INTERNATIONAL SOCIAL MARKETING CONFERENCE

Virtual Conference8-9 February, 2022

VIRTUAL CONFERENCE

"Social Marketing: reflecting, refocusing and reimagining for a sustainable future"

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Book of Abstracts

Creating collective solutions to combat unhealthy eating behaviours in the Australian Defence Force: An application of Systems Thinking

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[1] Renata Anibaldi is Senior Research Assistant and PhD candidate. Her academic background is in psychology, social and educational research methodology, and economics. Her current research interest is in systems thinking concepts and methods for addressing complex societal problems that involve multiple stakeholders and require coordinated collective action for change to occur.

[2] Dr Julia Carins is Senior Research Fellow specialising in the delivery of translational and impactful research, in the area of food, eating and health. She leads a large scale, collaborative research program focussed on social marketing strategies to improve eating behaviour, for military, government stakeholders and community groups. Her research blends consumer-oriented approaches with modifications to create supportive environments.

[3] Professor Sharyn Rundle-Thiele is a social marketer and behavioural scientist. She is the Founding Director of Social Marketing @ Griffith, which is the largest university based group of social marketers in the world. She is Founding Co-Editor of the Journal of Social Marketing, one of the worlds' leading behaviour change journals. She has led projects that have changed behaviours for 10,000's of people in areas including the environment, health and for complex social issues.

[4] Dr Christine Domegan is Head of Marketing and Senior Lecturer in Marketing at NUI Galway, Ireland. She is passionate about the role of social marketing in systematizing social change through the deep interconnections between business and society. Christine's research interests include systems social marketing, macromarketing, value creation, stakeholder engagement and service learning.

[5] Dr Ann-Marie Kennedy is a Senior Lecturer in Marketing at the University of Canterbury, New Zealand. Her research interests include macromarketing, social marketing, ethics and sustainability. She has often used retail, especially fast fashion as the context for her research. Her most recent research focuses on macro-social marketing, social marketing ethics, and on authentic sustainability as a business strategy.

Abstract

Quality of nutrition is highly significant for the job performance of personnel in the Australian Defence Force (ADF), and a dedicated feeding system provides the opportunity to consume nutritionally balanced meals while on duty. However, evidence of inadequate nutrition and over-consumption, suggests that some ADF personnel engage in unhealthy eating behaviours. Eating behaviours represent the outcome of complex interactions between multiple individual and environmental factors, and are resistant to change interventions, particularly when those interventions are uni-dimensional. As an approach that is built on the premise of complexity, systems thinking addresses behaviours that are hard to change through the systems within which behaviours occur. This paper reports a study that took a systems thinking approach to the problem of unhealthy eating behaviours in the ADF. A Creating Collective Solutions (CCS) process was applied to systematically assess and prioritise the barriers and opportunities for change and identify solutions to support and promote healthy eating in the system. The CCS process is a highly participatory methodology based on Collective Intelligence (McHugh et al., 2018; Fauville et al., 2018) and Interactive Management (Warfield & Cárdenas, 2002) which have been used extensively in systems thinking research frameworks. This study offers theoretical and practical insights on how participatory methods may support the integration of systems thinking in social marketing.

Background

For personnel in the Australian Defence Force (ADF), eating behaviours are particularly significant as job performance depends on sound nutrition to directly support cognitive and physical fitness. The ADF supports all personnel to engage in healthy and nutritionally appropriate eating. However, there is evidence that the eating behaviours of many ADF personnel are not optimal (Forbes-Ewan et al., 2008; Kullen et al., 2016; Skiller et al., 2005). Eating behaviours are complex as they respond to a biological requirement for sustenance and are influenced by a complex mix of individual, proximal and distal contextual factors (Carnell et al., 2013; Grimm & Steinle, 2011; Hunot et al., 2016; Lee et al., 2017; Llewellyn & Wardle, 2015; Parkinson et al., 2016, 2017). The mechanisms through which all factors interact are not, however, definitively or holistically understood. Therefore, when eating behaviours are targeted for change, they display characteristics of a 'wicked' problem – one that involves multiple and multi-level stakeholder perspectives; is not unambiguously defined; and resists "standard" solutions (Checkland, 2010; Kennedy et al., 2017; Rittel & Webber, 1973).

In this study, the problem of unhealthy eating behaviours was addressed in the context of a systems thinking framework. Specifically, the study sought to identify the opportunities and barriers for change and the strategies to support and promote healthy eating. Systems thinking has gained momentum as a framework for addressing some of the 'wicked' problems social marketing seeks to resolve (Brychkov & Domegan, 2017; Domegan et al., 2017; Truong et al., 2018). However, implementation presents several practical dilemmas for understanding where and how to act in the system, particularly in the absence of clear mandates and power discrepancies (Hastings, 2020). Further, systems are inherently complex, and may include siloed structures, lack of interactions, or conflicting and counterproductive interactions. Applying systems thinking in an environment amenable to boundaries around function, organisation, and target population, may alleviate these issues.

Method

The study methodology consisted of a process entitled Creating Collective Solutions (CCS)—a structured method for participatory problem solving that is implemented across five stages (see Figure 1). The CCS process was adapted from Collective Intelligence (Domegan et al., 2017; McHugh

et al., 2018; Fauville et al., 2018) and Interactive Management (Warfield & Cárdenas, 2002), with truncations to earlier stages to minimise participant time requirements and enhancements made to the fifth stage to stage to incorporate design thinking to generate actionable solutions.

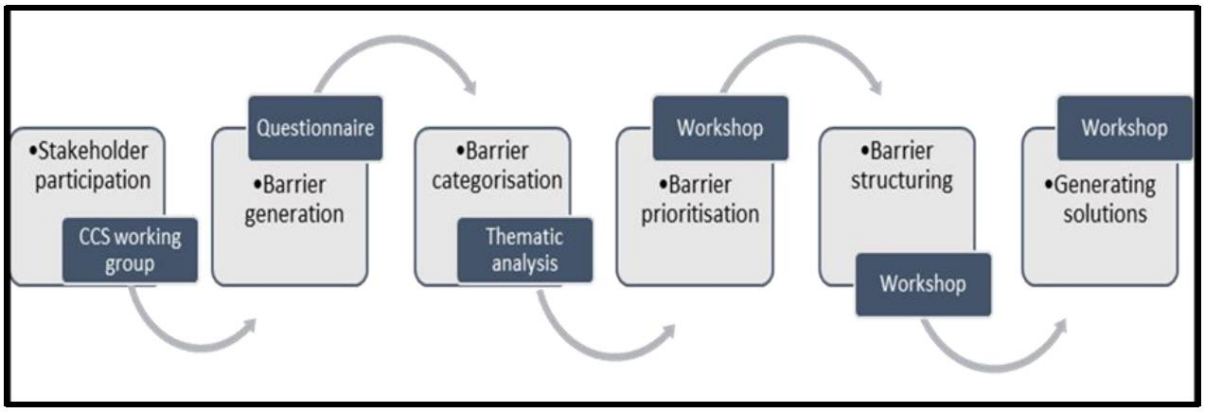

Figure 1: Creating Collective Solutions (CCS) Process

In this study, Stakeholder participation protocols were based those of McHugh et al. (2018) and aimed to achieve breadth and diversity of stakeholder inclusion in terms of expertise, interest and influence in the ADF feeding system. All 70 identified stakeholders were invited to complete an on-line anonymous questionnaire and 36 participated. From this group, 28 stakeholders were invited to participate in the CCS workshop and 17 attended. Barrier generation was achieved through the on-line questionnaire, which asked respondents to identify up to five barriers "that prevent ADF personnel from making healthy food choices on base." Respondents were asked to provide a clarification statement for each barrier. Duplicate barriers were removed before categorisation. Barrier categorisation involved thematically analysing barriers to identify categories in an iterative process of comparisons and contrasts. Barrier prioritisation, barrier structuring, and development of options took place in a one-day facilitated CCS workshop. Prioritisation (in terms of importance/significance by category and in the system overall) was accomplished through a multi-step consensus voting process. Relationships between the most important barriers were then assessed in terms of aggravation with the use of Interpretative Structural Modelling (ISM) software, which resulted in the generation of an aggravation structural map. Options for solutions for selected priority barriers were developed in small groups. The options were discussed in the reconvened whole group and solutions were voted upon by participants individually.

Results/Findings

A total of 112 unique barriers to healthy eating in the ADF were identified. Barriers were grouped into nine thematic categories (Table 1). The barrier prioritisation stage resulted in the identification of the 14 perceived most significant barriers to healthy eating across categories (Table 1). The structural map indicated five pathways (A, B, C, D, E) through which barriers aggravate each other (Figure 2). Barriers grouped together in one box are interrelated and aggravate each other. The barrier conflict between the need to eat and planned schedules or unexpected demands, leaving insufficient time to eat or make good choices did not aggravate other barriers in the map.
Co-created solutions by stakeholders targeted barriers related to knowledge and know-how, the organisational culture, and contrasting needs and operational imperatives of stakeholders (barrier nos. 1, 3, 4, 5, 7, and 9). Options proposed ranged in scope from organisational policies to specific initiatives that could be implemented at the operational and/or structural levels. Solutions also varied in terms of required resources and institutional support. Themes underlying solutions were 1) 'mainstreaming' healthy eating behaviours to become an essential and routine component of ADF identity and duty; 2) striking an effective balance of solutions targeting the demand and supply of

healthy food; and 3) systemic support and facilitation for self-determination in healthy eating behaviours. Preferred solutions are shown in Table 2.

Discussion

This study provides an example of how a system perspective may be applied through a participatory methodology in a context that is bounded by function, organisation, and target population. The CCS process facilitated understanding the problem of unhealthy eating as multi-factorial, multi-level and multi-causal within the system in which it occurs; the identification of the perceived most significant factors in its making; and the selection of solutions acceptable to multiple stakeholders. The influence of political, regulatory, societal, cultural, economic elements (Parkinson et al., 2016, 2017) that were outside the focal system was captured in barriers perceived and prioritised by stakeholders and translated to suggested solutions that could be implemented within the Defence feeding system. Stakeholders' nuanced contributions embody influences from all system levels and create frameworks for developing social marketing programs for behaviour change in the bounded system and have potential to bring change to the broader system. It is suggested that the fundamental assumptions of emergentism and non-linear causality that underlie system approaches to wicked problems (Domegan et al., 2017) are valid in bounded contexts.

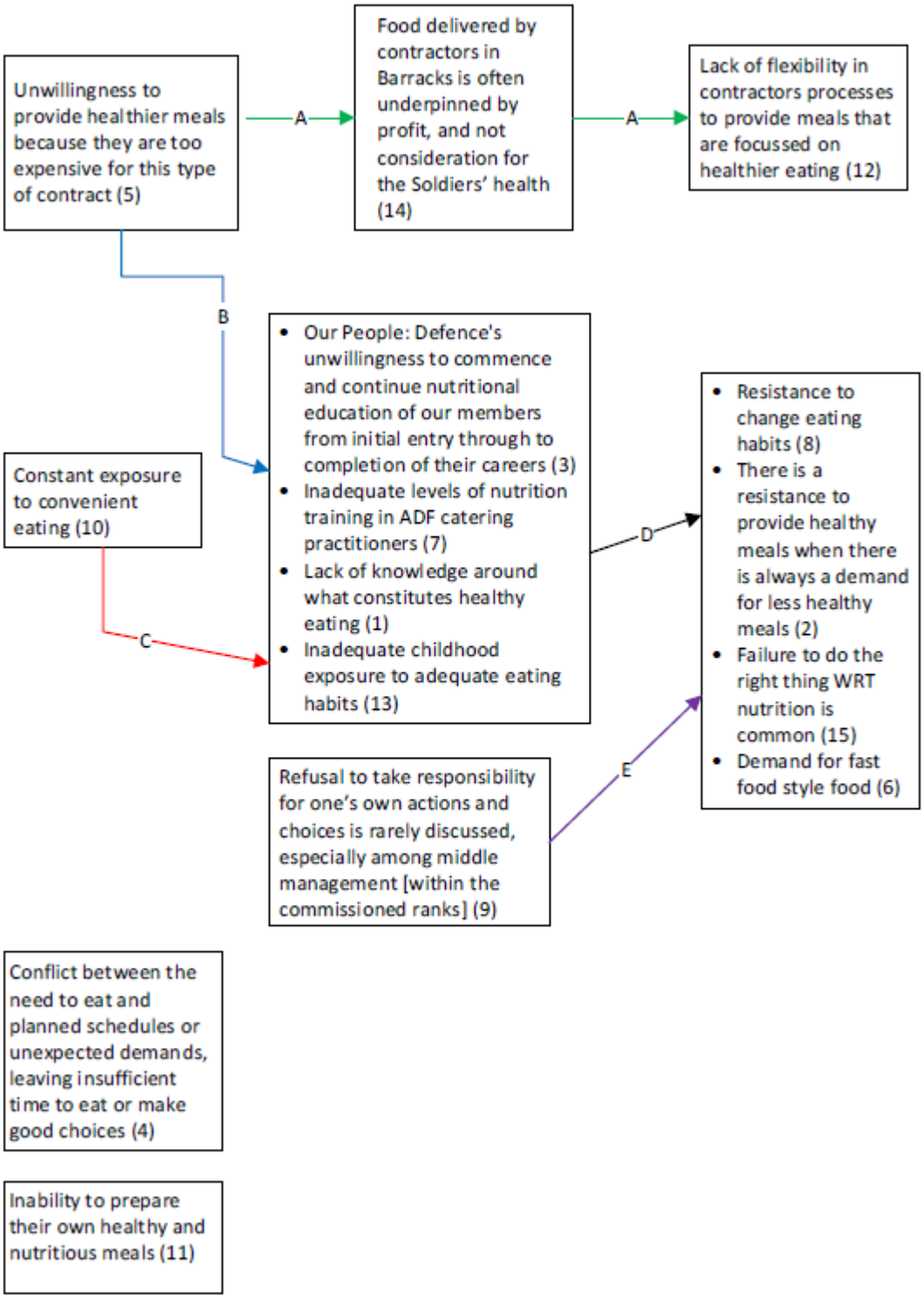

Figure 2: Aggravation pathways

Table 1: Barrier categories and most important barriers

Category	Description of theme	Important barrier(s)
Keeping Up	Deficiencies in nutrition education/information and its role in performance and health lead to inadequate knowledge about healthy eating and good food choices.	• *Lack of knowledge around what constitutes healthy eating (1)**
Food Provision	Aspects of offerings in dining facilities - options, variety, ingredients, serving size, tastiness, presentation - influence engagement in healthy eating.	• *There is a resistance to provide healthy meals when there is always a demand for less healthy meals (2)*
Big Change	Institutional factors - funding policies/priorities, cumbersome processes, resistance to change, poor collaboration, and failure to engage with research and industry - deter the development and implementation of initiatives to support healthy eating behaviours.	• *Our People: Defence's unwillingness to commence and continue nutritional education of our members from initial entry through to completion of their careers (3)*
Matters of Time	Incompatibility of timings and durations of personnel duties and activities relative to timings and types of meals in dining facilities reduce the opportunity to access healthy food when required, supporting substitution with convenient 'on-the-run' foods that satisfy hunger but may be nutritionally poor.	• *Conflict between the need to eat and planned schedules or unexpected demands, leaving insufficient time to eat or make good choices (4)*
Supply	Contractual arrangements and cost considerations influence the operational level of provision such that requirements, preferences, and expectations of diners in relation to quality standards, consistency of quality standards, flexibility of offerings, and mode of delivery do not support healthy eating behaviours.	• *Unwillingness to provide healthy meals because they are too expensive for this type of contract (5)* • *Lack of flexibility in contractors' processes to provide meals that are focussed on healthy eating (12)*
Temptations	The ready availability of unhealthy options in the food environment reinforce demand and preference for food that is appealing and convenient, yet nutritionally poor.	• *Demand for fast food style food (6)* • *Constant exposure to convenient eating (10)*
We are Human	Individual personality traits, attitudes and values, entrenched habits, and life circumstances influence the will, the intention, and the capacity to change unhealthy eating behaviours.	• *Resistance to change eating habits (8)* • *Inadequate childhood exposure to adequate eating habits (13)*
Cooking Skills	Deficiencies in cooking skills/knowledge of nutrition/nutritional content of foods, reduce the ability of providers and personnel to prepare healthy meals.	• *Inadequate levels of nutrition training in ADF catering practitioners (7)* • *Inability to prepare their own healthy and nutritious meals (11)*
Our Organisations	Managerial and/or administrative factors prevent the uptake of healthy eating behaviours or support unhealthy eating - a culture of acquiescence towards unhealthy eating in personnel and the urgency of implementing evidence-based reforms in policy and contractual obligations; lack of initiative in creating environments that facilitate healthy eating and discourage unhealthy eating.	• *Refusal to take responsibility for one own actions and choices is rarely discussed, especially among middle management [within the commissioned ranks] (9)* • *Food delivered by contractors in Barracks is often underpinned by profit, and not consideration for the Soldiers' health (14)*

