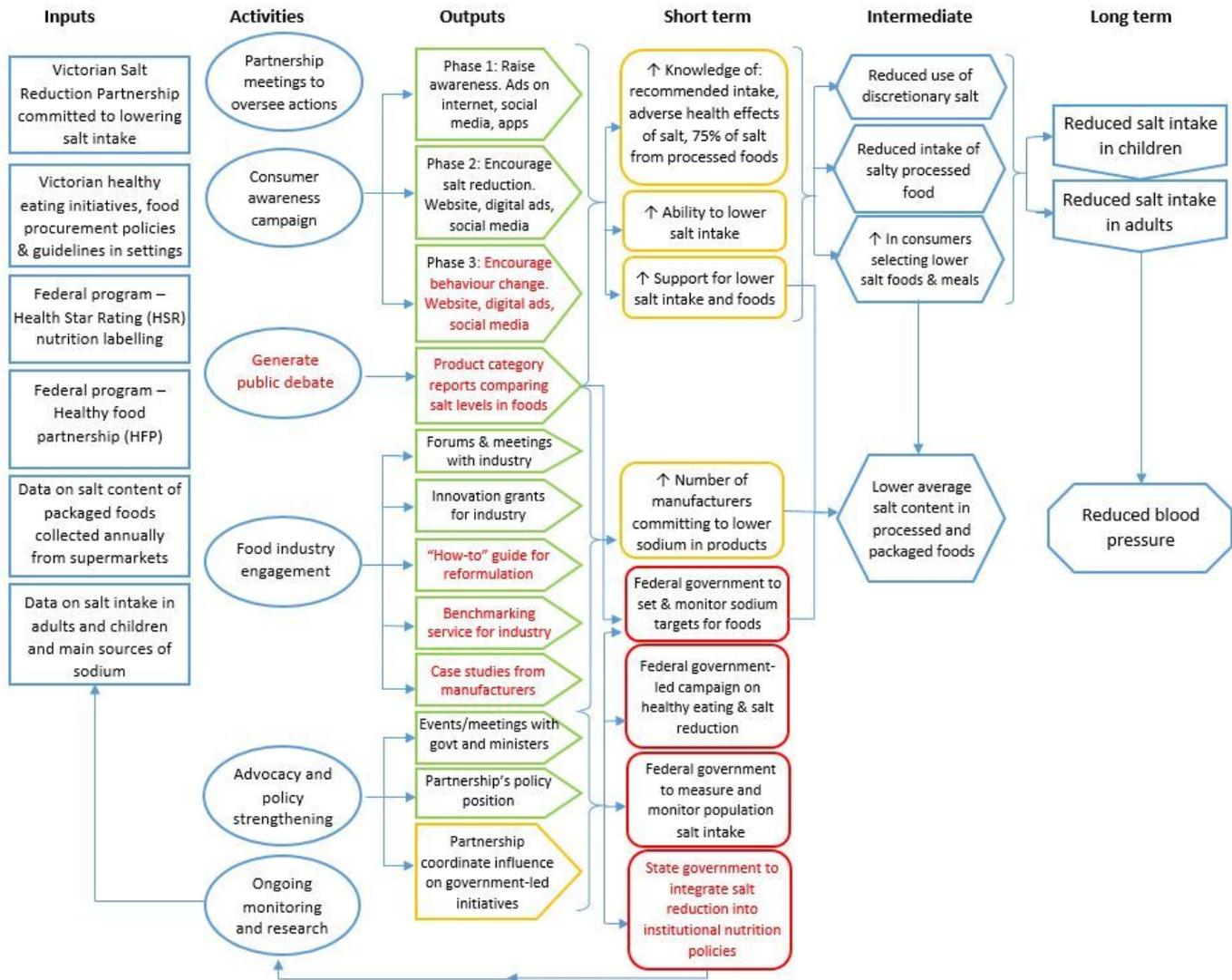


Figure 2

Revised logic model of the Partnership program. Adapted from Trieu et al. (12).

Supplementary Files

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