* Number indicates importance (in descending order from 1 to 14) and serves also as barrier identifier

Table 2: Preferred solutions

- Policy level solution to mandate education and training tailored to requirements of different stages and phases of ADF career
- Offer incentives (financial bonus) for rewarding positive outcomes
- Vehicle distribution of healthy food ('health truck' in place of 'fat truck')
- Offer take-away options (with availability of healthy choices)
- Embed mentoring by senior peers and role-models in training cycles
- Develop ADF-specific app-based interactive technology that includes nutritional information, access to menu, feedback, energy intake and activity tracking, links to entitlements, and so on
- Adopt food composting as a waste reduction measure and create kitchen/community gardens.

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Get emotional: Social marketing's role in disarming disinformation

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Project/Issue Overview

The last two years have seen a sharp increase in the volume of disinformation (intentionally deceptive content) and misinformation (shared without the intent to deceive – see Wardle, 2018) in the newsfeeds of Australians and of our neighbouring nations across the South Pacific (Weber et al., 2020). Before the pandemic, misinformation was already creating issues for under-resourced public service organisations in the South Pacific, such as meteorological offices who were already struggling to manage climate disinformation. The pandemic has supercharged the scale and pace of false information, resulting in public health issues, such as low vaccination rates, that may endanger communities in the South Pacific for some time to come (Dayant, 2021).
Social marketing may offer relatively simple and cost-effective techniques that complement existing misinformation mitigation approaches. In particular, techniques such as narrative framing, design thinking and brand theory, may help improve the salience and emotional impact of interventions designed to counteract online falsehoods.

Background and social context

Australians became more reliant on our online devices through the successive crises of the pandemic (Nielsen, 2020) and the 2019/20 'Black Summer' bushfires (Weber et al., 2020) as we sought information to stay abreast of the latest information (Mohammed, Johnston & van der Linden, 2020). This presented an opportunity to unethical operators. Groups who sought to promote social division or recruit for their causes created false information that shocked, angered or frightened an already concerned public. The false narratives were often wild and visually vibrant to attract attention and gain the physical interactions that ensure social media ad targeting systems and personalisation algorithms continue to serve up more of the same (Haugen, 2021). The unprecedented scale and virality of online disinformation caused the World Health Organisation to label the phenomenon an 'infodemic' (Zarocostas, 2020).

Many of our neighbouring states in the South Pacific were just as vulnerable, and some more so. When large scale electrification projects are rolled out, as they are currently in Papua New Guinea and the Solomon Islands, internet access tends to follow quickly (Watson, 2020; Hogeveen, 2020). As we have seen in countries like Myanmar, when rapid internet access is not accompanied by initiatives to manage disinformation, communities can become vulnerable to information disorder, and societal cohesion can be threatened (Aspen Institute, 2021).

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False online information is impacting a range of sectors in the South Pacific. Prior to the pandemic, weather related misinformation was already causing difficulties in several South Pacific nations. As the number of devastating cyclones increase due to the climate emergency (United Nations, 2019), access to reliable information is even more essential for preparation and recovery in the South Pacific (Newton-Cain, 2015). Social media provides a useful "space for Pacific Islanders' voices to be heard in times of natural disasters" (Kant, Titifanue, Tarai & Finau, 2018). This impact of disinformation is only increasing as social media platforms continue to grow across South Pacific nations (Hootsuite, 2021).

Meteorological offices have a critical role to play in South Pacific nations' forecasts, preparedness and management of major weather events (Vanuatu NDMO, 2017). Their under-resourced offices have limited public outreach budget (Hogeveen, 2020), and are already dealing with the increasing demands of the climate crisis. There is little capacity to manage the increase in misinformation, such as fake cyclone maps, that emerge during weather emergencies. It is not difficult to find examples of engagement with spurious or misleading weather content (Yumi Tok Tok Stret, 2017; Yumi Tok Tok Stret, 2013).

This information disorder only increased over the course of the pandemic. Since March 2020, conspiracy networks merged and amplified each others' false narratives (Bruns et al., 2021), geopolitical tensions and the US election further catalysed the spread. Like everywhere else (Bruns, Harrington & Hurcombe, 2020), strange stories found audiences in the South Pacific: such as 5G mobile phone towers causing COVID-19 and vaccines containing magnets - however, many of the narratives also took on local cultural characteristics such as religious apocalyptic themes or promotion of domestic herbal remedies over vaccines (Khosla, Pillay & Bathur, 2021). This may have a lasting effect, with a recent study by the Lowy Institute predicting that disinformation's influence on vaccine hesitancy, particularly in the countries of Melanesia, may impact these countries' public health and economies for years to come (Dayant, 2021).

Discussion of the Issue/Concept/Idea/Problem

As disinformation has spread, so too has the research into preventative interventions. Pennycook and Rand (2019) have taken the view that disinformation spreads primarily due to insufficient attention being paid by the sharer, and thus advocate the use of a behavioural nudge that primes social media users to be more accurate (Pennycook et al., 2021). Lewandowsky and colleagues (2021) prefer the use of 'prebunking'- providing factual information to audiences *before* they encounter the false information, providing a form of cognitive inoculation to the falsehoods.

We have employed both these interventions in our disinformation response strategies and training with South Pacific government ministries – however it feels as though there is a gap in the disinformation intervention research that could be being filled by social marketing. Specifically, these interventions mentioned above have been critiqued for not being recalled long enough to be effective (Brashier, 2021; Rozenbeek et al., 2021). I would suggest that this due, in no small part, to the stimuli used in these studies lacking in emotional salience. This perhaps highlights a more general issue with disinformation research to date: disinformation creators are very good at leveraging audiences' emotions – academics, not so much.

We need to better understand why the bad guys are winning the contest of narratives. Disinformation operators know how to harness our prejudices and hashtags. They understand that people sign up for the funny memes, then stay for the fabricated stories and outrage (Innes, Dobreva, & Innes, 2019). They know what brings us together, and drives us apart (Diresta et al., 2019).

> *"The professionals know you catch more flies with honey. They don't go to social media looking for a fight; they go looking for new best friends. To appreciate the influence and potential of disinformation, we need to view them less as Boris and Natasha and more like Don Draper"* (Linvell & Warren, 2019).

The disinformation operators might be seen as *anti-social* marketing experts. They use attention hacking to target segments, attract notice, filter into memory, start conversations – and then force an emotional response such as outrage to mobilise action (Paris & Donovan, 2019). They enhance emotional reactivity of untruthful content so that it spreads faster and further than real news stories (Vosoughi, Roy, & Aral, 2018). Emotive content is more noticeable in the newsfeed, more likely to be shared, and more believable (Martel, Pennycook, & Rand, 2019). These are all common marketing techniques, so it is perhaps not surprising that disinformation creation organisations are structured more like digital marketing agencies than like intelligence agencies (Francois & Lim, 2021).

Despite the importance of emotive content in disinformation (Francois, 2019), there seems to be little consideration into how we systematically use emotion when presenting counter factual interventions (Martel et al., 2019). As Ben Nimmo of the Atlantic Council's Digital Forensic Research Lab says: "We have the facts - but [the disinformation creators] have the stories" (Wemer, 2019). As such, social marketing may offer a somewhat unique insight, in that it is built on practices and theories from which disinformation was born. Marketing and social marketing is specifically designed to facilitate information processing – often with the tactical use of affect.

Practical and Conceptual Implications

Social marketing's role in disinformation interventions may centre on improving affective responses that improve recall of fact-based interventions. The three following techniques are drawn directly from marketing and social marketing practices - and each offer slightly different approaches to generating emotional responses to aid information processing. As such, each may offer promise as a complement to counter-disinformation interventions. Most crucially, they are simple, low-tech, cross-culturally appropriate and cost-efficient. They can be taught in short workshops and be deployed by information officers in under-resourced public communication roles in South Pacific nations – or Australia.

1. Brand new defenses

Disinformation disseminators will often send the same message, with slight variations, that are then reinforced by a network of bots or cyborg accounts (part automated, part human managed). This repetition activates a range of psychological heuristics: repetition is cognitively interpreted as a signal for truthfulness (Ecker, Hogan & Lewandowsky, 2017), it causes the stimulus to be learned, making it easier to retrieve from memory, which increases its credibility (Bornstein, 1989), and makes the audience more familiar with concepts, increasing their preference for them (Zajonc, 1968). Repetition from a single source is also often misattributed to be from multiple sources (Koch & Zerbach, 2013) which contributes to false consensus effects (Colliander, 2019).

We know that these same effects – repetition leading to improved processing fluency and familiarity effects (Machleit & Wilson, 1988; Janiszewski & Meyvis, 2001) - can be elicited from good brand management practices (Campbell & Keller, 2003). As such, appropriate brand processes can be a simple way to improve the effectiveness of competing counter-narratives and disinformation interventions. However, as noted by Gordon, Zainuddin and Magee (2016) there is still limited

consideration of brand theory in social marketing research, let alone its role in disinformation management.

For example, most of the organisations or government ministries we work with in the South Pacific do not have basic design style guidelines or branding guidelines. Developing simple brand guidelines do not need to be anything like the expensive corporate exercises. Just a few pages that identify appropriate fonts, palettes and logo usage will help an organisation leverage the same psychological principles of repetition and exposure effects that disinformation operators use all the time. However, anecdotally, brand itself may have a brand problem, with "brand" projects often treated with considerable scepticism by many government programs – and perhaps rightly so, given the number of expensive and untransparent brand projects that take place. This has created resistance to brand-related interventions. However social marketing research can provide the evidence that brand theory offers an overlooked perspective to disinformation responses.

2. Design-led storytelling

Disinformation uses highly visual stimuli in order to get noticed in the newsfeed, to generate a stronger affective response, to enhance memory vividness (Cooper, Kensinger & Ritchley, 2019) and message credibility (Fenn et al., 2019). Design-led thinking is simply good marketing practice – and tools such as Canva have democratised design, making well designed content possible for the information officers of any organisation. Over the years we have seen low-resourced anti-corruption organisations, meteorological offices, health ministries and environmental agencies develop their design skills to convey their organisations' messages vibrantly and impactfully.

Crucially, design helps modulate affective responses – in other words, design can be used to heighten the emotionality of a piece of content, or information can made easier to process, reducing stress during crises. For example, disaster management offices in Fiji used Canva and simple iconography to help communicate weather emergency information during Tropical Cyclone Yasa's landfall in December 2020, resulting in more widespread sharing by publics and mainstream media. Graphic design is not social marketing, but social marketing provides the strategic framework for visual storytelling.

3. Targeted narrative frames

Disinformation creators have always been expert at angling falsehoods in terms of threats to social norms and moral concerns. Specific moral narratives might even be being used to target particular identity groups. For example, moral framing can be used to overlay a moral theme onto a disinformation narrative (Feinberg & Willer, 2019) to obscure or justify more extreme concepts, with the intent to make them accessible to more mainstream audiences (Meiering, Dziri & Foroutan, 2020).

Moreover, these moral frames can short-circuit deliberative reasoning (Greene, 2001), eliciting intuitive responses that prompt 'moral emotions', such as disgust (Hutchison & Gross, 2011) or moral outrage (Tetlock et al., 2000). Using Morality as Cooperation (MaC) theory, which breaks moral themes into seven universal domains – Family, Group Loyalty, Reciprocity, Heroism, Deference, Fairness and Property Ownership – we have seen some evidence that political identity groups may be targeted using disinformation framed in terms of MaC moral themes (Curry, 2016; Bathur & Marsh, 2021).

Narrative framing is one of the less examined aspects of disinformation research and, arguably, there are few disciplines besides social marketing that have the intellectual legacy of examining

constructed persuasive narratives. Yet, despite this, there is little to be found in the social marketing literature on the scientific application of narrative framing in disinformation mitigation. This a potentially rich and vital field of investigation.

These three social marketing techniques are designed to increase the emotional salience of disinformation interventions. However social marketing may also have a wider contribution to make in terms of helping the wider marketing community to better understand the ethical boundaries of persuasion – especially as disinformation is becoming increasingly commercialised (Wallis et al., 2021).

Conclusion

Disinformation creators are experts at using emotion to help convey their message. So are social marketers. Disinformation creators apply cross-disciplinary ingenuity to new functionality in social technologies to achieve their mission. So do social marketers. Disinformation operators have learned how to grab and maintain emotional attention, honed from the practices of commercial marketers. So have social marketers.

Social marketing and disinformation are offshoots from the same vine – yet are totally different shrubs. However, due to this shared genus, social marketing may have a particular responsibility – and offer a unique insight – in supporting the efforts to find solutions to the disinformation crisis. The disinformation monster didn't grow in journalists' or behavioural economists' basements. It grew in ours, using our methods. It is up to social marketing to go down there and help deal with it.

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Bread to be more: A one-food focus for household food waste

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Abstract

Sustainability Victoria (SV) has been delivering social marketing campaigns on the issue of food waste since 2017. This case study outlines the approach used for a campaign on one of the most commonly wasted items in Victorian households: bread. Using bread as a focus for six weeks in 2021, SV's campaign promoted three groups of behaviours to help Victorian families make better use of their bread and reduce the amount thrown out: freezing it, using it and transforming it. Although short, the results indicate the campaign delivered effective and impactful messaging to Victorian families. Of those who saw the campaign, at least one of the target behaviours had been subsequently taken up, with freezing bread demonstrating the best results in converting from intention to action. The focus on one food item shows promise as a framework for future campaigns.

Sustainability Victoria – Organisation Overview

Sustainability Victoria (SV) is a statutory authority and a key delivery agency of the Victorian Government. Its purpose is to accelerate Victoria's transition to a circular and climate resilient clean economy and support the Government in achieving its targets (Sustainability Victoria, 2021). SV works with a range of audiences across the Victorian community, including industry and business, local councils, households, community groups and educational institutions. SV's work is focused on three areas: Investment and Innovation, Behaviour Change and Education and Community Action. SV has been delivering communications and social marketing campaigns on the issue of food waste since 2014, most notably under Waste and Resource Action Programme (WRAP) globally recognised campaign brand of *Love Food Hate Waste®* **("LFHW").**

The Food Waste Problem

Victoria grows one-quarter of all fresh food produced in Australia and processes more than half of Australian-made foods (Sustainability Victoria, 2020). Victoria is also responsible for around a quarter of Australia's food waste, with 2.4 million tonnes of food wasted along the supply chains each year and $6 billion estimated as the cost to produce that wasted amount (Sustainability Victoria, 2020). Food waste is a major contributor to climate change, responsible for around 15 per cent of Victoria's non-energy greenhouse gas emissions (Sustainability Victoria, 2020). Across the globe, around one third of all food produced for human consumption is wasted (FAO, 2011; 2019). The Victorian State Government is one of many around the world committed to halving food waste by 2030 (Sustainability Victoria, 2020).

Victoria produces the most food waste in Australia with the highest impacts of food waste occurring at the consumption end of the supply chain (Sustainability Victoria, 2020). This is because by the time the food gets to the consumer, it has accrued emission, water, and cost impacts from further up the chain. Food wasted at the consumer stage wastes more invested materials and resources than in any other stage of the supply chain (Sustainability Victoria, 2020). The best chance of reducing these impacts is by preventing waste occurring at the consumption stage.

Focusing on Bread – a Crumby Culprit Contributing to Consumer Waste

When considering the volume of waste, along with the impacts on emissions, resources and cost, there are six priority foods that need to be addressed through food waste programs: meat, milk, cheese, apples, bread and tomatoes (Sustainability Victoria, 2020). The waste from just three foods – meat, bread, and fruit – alone costs Victorian consumers $3.3 billion a year, equating to an annual cost of $532 per person. These figures are based on the value of lost food and the cost to dispose of the waste to landfill or the recovery costs for composting and energy (Sustainability Victoria, 2020).

Analyses in 2013-14 identified bread as Victoria's number one wasted food in households, with Victorians throwing away over 107,000 tonnes of it every year (Sustainability Victoria, 2014). More recently, bread was again highlighted as one of the top items being wasted across Australian households with 0.19kg of bread being wasted per household each week (Fight Food Waste CRC, 2020; Karunasena, G.G, Pearson, D, & Fight Food Waste CRC, 2021). Segmentation of Victorian data from the Fight Food Waste CRC's national survey identified that those reporting the highest level of bread wastage were females aged between

18 and 45 years with families (Fight Food Waste CRC, 2020). Parents with school-aged children are some of the biggest wasters of food overall and form part of a segment known as 'Over Providers' (Fight Food Waste CRC, 2020; Karunasena et al., 2021).

Families are often time-poor and this has been seen as one of the major reasons contributing to higher food waste for this audience (Sustainability Victoria & Fenton Stephens, 2013; Fight Food Waste CRC, 2020). Many families still struggle to plan and will often buy more food to have 'just in case', due to difficulties in predicting how much their family will eat in a week (Sustainability Victoria and Fenton Stephens, 2013; Fight Food Waste CRC, 2020). Families also report lacking confidence and experience with meal ideas and recipes and are nervous about keeping food for too long in case it is unsafe for the family to eat (Fight Food Waste CRC, 2020). Positively, families also have higher levels of motivation to avoid food waste and are more open to tools and information that can assist them in this (Sustainability Victoria & Fenton Stephens, 2013; Sustainability Victoria & Wallis, 2017).

As part of WRAP UK's LFHW program, bread was used as the basis for a successful social marketing campaign called "Make Toast, Not Waste" (WRAP, 2018). With bread also such a highly wasted item in Victoria, and one commonly purchased and used by one of the audiences most likely to be wasting food (i.e., families with children), SV modelled its most recent short-term social marketing campaign on WRAP UK's campaign and tailored it to the local context. The bread campaign used the tagline 'bread to be more than waste'.

Whereas other fruit and vegetable items may contain inedible components like stems or pips, bread waste is an entirely avoidable food waste item. There are many changes households can make to reduce the amount of bread wasted. Due to the nature of bread having a short shelf life and only being available in two standardised sizes (half or whole loaf), the campaign needed to focus on storing bread correctly and using the entire amount purchased, thereby preventing the need to buy more. The campaign focused on three groups of behaviours that can support families in storing and using more of their bread: freezing it, using it, and transforming it. Within each of these groups several behaviours were identified:

- Freeze it
    - Freeze half for later/freeze within one to two days.
    - Freeze it, date it and plan to use it.
    - Collect and freeze the 'end-bits'.
- Use it
    - Use the ends of the loaf.
    - Use it as is – toast, French toast, bruschetta.
- Transform it
    - Use leftover bread as an ingredient to make something else:
    - Make breadcrumbs for crumbed meat, meatballs, burgers.
    - Make croutons to add to salad.
    - Make bread and butter pudding.
    - Use to thicken soup.

These three groups of behaviours provided ways to overcome bread's short shelf life and help families see a wider range of uses for bread – even bread that is getting a bit old or the end bits that get left behind. It targeted attitudes surrounding bread waste and the skills and knowledge required for using the whole loaf. The campaign aimed to achieve an average total increase of at least 2% across the different target behaviours under freezing, using and transforming bread. Whilst moderate, the target was first informed by results achieved in SV's other sub-campaigns that incorporated WRAP's LFHW branding ("SV's LFHW campaigns") and then adjusted based on the constraints from COVID-19, which had reduced

available budget and time in market.
The creative style used in the campaign was a continuation of an overarching style that SV had previously used in its campaigns incorporating WRAP's LFHW branding. This style was designed to be bright, fun and positive, emphasising actionable behaviours along with providing tips and recipes as illustrated in Figure 1. The phrase 'bread to be more than waste' was a deliberate play on words, to ensure that behaviours were seen as humorous and tangible, not onerous or laden with guilt. Creative assets modelled the target behaviours making the call-to-action easy. The designs were tailored to the different channels used and visually designed to attract attention.

Figure 1. Examples of campaign communication materials and artwork used for Sustainability Victoria's Bread to be More campaign, incorporating WRAP's *Love Food Hate Waste*® branding that ran in 2021.

The campaign was in market for six weeks, from mid-April until the end of May 2021. It targeted a primary audience of parents with children, along with the principal grocery purchaser in the households. The campaign used primarily digital channels for the following reasons: resources and recipes were already available on the SV website and SV was keen to leverage these and direct audiences to them; the high usage of these channels already existing among the target audience; and maximising the greatest value from the advertising budget. A digital strategy was used to target online audiences that displayed similar traits to those who have previously engaged with SV's LFHW campaigns. Radio was used for four culturally and linguistically diverse audiences. Digital newspaper websites also targeted regional populations. Along with the advertising channels, a public relations and ambassador strategy was employed to drive campaign awareness and engagement. The Victorian cook and foodie personality, Alice Zaslavsky, was recruited to promote the campaign and she developed a range of bread-focused recipes and content showing ways to reduce bread waste.

During the campaign period, reporting on advertising engagement and reach was continually undertaken, with media and social coverage also monitored. Recall of the campaign and subsequent behavioural data was collected via a post-campaign representative survey, conducted with n=1003 Victorians in June 2021. Respondents were recruited via an ISO accredited research panel provider. Each respondent was offered an incentive payment in recognition of their time and insights shared. The sample was representative of the Victorian population with quotas set on age, gender and region. The sample was also post-weighted to reflect the Victorian 2016 census population parameters.

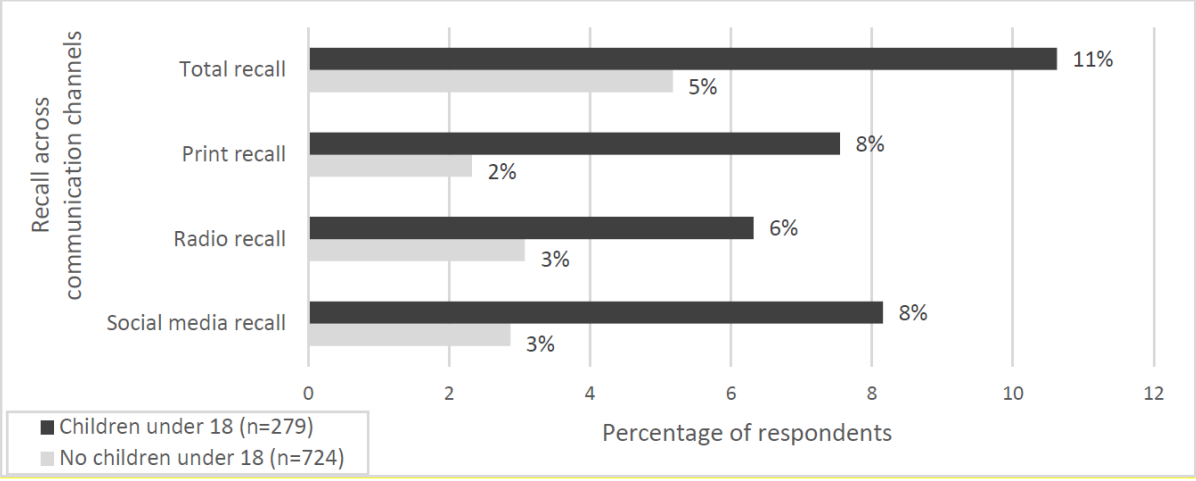
Outcomes

Over 22,000 unique views of the campaign webpage were recorded during the campaign period. The public relations campaign saw 175 pieces of media coverage earned across television, radio and print channels, with the total reach across public relations and media activities estimated at 34.6 million viewers.

Results from the post-campaign survey (n=1000) showed that 7% of Victorians overall recalled seeing the campaign and recall was evenly spread across social media, radio and press channels. Among the primary target audience of households with children under 18 (n=279), total campaign recall was significantly higher, along with recall across each specific campaign channel, as seen in Figure 2. This audience was significantly more likely to rate the campaign more strongly on a range campaign attributes, most notably that the campaign was relevant to them (64% agree) and that the campaign caught their attention (76% agree).

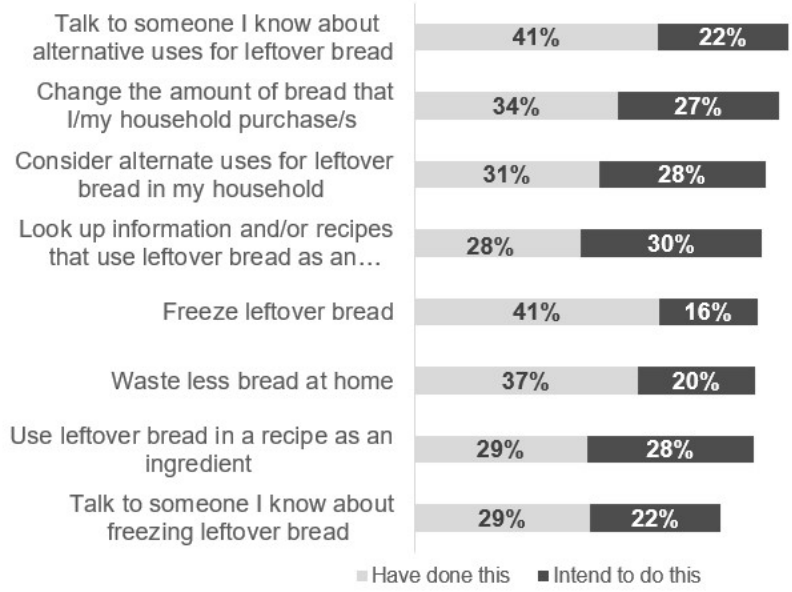
Although sample is limited, it appears households with children aged under 18, who saw the campaign (n=26) were highly likely to have taken action after seeing the campaign (90% suggested they took some action). When looking at the behaviours taken up in households with children under 18 who saw the campaign (n=26), the behaviours most commonly reported were to freeze leftover bread (47%), change the amount of bread that the household purchased (45%) or to look up information and/or recipes that use leftover bread as an ingredient (37%). Furthermore, among those within this audience who didn't see the campaign in market (n=253), future behavioural intention was strong. Over a quarter suggested they intended to look up information and/or recipes that use leftover bread as an ingredient (28%) or consider alternate uses for leftover bread in their household (27%).

Figure 2. Campaign recall across audiences with children under 18 years (n=1000).



At a total population level, those who recalled the campaign appeared likely to have taken some actions to address their food waste, as seen in Figure 3 (n=70). Two in five (41%) reported that, after seeing the campaign, they had frozen their leftover bread and a further 16% suggested they intended to do this in the future.

Figure 3. Behaviours undertaken by respondents who saw the campaign (n=70).



Overall awareness of the campaign ambassador, Alice Zaslavsky, was low (27%) but impressions of her were favourable with most respondents reporting her to be likeable (55%), appropriate for the campaign (54%) and trustworthy and credible (53%). The primary target audience of households with children aged under 18 were significantly more likely to have recognised Alice Zaslavsky (40%) and to agree that she was an appropriate advocate (62%).

More than four in five Victorians overall surveyed felt the campaign was easy to understand (84%) and credible (81%), but just over half felt it was relevant to them (53%). Positively, those in the primary target audience (households with children under 18) were significantly more likely to agree the campaign was relevant to them (64%). These results mirror other research findings around attitudes on food waste, which show that most do not see themselves as wasting food generally (Fight Food Waste CRC, 2020). This is a challenge for many food waste programs and campaigns because the audience often does not identify food waste as an issue they are contributing to, even if they believe it an issue worth addressing globally overall (Fight Food Waste CRC, 2020; Karunasena et al., 2021).

Lessons Learned and Recommendations

With such a short time in market, it is challenging to achieve meaningful and lasting behaviour changes in audiences. Despite this, the Bread to be More campaign delivered effective and impactful messaging and shows promise as a framework for future campaigns. The combination of public relations, media and ambassador activities delivered effective reach and exposure relative to the investment required. The evaluation results indicate that, of those who saw the campaign, at least one of the target behaviours had been subsequently taken up. Of the bread behaviours communicated, freezing bread demonstrated the best

results in converting from intention to action and should be a focus for future food and breadfocused campaigns.

It is recommended that campaigns look to promote other benefits and reasons for taking on food waste behaviours – and look beyond the environmental rationales surround food waste. This is due to the challenges often involved in connecting the audiences' own behaviours to the issue of food waste and many not seeing themselves as contributing to the problem (Karunasena et al., 2021). Using one food item (i.e., bread) provided a clear and specific focus. Even if the audience does not identify as wasting much food themselves, many could still see the benefits in using more of the bread they buy and so could take up those behaviours without having to self-identify or label themselves as being personally wasteful. For a campaign with such a short time in market, this focused approach has demonstrated it can still create results.

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Reflections on fighting food waste in an era of face masks

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Project and Issue Overview

Across the globe, around one third of all food produced for human consumption is wasted (FAO, 2011; 2019). The state of Victoria is responsible for around a quarter of Australia's food waste, with 2.4 million tonnes of food lost along the supply chains each year and $6 billion estimated as the cost to produce that wasted amount (Sustainability Victoria, 2020). Waste is generated at all stages of the supply chain which means many industries and individuals must change their practices to meaningfully address the issue. Driving any behaviour change requires time and is more difficult when it requires concurrent changes from multiple audiences (i.e., government, businesses, and consumers) and those changes need to continue during the world's longest pandemic lockdowns. This paper outlines some of the key learnings accrued from a government authority working in food waste over the last seven years – including those gained from campaigning during COVID-19.

Background and social context

Sustainability Victoria (SV) is a statutory authority within the Victorian Government, Australia and a key delivery agency working to transition the state to a circular, clean and climate resilient economy (Sustainability Victoria, 2021a). SV has been delivering social marketing campaigns on the issue of food waste since 2014, with its food waste program previously participating in the globally recognised campaign brand of Love Food Hate Waste™ ® ("LFHW"), which is owned and controlled by the Waste and Resource Action Programme (WRAP). It has been the Victorian Government's major social marketing

program aimed at reducing avoidable food waste. The most successful government-led social marketing campaigns and programs have taken many years to achieve their behaviour change impacts (Australian Public Service Commission, 2007). They have required longevity and consistency, whilst still evolving and adjusting to contexts. The recent impacts of coronavirus (COVID-19) on campaign planning and delivery created contexts never dealt with before. Governments delivering behaviour change campaigns have had to adjust their approach and be flexible, while still striving for impact.

Discussion of the issue/concept/idea/problem

Campaigning to change behaviours around food waste over the last seven years has brought several challenges. These arise from the nuances around the topic and subject matter itself, the scale and complexity of changes needed by multiple audiences, and the authorizing environment and political contexts of delivering social marketing campaigns within government. In the last two years, the arrival of coronavirus (COVID-19) in the Victorian community introduced new challenges. It saw both the audience, and the authorities communicating to them, dealing with a range of serious health and economic impacts.

Over six lockdowns the city of Melbourne ended up experiencing, cumulatively, the longest period of time spent in lockdown of any city globally, lasting over 260 days. The two major audiences for SV's food waste campaigns - hospitality businesses, and the general public – faced unemployment, loss of income, housing stress, isolation from loved ones as well as the fear and risks around contracting the virus. These factors prompted a necessary reflection and refocus on the way the campaigns had been delivered. SV identified what previously delivered elements should continue and what needed to change. The outcome of this reflection and the four key learnings gained are provided for the benefit of other practitioners, whether working in government, addressing the issue of food waste or grappling with the impacts of coronavirus (COVID-19).

Practical and conceptual implications and lessons learned

Targeting multiple audiences and behaviours is necessary for a problem like food waste.

The complexities of food waste mean that many interventions and changes are required concurrently by multiple audiences. No one audience or behaviour will solve it entirely. SV's campaign has targeted a range of different behaviours aimed at reducing food waste across different audiences and has adjusted over time in response to those involved. Audiences and behaviours have been chosen over time by assessing where the biggest impacts can be made, the likelihood of uptake by that audience and where SV is best placed to drive change. As a government-based organisation, SV has also considered all avenues for change available to it: informing policies and legislation, funding ideas, and influencing contexts.

With some of the biggest waste impacts occurring at the consumption end of the supply chain (Sustainability Victoria, 2020) the majority of SV's campaign activities has focused on Victorian residents and households. SV has primarily encouraged list-making behaviours and using up leftovers, but more recently targeted behaviours around bread consumption, due to it being a commonly wasted item. There are many behaviours a household can take to reduce their food waste, however meal planning and shopping behaviours have been shown to have a major impact on the amount of food households later throw away. Research has found that shopping with a list was one of the best ways to reduce household food waste (Stefan et al., 2013; Schanes, Dobernig & Gozet, 2018; WRAP UK, 2016, 2018). Research by SV found

that most Victorian families could be doing better at shopping with a list, with just under half of Victorians (43%) reporting they always shop with a list (Sustainability Victoria, 2018). These insights were the basis for the *Love-a-List Challenge*, designed to encourage families to use lists and track the savings made over four weeks. The online challenge has run three times since 2018 with 2,752 households signed up. Of those who responded to the post challenge survey over half reported they continued he target behaviours for four weeks or more (57%), saw substantial changes to the amounts of food thrown out (63%) and saved more than $50 a month on grocery bills (64%) (n=281) (Sustainability Victoria, 2021b).

SV has also worked to address food waste in hospitality businesses. Across Victoria, these generate around 180,000 tonnes of avoidable food waste each year, with half of this waste able to be addressed through changes in behaviours and practices within the business (Sustainability Victoria, 2020). Reducing avoidable food waste by even 5% for these businesses would save a cumulative total of $16.5 million annually (Sustainability Victoria, 2020). SV's *Love Food Hate Waste Business Program* ("LFHW Business Program") arose from licensing NSW EPA's Your Business is Food program, incorporating WRAP's LFHW branding and adapting it to the Victorian context. It has run between 2019 and 2021 with over 150 businesses recruited into the 4-week program. Businesses participate either through a self-guided online program or through accessing an in-person consultant led version. Both versions are built to help businesses identify and track where food waste occurs in their business, measure the reduction, and calculate the financial impacts of this waste. Businesses participating have typically reduced food waste by 3.7kg a day, saving an average of $13.50 daily or around $5,000 a year (Sustainability Victoria, 2020; 2021b).

SV has been a partner in the Fight Food Waste Cooperative Research Centre, an initiative designed to bring together a range of experts across the supply chain to identify what will work for different audiences and systems (Fight Food Waste CRC, 2021). In 2020, SV mapped the state's food waste system to identify where the biggest impacts could be made. The Path to Half report identified 25 solutions that could reduce Victoria's food waste across the entire supply chain (Sustainability Victoria, 2020). The benefit of being in government is the ability to address issues like food waste using interventions beyond those in the traditional marketing toolkit. The Path to Half report has informed grants and funding programs now being delivered by SV and the Victorian Government, with $3.34 million of funding provided to 12 food and organics projects over 2020-21 (Sustainability Victoria, 2021c). These projects will implement solutions to reduce or recycle food waste by over 50,000 tonnes each year and identify and trial solutions to reduce a further annual 693,000 tonnes of food waste.

Action can be generated even without needing to convince an audience they waste food.

When introducing the topic of food waste to an audience – many do not see much need to do anything differently (Karunasena et al., 2021). Making those links for them is complicated and requires more time than is available in a campaign heavily reliant on marketing channels and short concentration spans. Food waste is not a novel issue and most agree it should be avoided and have notable levels of motivation to do so (Fight Food Waste CRC, 2020; Sustainability Victoria and Fenton Stephens, 2013; Karunasena et al, 2021a; Karunasena et al., 2021b; WRAP UK, 2007). At the same time though, many Australians do not see themselves as contributing substantially to the issue or as wasting food themselves in any significant way (Karunasena et al., 2021). The waste the public does acknowledge is often mentally excused by the audience to alleviate their dissonance: it is labelled as unavoidable due to how it is packaged; or as something they are doing better at than most; or not labelled as waste at all because it is composted or fed to pets (Schanes, Dobernig & Gozet, 2018;

Fight Food Waste CRC, 2020; Karunasena et al., 2021; OzHarvest, 2021). Hence, there is lots of food waste to be avoided but few willing to self-identify as wasting that food.

Highlighting the large-scale impacts of food waste and how many are contributing to it can also cause the unintended adverse consequence of promoting descriptive social norms that normalize unwanted behaviours and reduce the audience's individual perceived response efficacy: *"If so many are doing the wrong thing, then my action will not solve this problem, so why even bother?"* (Borg, 2018; Borg and Curtis, 2021). This effect of norms has been seen in other behavioural campaigns (Borg, Curtis and Lindsay, 2020; Hallsworth et al., 2016; Schultz et al., 2007). When campaigns have such limited time to encourage behaviours and are up against an audience unlikely to see themselves as contributing to the problem, they need to look to other hooks for engaging audiences and motivating action.

Narratives around saving money and making funds go further have resonated strongly with audiences in SV's campaigns – for both household and business audiences (Sustainability Victoria, 2021b). Most businesses consider also reducing food waste to be important but are unaware of how much they waste and the true cost to bottom line (Sustainability Victoria and Colmar Brunton, 2019). For food businesses, messages on boosting profits and lowering operating costs, alongside reducing environmental impacts, have been successfully used to generate initial engagement (Sustainability Victoria, 2021b,d). Where the business program has been able to spend more time closely helping the audience track and visualize their food wasted (and challenge some assumptions around what is avoidable), the householder programs have not always had this option. Over three years, the *Love-a-List* initiative has relied on attracting householders into the online challenge by the opportunity to save money, regardless of whether they think they waste a lot of food or not. Of those who have responded to the post-challenge survey (n=281), 64% reported to save more than $50 a month, and 37% reported savings of over $100 during the month (Sustainability Victoria, 2021b). Each time it has run, the campaign has been able to provide a tangible financial amount to be gained from merely shopping to a list informed by its previous participants. This approach provides benefits and generates action regardless of whether one identifies as wasting a lot of food, bypassing that barrier.

Flexibility and adapting to context are vital to keeping campaigns relevant.

The pandemic and its effects on households and business have been widely described as 'unprecedented' by many – and this was especially the experience in Victoria. Many lost jobs and income, with high losses in the food and beverage services (HILDA, 2020). By mid-2020 income decreases were reported by 84% of accommodation and food services businesses and 40% of all Australian businesses reported to have changed the way products or services were being provided to customers (Australian Bureau of Statistics, 2020). Residents were unable to leave homes except for strictly limited reasons. One in four experienced some form of financial hardship during the initial lockdowns (VicHealth, 2020) and 40% of households experienced declines in income (Knight, 2020). One fifth of Australians experienced high or very high levels of psychological distress, a trend that continued into 2021 (Australian Bureau of Statistics, 2021). SV's campaign (incorporating WRAP's LFHW branding) had to adjust to the pandemic and determine what was still likely to resonate with an audience experiencing significant mental and financial strain.

The original pilot of SV's *LFHW Business Program* in 2019 had been designed for a hospitality industry before coronavirus. The next phase of the program was scheduled to roll out in 2020-21 and so several changes were made ahead of launch to adjust to the pandemic

context. The 2019 pilot had focused on businesses managing dine-in cafes and restaurants, but this audience was expanded to include a wider range of food and hospitality businesses, including takeaway venues and food retail stores (e.g., bakeries and delicatessens). While the entire hospitality industry was hit directly by the public health measures (Wilkins and the Melbourne Institute, 2020), these food businesses were less impacted by the lockdowns relative to dine-in venues.

Another change was in adapting key messages. Rather than mentioning the potential to "boost profits" the financial benefits were instead framed as "improving efficiencies and reducing costs". With so many businesses already watching profits disappear, this reframe provided a more realistic benefit for the audience. Despite the pandemic pressures, the 20-21 program saw 130 new businesses sign up: 69 via consultant-recruitment and 61 online (Sustainability Victoria, 2021b,d). Phone conversations and SMS messages were used by the consultants to make it easier to communicate with participants during business hours, when they were in kitchens or on the floor. Within the consultant-supported cohort, 27 were unaffected by ongoing disruptions and able to complete the entire program, reporting an average decrease of 29% in food wastage, equating to $6,684 in savings per year per business participant (n=27) (Sustainability Victoria, 2021b,d).

Despite being encouraged to minimize visits to retail stores, Australians led the world in panic buying during the first months of the pandemic, with supermarket spending rising by 24% in March 2020 (Jericho, 2020; Keane & Neal, 2020). The messaging for the Love-a-List challenge was altered in response to householder behaviour with more focus placed on meal planning behaviours, alongside lists, to reduce non-essential shopping trips and encourage residents to only shop when necessary. More content was shared showing how to use up food already in the house. Creative assets displayed online grocery shopping examples and more images of people cooking in their homes. Financial savings to be gained from using a list were still emphasized but time-savings were also highlighted – as the average workday had increased by around 8% (Productivity Commission, 2021) and many were juggling family commitments and remote learning (Tanner, 2020).

Repeat what works, build on successes and check your assumptions.

More than seven years of running food waste initiatives has allowed SV to learn and refine along the way. The *Love-a-List Challenge* has run three times, and each has allowed SV to adjust to the external context and consolidate successes, repeating what works. With the limitations on time available in market and budgets, social media advertising has provided high reach and conversion rates for the spend available and become a major part of the strategy. Although the core elements of the challenge have remained, improvements have been made to the online user experience and emails used in the challenge, to reduce overall information and make resources easier to find. These alterations realized a 10% increase in email open rates and higher times spent on the webpages in the most recent challenge, improving engagement (Sustainability Victoria, 2021b).

The overall time in market for the *Love-a-List Challenge* in 2020-21 was shortened due to government prioritising health communications. This meant lower total sign-ups compared to the first time it ran. Despite the reductions in advertising budget and time in market, the 20-21 challenge actually achieved a higher sign-up rate per month compared to previous years (Sustainability Victoria, 2021b). This was likely due to the improvements made online, along with retaining the key elements that worked so well previously.
Having the ability to focus on the food waste issue over many years has enabled many efficiencies to be gained over time for SV. The original *Love Food Hate Waste*® campaign in

the UK, has been run by WRAP since 2007 and this longevity has helped make it one of the most successful global campaigns in reducing household food waste (WRAP UK, 2021). Having dedicated teams, time and investment leads to learning and building on successes and ultimately greater impacts.

Recent research released by OzHarvest and BehaviourWorks Australia (2021) showed that list-making is still a highly impactful behaviour in terms of reducing household food waste. However, the opportunity for behavioural uptake across the population is lower than other behaviours (OzHarvest, 2021) due to more Australians now reporting to do some form of basic meal planning and list-making. These behaviours are becoming more commonplace, and the emphasis instead will shift to ensuring citizens stick to their lists when shopping, not just create them. It is vital to keep revisiting behaviours and audiences to ensure the focus remains on those able to drive the most change. This process of reviewing, researching, and refining will ensure these programs remain effective into the future and achieve the reductions in food waste this planet urgently needs.

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Condom use by the over 50's: the shared sphere of eroticizing, enhancing and enriching sexual experiences

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Introduction

Sexual health continues to be a socially complex problem in Australia with sexually transmitted infections (STIs) such as chlamydia, gonorrhoea and syphilis rates continuing to rise despite extensive government and social marketing initiatives (Firestone, Rowe, Modi, & Sievers, 2017). The number of over-50s contracting chlamydia, gonorrhoea and syphilis has nearly doubled in Queensland over the past four years increasing form 541 reported STIs to 1,078 cases in 2017 (*National Notifiable Diseases Surveillance System*, 2020). Heterosexual Mature Adults (HMAs) aged 50 years and older have a distinctive life history which has resulted in a consumer market that is confident in who they are and what they want from sexual experiences but have little awareness of the changing health environment (DeLamater & Koepsel, 2015; Marshall, 2011; Quine, Bernard, & Kendig, 2006). These adults are therefore re-entering the dating market with liberal sexual attitudes, limited risk perceptions and possibly no experience of condom use or negotiation (Gewirtz-Meydan et al., 2019). Current social marketing interventions ignore this growing group of consumers and instead focus on youth, homosexual, indigenous and ethnic minorities as they are incorrectly deemed more likely to engage in higher risk sexual behaviours (Dimbuene, Emina, & Sankoh, 2014). Evidence demonstrates that condoms are not designed for use by mature consumers who have physiological barriers that decrease positive experiences of condom use (Messelis, Kazer, & Gelmetti, 2019). Traditionally social marketing condom interventions focus on individual insights and the social psychological barriers with little understanding of the shared customer experience. This dominant emphasis in practice and scholarship on individual behaviour reveals a significant gap in the social marketing literature pertaining to condom use. Specifically little is known about the *lived customer experience* of condom use by HMAs and the complexity of *shared experiences* (Johnston & Kong, 2011; Palmer, 2010). In line with reflexive praxis (McHugh & Domegan, 2017), this research aims to extend the understanding of the elements contributing to success or failure of condom use behavior (Braun, 2013). The first theoretical framework used to frame this study is Gentile, Spiller and Noci, (2007) six component customer experience framework that explores *the sensorial, emotional, relational, cognitive, pragmatic and lifestyle elements of the customer experience.* The second framework is Grönroos and Voima's (2013) value spheres where the *provider sphere* is a value facilitator and produces resources and processes for the customer's use and the *joint sphere* is where there is direct interaction between the provider and customer (P2C) and in this space the provider and customer can co-create value. The rest of the customer sphere is closed to the provider whereby the customer creates value through independent value-in-use (Grönroos and Voima, 2013).

Method

To understand condom use by HMAs 50 years and older, a qualitative research method was selected whereby social reality is constructed thorough subjective and consensual meanings (Denzin & Lincoln, 2011). This perspective focuses on understanding the construction of knowledge and local truths within a specific culture and or context (Yilmaz, 2013). A purposeful national sample of 24 adults aged 50 years and older who self-identified as heterosexual and were not in a committed relationship were invited to participate. There was an even distribution of males and females within the sample and their ages ranged between 50-70 years old. Due to the sensitive nature of the topic a semi-structured interview approach with the use of projective bubble drawings was used allowing exploration of intimate thoughts and feeling in a painless unobtrusive way (Donoghue, 2000). The research participants were recognised as reflective actors and were encouraged to contribute towards the construction and interpretation of sexual experiences both with and without a condom (Kariippanon, Gordon, Jayasinghe, & Gurruwiwi, 2019; Yang, 2015). Participants were asked questions that contextualised the construction of their opinions, attitudes and experiences of condom use across their lifetime acknowledging continuance of change (Gordon & Gurrieri, 2014). The projective technique physically captured participants cognitive, emotional and expectations of sexual experiences both with and without a condom. The process elicited rich data on the complexity of sexual experiences and how the customer experience of condom use connects to their anticipated experience and sexual outcome. Thematic analysis of verbal transcripts and visual data was conducted using NVivo and followed an inductive deductive approach (Fereday & Muir-Cochrane, 2006).

Results

The mature customer experience of condom use by participants is a complex dance between the competing needs of the individual and the shared sexual experience of the couple. Comparative analysis and discussion with participants identified that their lived customer experience of condom use is one that is lesser, unnatural and considered to be "bad" in comparison to sex without a condom (Fig.1).

> *"I wouldn't want to do it* [use a condom] ….. *it's going to be bad sex" Monty, 64*, "They* [condoms] *just passion-less!"* ***Florence, 61* ,*** *"I find it unnatural. To me it becomes like a surgical thing…. I dunno if you've ever had natural sex but it is really fantastic"* ***Albert, 59,*** *"…. it's like missing the skin to skin contact."* ***Olive, 62***

All six elements of customer experience (Gentile et al 2007) were found to be present in HMAs lived experiences of condom use (Fig.2). The outcome of the sexual experience was represented by the sensorial, emotional and relational elements while the process was represented by the cognitive, lifestyle and pragmatic elements. The shared experience of condom use by participants was made apparent through discussion and the projective bubble drawings. Participants naturally referred to their sexual experiences as "shared" involving themselves and their partner.

> *"I've always had the attitude when you're having sex, it really is a pleasurable function for the both of you."* ***Xavier, 59****, "I mean, intimacy and with the person, you're basically one person at that time."* ***Ulrich, 57,*** "*He [casual sex partner] fulfils a need in me, now, like that intimacy and closeness" Dorothy, 51*

The projective technique captured physical evidence of a "shared experience" that did not involve the provider. Participants drew lines, arrows and placed emotions and comments between the figures (see Fig.3). This research has identified that three ways that two customers simultaneously consume a single product and co-create value without the provider being present. Each HMA has their own customer experience of the condom use during the sexual activity and as it is being used by both sexual partners this experience simultaneously creates a third "shared experience". Participants identified shared emotional (embarrassment, discontent, joy), physical (pleasure, pain,

heat, friction) and practical (process, ambiguity, responsibility) aspects of condom use. Active and willing participation in the use of a condom by both sexual partners was found to facilitate its use.

Discussion

This research has identified the phenomenon of the Shared Sphere of value co-creation which consists of *sensorial, emotional* and *relational* elements of customer experience. The Shared Sphere occurs when a single product or service is simultaneously used by two customers. The shared sphere extends Grönroos and Voima's (2013) value creation spheres beyond the *provider, joint* and *customer spheres*. This research proposes a second customer sphere (other customer) where two or more customers simultaneously engage in the use of a resource or process from a provider (Fig.4). These customer experience elements (*sensorial, emotional* and *relational*) are all in the moment, not cognitive and ultimately provide evaluation of the experience. These elements are what is felt physically, emotionally and socially by the HMA. Akin to the first customer sphere, the Shared Sphere and Other Customer Sphere is independent from the provider's visibility and control (McGraw, Russell-Bennett, & White, 2018). The value created within the shared sphere is uniquely and phenomenologically determined by the beneficiaries of the shared experience and as individual customers. Active involvement by both customers with the resource/process (condom) in the shared sphere was found to facilitate behaviour. The shared sphere presents an opportunity for social marketers to create value propositions for mature consumers that focus specifically on enhancing, eroticizing and enriching the shared sexual experience of condom use. Mature consumers should be involved in this process as they are the reflective actors and the only actors who can elicit and articulate the value of condom use within the shared sphere (Gordon & Gurrieri, 2014; McHugh & Domegan, 2017). Barriers to condom use identified within the shared sphere included embarrassment, physical pain, heat and friction and process ambiguity. Social marketers could address these barriers by redesigning the packaging (easier to open, mature branding), product (ultrathin and extra lubrication) and instructions (larger print and application strategies) to ensure an erotic experience is feasible. The three key customer experience elements of sensorial, emotional and relational in the shared sphere could be enhanced and enriched by promoting strategies and tactics to increase intimacy and sexual sensitivity when using a condom and remove stigma around condoms use and casual sex. Further research should be conducted with couples to identify the customer journey of each sexual partner leading up to, during and after condom use to further refine pain points within each customer sphere and the shared sphere. This research has pushed the boundaries of social marketing looking beyond the individual and the social psychological environment to examine shared intimate and intrinsically complex shared experiential behaviour.

Tables and Figures.

Table 1. Research contributions

Managerial Problem	Theoretical Contribution	Research Question	Theoretical Contribution	Managerial Contribution
Interventions to increase condom use are targeted at individual behaviour and are not designed to address the real or perceived physical, emotional and cognitive barriers of HMAs	We do not know the elements of the lived customer experience of condom use by HMAs involving another person.	How do HMAs perceive the lived experience of condom use and how does this co-create value?	- The customer experience elements of condom use form the process and outcome of the behaviour. - The value spheres framework has been extended to include the shared sphere	- Redesign condoms to align with physical and psychological limitations of HMAs -Promote condoms based on shared not individual value propositions

Figure 2. Mature Customer Experience of Sex

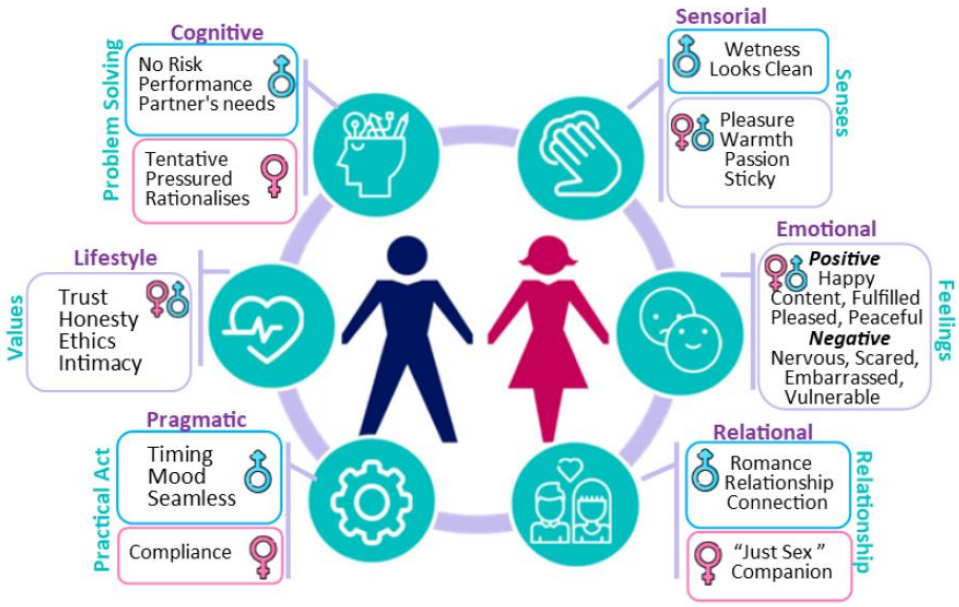


Figure 2. Mature Customer Experience of Condom use

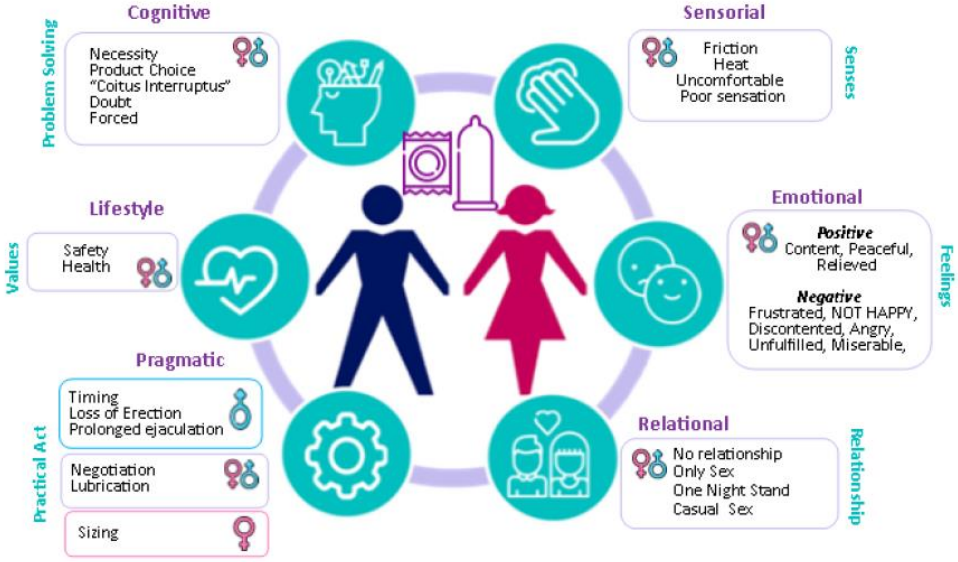
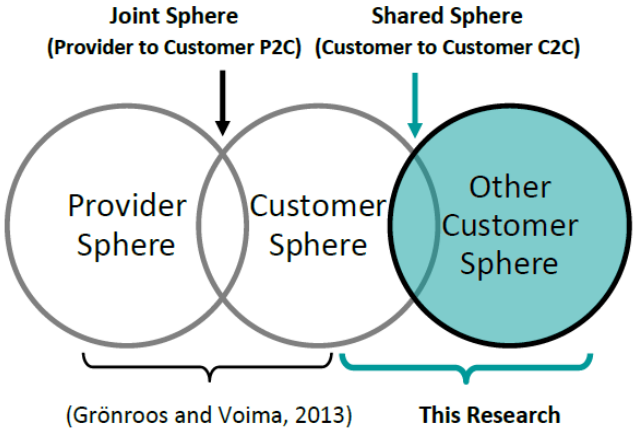


Figure 3. Raw Data of the Shared Experience

Figure 4. The Shared Sphere



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Do consumers envisage food well-being when co-designing programs for retail settings?

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Indigenous health rituals to treat COVID-19 patients in the Peruvian Amazon. A discursive study

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Abstract

Social marketing interventions targeting Indigenous people should understand Indigenous ideas and how they relate to and construct their social life. Indigenous people have a holistic view of health and illness that is linked to their culture, nature and ancestral knowledge. Drawing on the discourse of the Shipibos, one of the largest ethnic groups in the Peruvian Amazon, we studied how Indigenous ideas shape and are shaped by Indigenous health rituals to treat COVID-19 patients. The corpus of the discourse included webinars, online interviews and posts/comments on a Facebook page, in which the Shipibos narrate their experiences using Indigenous health rituals from the beginning of the COVID-19 pandemic. We found that the Shipibo values, such as solidarity, reciprocity and complementarity, act as forces to enact their health rituals; and the Shipibos use their ancestral knowledge and health rituals to resist and contest the hegemony of Western medicine professionals and practices.

Pushing the right buttons: The mediating effects of Positive Social Marketing Reinforcement on socially responsible consumption

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Introduction

The food waste phenomenon in Malaysia amounts to an estimate of 6.5 million tonnes in 2020 (Hamid et.al, 2012). Households are biggest contributor to this phenomenon (38%); followed by food courts and restaurants (23%), markets (24%), and hotels (7%) (Jereme et.al, 2016). There is an intense competition within the food and beverage industry as resulting in restaurant patrons demanding portion satisfaction, sometimes over and beyond their consumption capacity. This action of the industry racing to meet these demands has indivertibly created a wasting culture from the patrons whereby large amounts of edible food are thrown away. To date, food courts and restaurants are second largest contributor to food waste in Malaysia. 65% of food wastage could be avoided if consumers adopt a more sustainable consumption behaviour (Wharton et. al, 2014). Hence our research proposes that positive social marketing messaging is the key to encouraging such a culture.

Current market analysis shows that several initiatives in promoting positive behavioural consumption lack one or two of the important elements in influencing behavioural change (Comber et al., 2013). Nudge theory (Thaler and Sustein, 2009) states that positive behavioural change is most effective when motivation, ability and trigger work in tandem with external influences (Fogg Behavioural Model (Fogg, 2009). Consumers who desire to be more equitable and sustainable do not

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necessarily translate their intentions effectively due to the lack of suitable platforms. Hence the encouragement for positive behavioural change lacks visibility as a result of inexplicit and unobservable impact of their actions. Digital nudge has been considered an effective influential choice architecture platform (Thaler and Sustein, 2009) for behavioural change. However, several literature has revealed that there is limited consideration on the effectiveness of digital nudge especially to prevent consumption waste (Farr-Wharton et al.,2014b, Young et al., 2017 and Lazell, 2016).

As such, this study aims to ***investigate the effects of choice architecture on positive behavioural change***. We seek to answer the following research questions:

RQ 1: How do tangible influences (social media and restaurant service) affect positive behavioural change (socially responsible consumption)?

RQ 2: What is the mediating role of non-tangible influences (positive and negative reinforcements) on positive behavioural change (socially responsible consumption)?

Method

This research employed a field experiment at a casual dining franchise (i.e. The Manhattan Fish Market) randomized from 2 different outlets (Sunway Pyramid and Wangsa Walk malls). Both outlets were chosen due to their high traffic based on the strategic locations. A total of 628 respondents participated in the experiment during both lunch and dinner periods. 412 of the respondents consist of both control (no reinforcement) and influence exposure groups (positive and negative reinforcement groups). The tent-cards used for the different groups are seen in Figure 3.1. Each respondent was asked to fill in a questionnaire after they finished their meal. In addition, all the respondents (including the 216 who were not given any exposure) had their leftovers (if there were any) weighed and recorded alongside with their purchase receipt amount (which indirectly gives us our consumption waste per unit revenue). The number of respondents for the randomization of the field experiment is detailed in Table 3.1.

Figure 3.1: Tent Cards Design - Social Marketing Reinforcement Messaging and Control

Table 3.1: Intervention Schedule Developed for This Study

	Experiment		Placebo	

	Sunway Pyramid Mall	Wangsa Walk Mall	Total	Sunway Pyramid Mall	Wangsa Walk Mall	Total
Week 1	162	69	231	74	40	114
Week 2	65	53	118	16	29	45
Week 3	6	6	12		12	12
Week 4	44	7	51		45	45
	277	**135**	**412**	**90**	**126**	**216**

Results and Findings

The respondents' demographic breakdown was almost evenly represented by both males (42%) and females (58%) with a good mix of Malay (59.7%), Chinese (29.9%), Indian (6.8%) and other ethnicities (3.6%); whilst a majority of the respondents were aged 30-49 (76.4%). The SMART PLS measurement model analysis (n=412) represented the positive and negative reinforcement variables and formative constructs while the rest were remained as reflective. The structural model analysis results in Table 3.2 (Refer Appendix 1.0) shows that tangible influences (social media and restaurant service) do not directly influence behavioural change (H4: $\beta = -0.006$ and H6: $\beta = 0.001$; $p>0.05$). Interestingly, Table 3.3 (Refer Appendix 1.0) shows only the significant mediating effect of positive reinforcement between restaurant service (H9: $\beta = 0.113$; $p<0.01$) and social media posting (H10: $\beta=0.163$; $p<0.01$) on behavioural change.

Further to our analysis from the 412 respondents (experiment); another 216 (placebo) diners had their purchase receipt amount tabulated as well. When compared, the experiment group showed an average of RM 0.45 consumption waste per unit revenue versus RM 1.44 for the placebo group; which is an approximate of 1:3 difference in waste consumption (Refer to Table 3.4). This shows that digital nudge effect and intervention influences reduction in consumption waste. This influence is further strengthened by positive reinforcement messages.

Table 3.4: Food Waste Collected from Field Experiment

Research Types	**Total No. of Tables**	**%**	**Total amount of food leftovers (in grams)**	**Consumption Waste Per Unit Revenue (RM)**	**Impact**
Diners at Restaurant			***Food waste at tables***		
Experiment (with questionnaire)	412	65.6	11,920	RM 0.45	3 x reduction
Placebo (without questionnaire)	216	34.4	20,530	RM 1.44	
Total	628				

Discussion and Conclusion

Reduction of food consumption waste is a challenge that needs to be addressed by the food industry. This research has demonstrated the combination of Fogg Behavioural Model and the nudge theory emphasising the importance of using persuasive technology (encompassing elements of motivation, ability and trigger) to activate positive behaviour change. Furthermore, the choice

architecture within the nudge theory is activated when influential interventions (i.e. positive reinforcement) transforms unconscious decisions to action to the conscious level. The food consumption reduction activity is shown to be most cost-effective in yielding significant social and environmental impacts relative to other activities. By addressing consumption waste, this research has also targeted the largest cumulative impact consumption has on the food value chain. Every 1 kg of food waste at consumption has a significantly higher environmental impact than 1 kg of food waste at farms, processors, supermarkets, or groceries (i.e. any upstream value chain activities) (Lipinski et.al, 2013). Thus, to address consumption waste, sustainable consumer behaviour coupled with positive reinforcement can prove to be an effective strategy by the food industry. However, this warrants further investigation to examine how this sustainable consumption culture can effectively encouraged. This research has shown the potential of positive social marketing messaging and digital nudging for the improvement of sustainable practices both for industry and individual.

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Appendix 1.0

Table 3.2: Structural Model Hypothesis Testing for Direct Relationships

Hypothesis	Relationship	Std Beta	Std Error	t-value	Decision	f2	95%CI LL	95%CI UL
H1	Social Media Posting → Positive Reinforcement	0.316	0.055	5.740**	Supported	0.077	0.211	0.395
H2	Social Media Posting → Negative Reinforcement	0.334	0.07	4.775**	Supported	0.092	0.209	0.438
H3	Social Media Posting → Behavioural Outcome	-0.006	0.048	0.134	Not Supported	0.000	-0.083	0.074
H4	Restaurant Service → Positive Reinforcement	0.219	0.054	4.069**	Supported	0.088	0.122	0.300
H5	Restaurant Service → Negative Reinforcement	0.197	0.068	2.881**	Supported	0.069	0.077	0.301
H6	Restaurant Service → Behavioural Outcome	0.001	0.053	0.027	Not Supported	0	-0.081	0.092

a. ** p<0.01, *p<0.05

b. R2 (Behavioural Outcome = 0.287; Negative Reinforcement = 0.196; Positive Reinforcement = 0.195);

c. Effect Size impact indicator are *according to Cohen (1988), f_2 values: 0.35 (large), 0.15 (medium), and 0.02 (small)*

Table 3.3: Structural Model Hypothesis Testing for Mediation Relationships

Hypothesis	Relationship	Std Beta	Std Error	t-value	Decision	95%CI LL	95%CI UL
H7	Restaurant Service → Negative Reinforcement → Behavioural Outcome	0.009	0.013	0.651	Not Supported	-0.011	0.033
H8	Social Media Posting → Negative Reinforcement → Behavioural Outcome	0.015	0.022	0.685	Not Supported	-0.018	0.052
H9	Restaurant Service → Positive Reinforcement → Behavioural Outcome	0.113	0.030	3.748**	Supported	0.064	0.161
H10	Social Media Posting → Positive Reinforcement → Behavioural Outcome	0.163	0.032	5.183**	Supported	0.108	0.211

** p<0.01, *p<0.05

Switch your fish: Process and outcome evaluation of a pilot campaign

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Team overview

This 'Fishing for Change' project was supported by funding from the Fisheries Research and Development Corporation on behalf of the Australian Government. The two-year project was led by Currie. Currie and Social Marketing @ Griffith delivered this project in a partnership with the Queensland Department of Agriculture and Fisheries (DAF), CSIRO and the Centre of Marine Socioecology. The project team established for this two-year pilot project collectively offered expertise, industry knowledge and the scientific experience needed to design, implement and evaluate a behavioural change pilot program in a recreational fisheries context. DAF Fisheries Biologist Samuel Williams acquired recreational catch data to evaluate any shifts in fish harvest. Sophie Clayton and Mark Paterson led the development and delivery of the pilot social and behaviour change communication campaign called 'Switch Your Fish'. Sharyn Rundle-Thiele and Carina Roemer from Social Marketing @ Griffith led delivery of Creating Collective Solutions and co-design processes and Sophie Clayton led stakeholder communication. All research methods were combined to deliver insights needed to inform pilot program design and implementation.

Problem/opportunity statement (including aims and SMART objectives)

Two popular iconic fish species, snapper and pearl perch, both favourable targets for recreational fishers, are depleted in Queensland indicating that current management approaches are failing to deliver desired outcomes (Fowler et al., 2021; Roelofs & Stewart, 2021). Urgent management actions have been proposed in a Queensland Government discussion paper to improve stocks (Queensland Government, 2020). Given previous regulatory approaches have been unsuccessful in improving stocks of both species (Fowler et al., 2021), implementation of action mapping and social marketing approaches in addition to regulatory changes may be more effective. Social marketing delivers innovative solutions that people value and that support desired outcomes (McIlgorm et al., 2016). It draws on social and behavioural sciences and delivers a psychology-based understanding of how and why people behave (Rothschild, 1999), what motivates them to change and what prevents behaviour change (Roemer et al., 2021). All are key to successful implementation. A key challenge in addressing how to recover depleted fish stock is the numerous and diverse stakeholders with an interest in recreational fishing many with conflicting agendas. This makes change challenging. New approaches that bring different people and organisations together to prioritise agreed areas for action and generate solutions that can achieve desired outcomes are needed. Motivated by the need to bring diverse stakeholders together to identify a program that could be piloted, this project aimed to:

1) Develop and test a behaviour change program targeted at recreational fishers that aims to increase fish stocks of snapper and pearl perch in Queensland.
2) Identify the most effective behaviour change interventions that could be further rolled out in Queensland.
3) Share knowledge and ownership of a behaviour change approach with key stakeholders.

The project was conducted across two phases, namely the research phase and the behaviour change phase.

The 'Switch Your Fish' Campaign

Phase 1 – Identify an effective approach that can be rolled out

A deep learning phase that involved a combination of research approaches was applied to identify an effective approach that could be trialled. Over a six-month period, the team gathered 923 priorities from 239 stakeholders, identifying three key priorities for consideration that people agreed could be used in a behaviour change campaign to reduce catch of two key recreation fish species. Priority solutions included shifting focus to alternative species. A survey was implemented to identify alterative fish species and this was completed by 125 participants. Examination of fish stocks for preferred alternatives was next undertaken to ensure alternates identified would not be placed under ecological pressure. Both wider stakeholders and recreational fishers (n=18) co-designed solutions. Co-designed solutions that were widely supported included promotion of alternatives fish species across a monthly calendar and a campaign that involved influencers. A six-month pilot campaign was launched in April 2021. Pilot project implementation was affected by COVID-19 lockdowns and restrictions, which extended the pilot by one month. Taken together, the learning phase identified that recreational fishers and other stakeholders supported approaches that did not dictate what to do directly to reduce catch and rather took a positive stance promoting alternative species with abundant stock. The research team identified potential barriers and benefits for each of the alternate species identified. Research learnings, including the language used by recreational fishers, were used in communication materials for the pilot campaign. The pilot was aimed at recreational fishers departing from Sunshine Coast boat ramps (Kawana and Mooloolaba boat

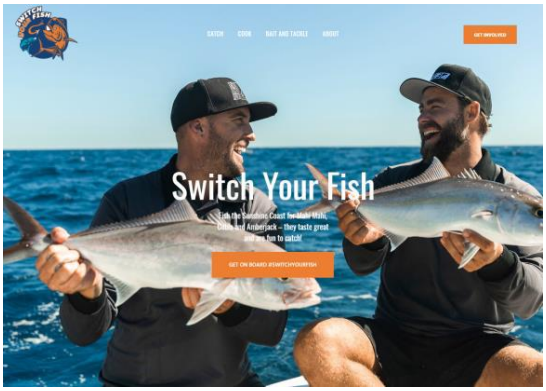
ramps). Social and behaviour change communication (SBCC) materials aimed to encourage recreational fishers to increase catch of alternative target species (Mahi Mahi, Amberjack and Cobia) with the overall aim of reducing the catch of pearl perch and snapper.

The pilot campaign utilised a range of communication channels with the key aim of promoting alternative species whose populations were considered to be abundant, when compared to threatened pearl perch and snapper species. Switch Your Fish Facebook and Instagram accounts were launched in April 2021 and the Switch Your Fish website was first published in May 2021. A content calendar was created by the project team focussing promotion on alternative species. Content was organised into different fish species on a monthly basis. Social media was used to share original core content, connect with local fishers, engage with fishing social media influencers, share and support relevant content produced by others about our target fish where posts were in line with the campaign's objectives and values, and to communicate key messages about the campaign. The project website contained core content about the campaign providing information on how to get involved and information about our target species (Mahi Mahi, Amberjack and Cobia). Information aimed to show recreational fishers how to fish for Mahi Mahi, Amberjack and Cobia (for example see Figure 3) and the website provided ideas on how to cook alternative species providing recipe cards that were created by well-known chefs (see Figure 1) and video demonstrations.

Figure 1: Fishing influencers sharing recipes and showing enjoyment of catching alternatives

Figure 2: Campaign website landing page

Figure 3: Fishing demonstrations



Media personalities, fishing influencers and project partners worked with the project team over the six-month period. For example, Queensland Department of Agriculture and Fisheries posted alerts on its QLD Fishing 2.0 app, social media channels and newsletters prompting people to visit the 'Switch Your Fish' website.

A launch event focussed attention on the pilot campaign. Sunshine Coast-based SCF Australia – who run events and activities related to sustainable fishing – hosted the launch at the Mooloolaba seafood restaurant Pier 33 with TV fishing personality Rob Paxevanos launching the campaign. Three fish dishes were served featuring Mahi Mahi and Cobia, Queensland Department of Agriculture and Fisheries hosted a Fish Aggregation Device display and participants signed up for the pilot campaign via a commitment wall (see Figure 4).

Figure 4: Commitment wall

Figure 5: Boat ramp signs

Other communication channels used in the pilot campaign included boat ramp signage (see Figure 6) and flyers (see Figure 7). Boat ramp signs were produced in partnership with Sunshine Coast Council and installed at Mooloolaba Coast Guard Ramp and Kawana Boat Ramp. Boat ramp signs aimed to provide an on-ground prompt for recreational fishers.

Figure 6: Switch Your Fish Flyer

Outcomes/evaluation

More than 3,700 people visited the Switch Your Fish website. The most frequently visited pages with more than 1,500 views each were the pages promoting how to catch and cook the alternative species, namely Mahi Mahi, Cobia and Amberjack. Over 6 months the campaign built following in Facebook (n=284) and Instagram (n=404).

Boat ramp and charter boat data showing what fish were caught will be delivered to the project team after November 26th 2021 and campaign results will be presented at the conference. Details on the evaluation approach follows. The outcome evaluation will observe whether changes in recreational and charter fishing catch or targeting can be detected from within the target campaign area (treatment) in comparison to adjacent fishing areas (control). Catch information from before and during the campaign period will also be assessed, to account for temporal variability. Accounting for this temporal variability is pertinent due to changes in local fish abundance and human behaviour particularly given the campaign was run during periods of COVID-19 restrictions. The two forms of data to be evaluated are Charter Fishing Logbooks (CFL) and Recreational Boat Ramp Surveys (BRS).

BRS data has been collected by Fisheries Queensland at the two offshore boat ramps in each of the Sunshine Coast (treatment) and Gold Coast (Control) region from April 2018 to October 2021. Boat ramps were selected based on the presence of high reported catches of Snapper and Pearl Perch. Boat ramp surveys record day and location fished, primary target species and catch of key species (including discards). Surveys are conducted at each ramp 5 times a month with 3 weekday and 2 weekend shifts. Survey shifts are 4 hours in length starting at 9am or 12pm. Time of day and day of week are randomly allocated within a month for each ramp with severe weather days not surveyed.

Results and lessons learned

Apart from weather, which was beyond the team's control; a key challenge experienced by the project team that occurred between phase one and two resulted in a shift in locations from Brisbane's Bayside to the Sunshine Coast as the treatment arm of the field trial. This decision was made as the Sunshine Coast is smaller ensuring the projects communication budget could adequately accommodate the six-month promotional period. A consequence of this decision was that stakeholders identified in the Brisbane area were partially lost in the implementation phase. Completion of phase one within the Sunshine Coast area would have further strengthened support during pilot program delivery. Other lessons learned by the project team include the opportunity to engage even more with local stakeholders (e.g. tackle retailers, local government. seafood retailers); ensuring a local on-ground lead; the need to build trust with local stakeholders which may take time; and looking for commercial incentives to support the campaign. Identifying a shift in fisher behaviour can take time to emerge and one lesson learnt from this pilot would be to collect additional metrics to assess fisher behaviour in addition to boat ramp surveys and logbooks where an effect may be diluted. For example, lab experiments to test strength of messaging types with fishers, or ongoing journal type surveys with a sample of fishers and other stakeholders over a season or set time-frame to record catch and any changes, or a wrap-up workshop featuring delivery of logbooks by stakeholders to give a qualitative account of preferences.

To ensure the project was delivered on time, timing and promotion of the alternative species were carefully considered. A key difficulty faced by the project team centered on supply of the alternate fish via the food service industry which limited our ability to offer more exposure of fish recipes in local restaurants. For example, at the start of the campaign neither Cobia nor Amberjack were available at fishing retailers at the Sunshine Coast and Mahi-Mahi was available at one shop only. Sourcing of Amberjack was not possible to serve at the Launch event at Pier 33. Delivering a project during the COVID-19 pandemic posed significant challenges including the need to deliver stakeholder workshops online, postponing activities (e.g. co-design sessions, the launch event and on-water fishing activities) and restrictions limited the ability for project partners to travel into Queensland to service the needs of the project. Customer relationship management (CRM) was established with a growing number of email contacts of participants and other stakeholders engaged with over time. A more comprehensive list from the start would have further strengthened performance during the project.

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Does the environment remain underexposed? A scoping review of social marketing research

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Introduction to the Research Problem and Literature Review

Climate change is a pressing issue in our society today, requiring immediate action from governments, industries, and citizens (IPCC, 2021). At the same time the field of social marketing, which draws on commercial marketing techniques and behavioural sciences to achieve a specific social goal focused on the public good (Andreasen, 2002; McKenzie-Mohr, 2011; Peattie & Peattie, 2009), is increasingly addressing environmental issues (Almosa et al., 2017; Green et al., 2019; Kim et al., 2019; Takahashi, 2009; Truong, 2014; Veríssimo, 2019). However, research shows that social marketing still focuses primarily on public health (Kim et al., 2019; Truong, 2014; Truong & Dang, 2017). Given the relevance of climate change (IPCC, 2021) and the already demonstrated effectiveness of social marketing interventions (Gordon et al., 2006; Helmig & Thaler, 2010; Truong & Dang, 2017), it is important to focus even more on environmental themes within the field (Almosa et al., 2017; Green et al., 2019; Kim et al., 2019; Osbaldiston & Schott, 2012; Takahashi, 2009; Truong, 2014; Veríssimo, 2019). Therefore, this study will start by conducting a scoping review of the social marketing field to determine what the current status is of the environment as a core theme and whether public health is overthrown. To further guide future research on social marketing and environmental issues, the study continues by mapping published social marketing studies on environmental issues specifically, which has not been done since Takahashi (2009) and Truong (2014). Finally, to get a deeper understanding of social marketing related to the environment, the study will focus on the evolution of the studied topics over the last eight years. In this way, we gain a deeper insight into the current focus and gaps of social marketing research on environmental issues.

Therefore, we focus on the following research questions in this study:

- What is the position of environmental themes within social marketing publications?
- How did the number of published articles in the field of social marketing research on environmental issues, evolve over the last eight years?
- What are the most common themes in social marketing research on environmental issues? How did these themes evolve over the last eight years?

Method

The applied method is a scoping review (Peters et al., 2015), which typically focuses on mapping "the literature on a particular topic and provide an opportunity to identify key concepts, gaps in the research; and types and sources of evidence to inform practice, policymaking, and research" (Daudt et al., 2013). The underlying themes of the articles have

been coded by qualitative content analysis (Bryman, 2012). Then, a frequency analysis was carried out on the themes of all the articles. Next, the same articles were objectively analysed by a 'top vector' analysis via 4CAT, to see whether the most occurring terms are the same as the assigned themes. Afterwards, only those articles related to the environment were analysed by both a frequency analysis and a 'top vector' analysis to study the sub-themes.

Results

One of the main outcomes of this study is that public health is still the dominant area in published social marketing related research, with 56% of all the articles related to social marketing (n=1285) being concerned with this theme and only 25.2% with environmental issues. Other themes found were social marketing research in general (11.4%), public safety (3.5%), equality (1.5%), environment/public health (1.3%), non-profit marketing (0.6%), and prosocial behaviour (0.5%). The finding that public health is still the dominant topic in the field was also supported by the 'top vector' analysis, which showed related terms to public health like 'health', 'alcohol', 'activity' and 'physical' as most occurring terms throughout the eight years (Figure 1). Concepts related to the environment were almost not found (only 'energy' in 2018).

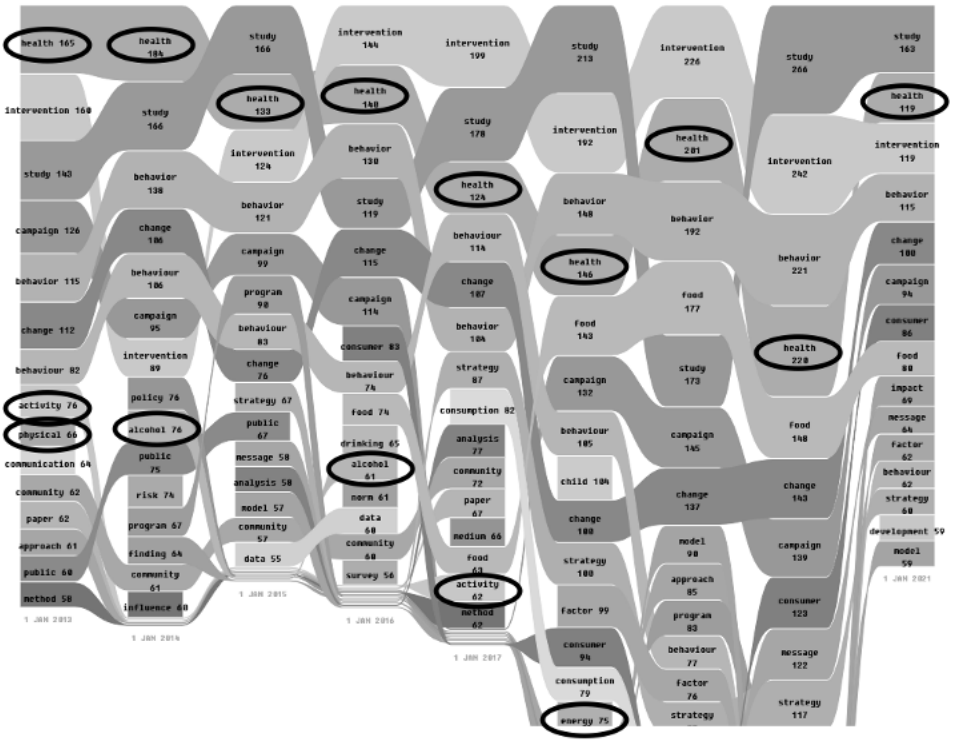

Figure 1: Top vectors (top 15) of all social marketing related articles

The topical dominance of public health is in line with previous research that has been done to map the social marketing field (Truong, 2014). When taking a closer look at the evolution of those articles only concerned with environmental issues, we can see a slight upward trend since 2013. In 2013 only 20.80% of all analysed social marketing research was concerned with environmental issues, whereas in 2020 28.65% was concerned with the topic.

Because environmental issues are still less researched in the field, specific attention was paid to articles on the environment (n=324). Another key finding of the study is that the frequency analysis showed that the five most common themes within social marketing research around environmental issues are, energy (22.9%), conservation (17.33%), waste (17.03%), mobility

(16.40%) and climate change (5%). These main themes were also supported by the 'top vector' analysis via 4CAT (Figure 2). Both ‘energy’, ‘conservation’, ‘waste’ (incl. ‘food’ and ‘recycling’), and ‘climate’ appear in the most common terms, only ‘mobility’ appears to be missing, with only one appearance of the concept in 2015, although related terms to mobility do appear, such as 'transport' (2014) and 'electric' (2018).

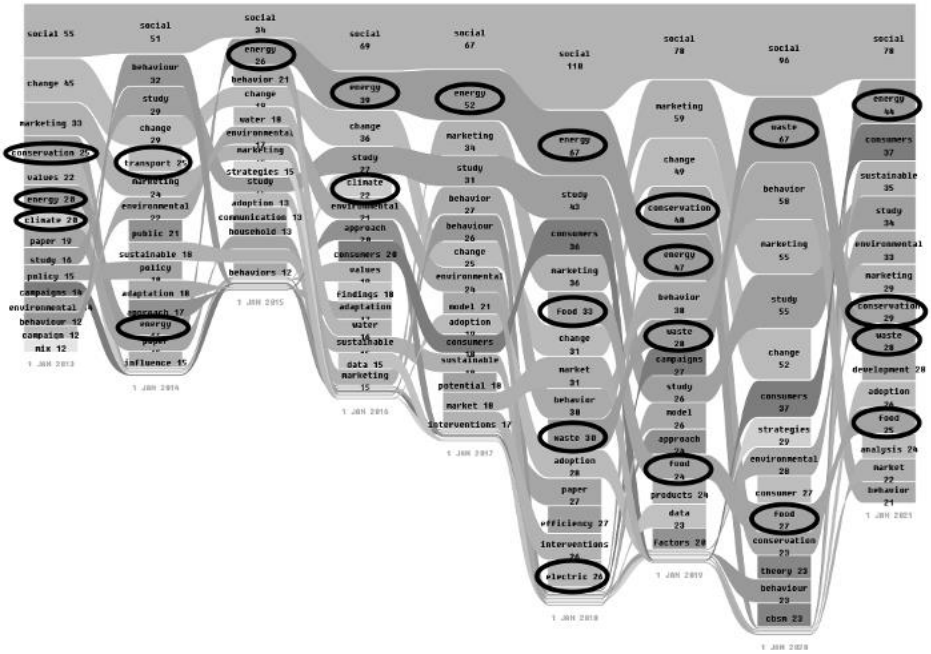

Figure 2: top vectors (top 15) of social marketing related research on environmental issues

While looking at the evolution of the environmental themes over the last eight years, it becomes apparent that related concepts to waste (‘waste’, ‘food’, ‘recycling’) have only started to appear more since 2018. Since then, the related concepts to waste have stayed immensely popular in the domain. The concept ‘conservation’ was mentioned a lot in 2013 but then also vanished from the top concepts until now in recent years, the term has suddenly become more prevalent in research (2019-2021). This could be because of the general focus on circular economy (for example in 2015, the European Commission adopted its first circular economy action plan) and adoption of the Sustainable Development Goals (SDGs) by the UN General Assembly in 2015. But also, for waste, by the overall popularity of the zero-waste movements and the ongoing plastic bashing in recent years. An unexpected finding was the lack of the concept ‘climate’ in social marketing research, the concept only occurred in 2013 and 2016 in the top 15 concepts. Because of the relevance of climate change knowledge and action, this is a big gap for the field. The concept ‘energy’ though, is being studied very consistently in the field, only disappearing from the top 15 most occurring terms in 2020. A big gap for the field is the lack of research on mobility, as related terms only came back in the years 2014 and 2018.

Discussion and Implications

The study showed that public health is still the most dominant topic in social marketing research. However, environmental issues are being studied increasingly, which is good news when considering the positive effect that the field could have on environmental issues. It became clear that the field is already investing in themes such as energy and has also made good progress into certain themes such as conservation and waste. However, it is also clear that other very relevant themes urgently need more research. This is the case for research on

mobility and climate change. COP26 has again stressed the importance of changes in our mobility, whereas road transportation accounts for over 10% of greenhouse gas emissions (COP26, 2021). The countries have therefore set out for new cars to have zero emission by 2040 globally. Also, with the relevance of climate change research on both actions and knowledge, it is a big gap for the field to not be focusing on this theme. Future research in the field should therefore focus more on how effective interventions could be set up in mobility and climate change related themes. By keeping the focus on the already researched themes but also reallocating focus on themes like mobility and climate change, the field of social marketing will further take on its social and scientific role with regard to the climate issue.

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Healthy @ Home and living well after lockdown. A social marketing strategy to support the health and wellbeing of the Western Sydney community

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Brief Overview

During the height of the 2021 COVID-19 outbreak in Sydney, NSW the majority of the Health Promotion team at Western Sydney Local Health District (WSLHD) was deployed to support contact tracing, case interviewing and community outreach communications. WSLHD's service area covered three Local Government Areas of concern (NSW Health, 2021).

With a population of almost one million people where over half speak a language other than English, 46.8% were born overseas and 1.5% are Indigenous (WSLHD, 2019), the WSLHD area (besides those living in The Hills Shire Local Government Area (WentWest, 2019)) experiences greater socio-economic disadvantage compared to the general NSW population.

The **Healthy@Home** (H@H) (implemented 4 August – 10 October 2021) and **Living well after lockdown** (LWAL) (implemented 9 November – current) strategies aimed to provide practical, credible and timely information to support the health and wellbeing of residents of WSLHD during and after the COVID-19 'stay at home' period (lockdown).

Problem/Opportunity Statement

Current State:
Limited health literate physical and social wellbeing information was available that considered the unique needs of the Western Sydney community during lockdown. Identified needs included: accessing culturally appropriate affordable fresh food; keeping active and/or children occupied in small spaces (ie: apartments); staying connected with family and friends; mental wellbeing support when in isolation; support for staying COVID safe and adjusting to change when transitioning out of lockdown.

Impact:
Some people were breaching isolation to obtain culturally appropriate food. Mental fatigue, social isolation and physical inactivity was experienced by some during lockdown. Young people were worried about their mental health, especially in relation to uncertainty around school, friendships and their future. After lockdown, some people were concerned about children's safety and wellbeing, the spread of COVID-19 and giving it to people they care about, fear of another lockdown and transitioning back into the community.

Desired State:
The H@H and LWAL strategies provided an opportunity to develop tailored, localised and accessible COVID-19 wellbeing information during and after lockdown to support positive health behaviours and COVID safe environments.

Aim

To provide practical, credible, and timely health promoting information supporting the health and wellbeing of the Western Sydney community during and after lockdown.

Objectives

1. Identify priority health and wellbeing needs of the community through rapid community and stakeholder consultation approaches.
2. Provide relevant, timely and meaningful health and wellbeing information to vulnerable populations within Western Sydney during the COVID-19 stay at home period (July-October 2021) and after lockdown November 2021 – March 2022.
3. Promote H@H and LWAL messages in communication channels to maximise reach of wellbeing support during the strategy period.
4. Increase the number of individuals visiting the Western Sydney COVID-19 Community Resources website by at least 100% from the three months prior to strategy.

Strategy/Campaign/Intervention

The Healthy@Home (H@H) and Living well after lockdown (LWAL) campaigns provided tailored health and wellbeing tips and referral options via social media tiles and resources, translated into priority languages and disseminated through targeted communication channels to reach vulnerable populations.

Rapid community consultation informed the development and dissemination of content. Stakeholders consulted included: educators, parents, youth, youth workers, WSLHD Public Health Unit contact tracers and case interviewers, community food support services and multicultural health officers working directly with the most vulnerable. Robust community engagement ensured H@H and LWAL messaging and content were relevant to community concerns, including those in isolation.

H@H topics addressed physical activity in small living spaces, healthy screen time, food security, mental wellbeing, staying connected, local places to enjoy “green time” and self-care in isolation. LWAL topics included COVID safety, social connection, adjusting to change and tips to support mental wellbeing, physical activity and healthy eating behaviours during the lockdown transition. H@H (WSLHD, 2021) and LWAL webpages (WSLHD,2021) were created on the Western Sydney COVID-19 Community Resources website to enable broad access to the social media tiles.

Following content development, it was consumer-tested, refined, and disseminated via established communication channels (Figure 1) including: four local councils, Early Childhood Education Centres (n=593), primary schools (n=1,053), tertiary education facilities, local media, Multicultural Health workers, Youth health workers and other internal health networks (n=91). These key partners were invited to share the content via their communication channels such as apps, social media and newsletters. Tiles were posted on WSLHD social media channels such as Facebook, Instagram and

Nextdoor. COVID-19 cases and close contacts also received H@H information via email (approximately 3,300 cases over eight weeks).

Figure 1: Community driven development and dissemination of H@H and LWAL health and wellbeing campaign

Objective 1: Identify priority health and wellbeing needs of the community through rapid community and stakeholder consultation.

Healthy@Home

- Telephone and email consultation with key partners revealed the top wellbeing concerns for the Western Sydney community during lockdown. These included physical activity in small living spaces; healthy screen time; access to food; support for mental health; tips to stay connected; local places to enjoy "green time" and self-care in isolation.
- An online survey completed by 189 people aged 12-24 years identified their key concerns in lockdown (Figure 2) and informed tailored H@H social tiles (Figure 3) which were tested for acceptability with 28 people aged 12 – 24 years then further refined.

Figure 2: Top concerns expressed by people aged 12 – 24 years during lockdown (n=189)

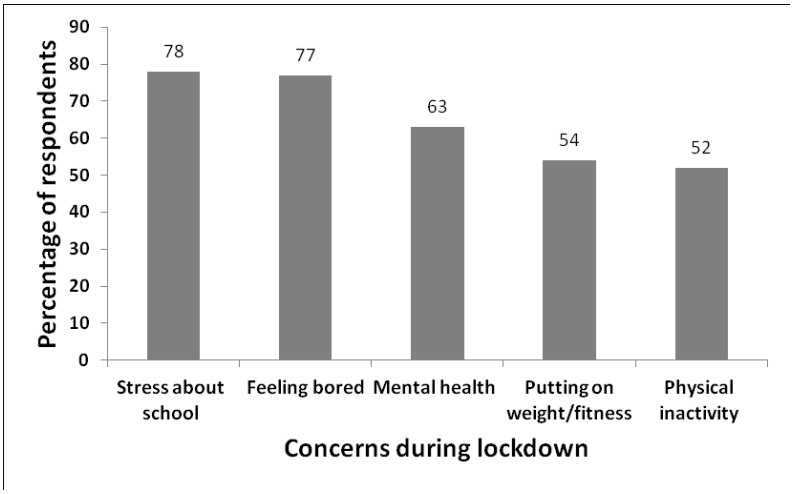
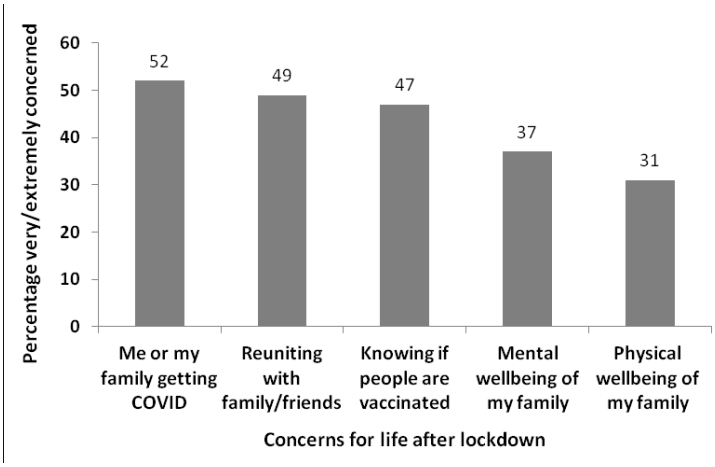


Figure 3: Example of Healthy@Home tiles for people aged 12 - 24 years

Living Well After Lockdown (LWAL)

- Over 500 residents completed a survey about health and wellbeing concerns coming out of lockdown (Figure 4).

Figure 4: Top five concerns expressed by Western Sydney residents for life after lockdown (n=524)



Objective 2: Provide relevant, timely and meaningful health and wellbeing information to vulnerable populations within Western Sydney during the COVID-19 stay at home period (July-October 2021) and after lockdown (November 2021 – March 2022).

Healthy@Home

- 60 tiles were developed, consumer-tested and uploaded to the H@H webpage within four weeks of idea conception. A further 55 tiles were developed to address ongoing needs that arose during lockdown (See Figure 5 for example tiles).
- 10 key tiles were translated into seven languages for reach of meaningful information to Culturally and Linguistically Diverse (CALD) communities, particularly those
- living in high density with food security issues and limited areas to be active and socialise.
- H@H isolation tip sheet (Figure 6) for COVID-19 cases was developed and translated into 17 languages. Resilience NSW distributed the sheet state-wide with food packages to those in

isolation. Department of Communities and Justice also distributed the sheet to more than 8,500 residents in social housing.

- Content was shared by several organisations and other LHDs who work with vulnerable populations. Their positive response and interest in the H@H toolkit highlighted the value and relevance of the resource.

"We are trying to reach as many people as we can in these tough times. Thanks to all the great work you guys put in by providing us the links to these important resources. There are a lot of vulnerable people out there who need assistance." Multicultural Community Liaison Officer, Parramatta Police Area Command.

Figure 5: Example Healthy@Home tiles

Figure 6: Isolation tip sheet sent by email to COVID-19 cases

Living Well After Lockdown (LWAL)

- 120 tiles developed within 4 weeks of community and stakeholder consultation (See Figure 7 for example tiles).
- 276 toolkits accessed in first week of launch.
- 100,000 people have received LWAL information to date.

Figure 7: Example Living well after lockdown tiles

Objective 3: Promote H@H and LWAL messages in communication channels to maximise reach of the wellbeing support during the strategy period.

H@H reached an estimated 68,000 people during the strategy period. Some of the most successful promotion channels included:

- The H@H webpage:1,142 visitors.
- Email distribution resulting in 265 downloads of the toolkit.
- H@H isolation tip sheet via email to 3,300 WSLHD COVID-19 case contacts and close contacts resulting in 411 downloads.
- Facebook and Nextdoor promotion of tiles for people aged 12-24 years reaching 27,184 people in Western Sydney.

LWAL has so far reached 101,623 individuals since launch on 9 November 2021.
Some of the most successful promotion channels included:

- Email distribution reaching 1,272 key partners.
- Inclusion in the NSW Health COVID-19 bulletin reaching 58,000 staff.
- Promotion via Nextdoor reaching over 10,000 residents.

Objective 4: Increase the number of individuals visiting the Western Sydney COVID-19 Community Resources website by at least 100% from the three months prior to the strategy.

Between 4 August 2021 and 4 November 2021 there were:

- 7,492 new visitors to the site; a 155% increase from the previous three months.
- 17,649 page views which represents a 155% increase from the previous three months.

Results and Lessons Learned

H@H and LWAL strategies demonstrated the need for localised health and wellbeing content to support State and National COVID-19 messaging. Tailored information and dissemination strategies enabled greater engagement with key COVID-19 health and wellbeing messages for the Western Sydney community.

A user-centred design process, with focus on health literacy, ensured community needs were considered throughout development and implementation. By engaging with the community in real-time, we were able develop timely and relevant material to support the community when they needed it most.

The value and relevance of the resources was highlighted by the increased visitors to the website and expressions of gratitude from key stakeholders who received links to the online toolkits.

Providing Tailored Resources for Vulnerable Community Members

In collaboration with the WSLHD Youth Health team, we surveyed people aged 12-24 years to capture their key concerns during the lockdown period. Stress around schoolwork, Higher School Certificate (HSC), changing friendships and their mental health were the most common concerns. Social media tiles were developed to address these topics and consumer-tested to validate acceptability of messaging and design. Facebook and Instagram advertising was chosen as the most efficient way to reach the targeted age group in vulnerable areas across Western Sydney. With a total advertising spend of $200 across 14 days, the method proved cost effective, reaching 25,211 people aged 16-19 years.

Collaboration with Multicultural Health and Translation Service to Meet Community Needs

Culturally and Linguistically Diverse (CALD) communities were considered as vulnerable members of the community in the context of lockdown. Consultation with the WSLHD Multicultural Health team emphasised the importance of providing tips that were “culturally appropriate” and translating the information into key community languages. The WSLHD Translation Service was a key driver in enabling the provision of quality-assured translated resources.

Harnessing WSLHD Public Health Unit (PHU) Insights to Address the Needs of Vulnerable Populations.

Utilising the knowledge of WSLHD PHU staff directly communicating with Western Sydney residents for many months as part of contact tracing and COVID-19 case management was invaluable to inform the direction of H@H. This team had a rich understanding of the complex needs of the community, particularly CALD families in which large multi-generational households were all required to isolate at home together. The PHU raised the need for a H@H wellbeing isolation tip sheet, in multiple languages, for those isolating at home. Data from COVID-19 case interviews was used to inform priority languages for translations.

Creating and Sustaining Internal and External Partnerships to Optimise Dissemination of Health Promotion Strategies

New networks for disseminating health promotion information and strengthening of existing partnerships resulted from the H@H and LWAL strategy. Partnerships with Resilience NSW and Department of Communities and Justice enabled some of the most vulnerable communities to be accessed.

Robust Technology to Support Local Strategy

New webpages were created on the existing Western Sydney COVID-19 Community Resources website to house the H@H and LWAL social media tiles and toolkits. Using this platform was a cost-effective way to disseminate the tiles in an organised manner.
The website was already established as a credible source of COVID-19 related health information and the addition of the H@H webpage attracted 7,492 new users to the website within a three month period (155% more than the previous three month period) The website enabled analytics data on the number of toolkit downloads and insights on content engagement.

Conclusion

The H@H strategy was a cost effective, successful social marketing campaign, harnessing available technology for dissemination of meaningful health and wellbeing information. As COVID-19 cases increased in Western Sydney, H@H proactively delivered priority health and wellbeing information targeting key issues important to the community. It addressed a gap in the availability of tailored COVID-19 resources to support the wellbeing of Western Sydney residents. Following the success of H@H, insights from the Life after lockdown survey, PHU and community partners informed LWAL. This strategy has incorporated further public health messaging on vaccination, boosters and COVID safe behaviours to support lockdown transition. Community consultation and partnership engagement will continue in 2022 to ensure ongoing, relevant support for the Western Sydney community to live well after lockdown.

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This Girl Can – Victoria

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Project/Issue Overview

This Girl Can Victoria is based on Sport England's highly successful This Girl Can campaign and through VicHealth, Australia is the first country to license the world-renowned campaign. The campaign aims to *increase physical activity* among Victorian women and since 2018 has inspired more than 400,000 women across Victoria to get active1. It has a focus on less active women and supports gender equality by challenging traditional gender roles and stereotypes in sport and by celebrating women in this space.

Background and social context

More than half of Victorian women are not sufficiently active, participating in less than 30 minutes of physical activity on five or more days a week2. And alarmingly, one in ten Victorian women don't

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do any physical activity at all in a typical week 3. VicHealth research revealed that it was a *fear of judgement* that stopped women from being physically active. 52% of Victorian women worry about being judged when exercising 4.

VicHealth is taking a comprehensive approach to help address the issue of low levels of physical activity among women in Victoria as part of VicHealth's Physical Activity Strategy. This includes grant funding and partnerships to create and promote new participation opportunities for women and girls across Victoria.

The This Girl Can – Victoria campaign is just one part of VicHealth's broader work to support gender equality and to both empower and enable Victorian women and girls to be more physically active.

Behavioural/Social Change Goals

The overall aims of the campaign are:

1. To *increase physical activity* among Victorian women, with a focus on somewhat active and inactive women.
2. To *support gender equality* by challenging traditional gender roles (sporty and active as male traits) and by celebrating women in this space.

Specifically, the campaign's objectives are to:

A. *Shift attitudes.* Increase women's positive attitudes (including self-efficacy) towards physical activity and sport.

B. *Drive action.* Increase women's physical activity levels – increase intention *and* actual behaviour.

C. *Shift social norms.* Increase positive attitudes to the notion of strong, powerful, active women.

Citizen orientation

In the initial stages of the campaign, VicHealth gathered evaluation data from Sport England as well as local audience insights through pre-formative and formative research. The key insight that informs This Girl Can is that women across life stages share a common fear of being judged for how they look, their skill level, and for how they prioritise their time.

VicHealth research shows that while women know the health benefits of being active, it isn't a motivating enough factor to get them moving. In 2019, further research was conducted to inform year three of the campaign. Four separate but interconnected themes of research work were undertaken, with 'fear of judgement' an underpinning social mechanism running through each. These were:

1. *The Activity: Reshaping meaningful activity.* Further analysis of previous data to understand how to best represent physical activity in order to connect with more women.
2. *The Journey: Pathways to sustainable activity.* In-depth interviews and narrative maps to understand the stops and starts of the physical activity journey.
3. *The Places: Where to go in order to be active.* 'Photovoice' research to explore experiences and emotions through photography. To understand the physical activity places and spaces in which women feel most and least comfortable.
4. *The Enablers: Getting to and off the start line.* An online survey designed to capture a large amount of representative information about the facilitators at the beginning of the sport and physical activity journey.

Research and Insight

Key evaluation and research elements that have shaped the campaign to date have included:

- *Quantitative research:* Campaign impact and outcomes were assessed via an online survey of the target audience. A total of 7,143 women were surveyed at different points in time (baseline, post-campaign 2018 and post-campaign 2019). An additional survey of 2,500 women was conducted in year two to further understand women's engagement with physical activity and enablers to getting back into physical activity.
- *Qualitative research:* In-depth phone interviews with 40 women in year one, to explore emerging themes from the target audience. Interviews (with 24 Victorian women) were conducted in year two to develop a greater understanding of women's engagement with and experience of sport, exercise and physical activity.
- *Process evaluation:* Reports on each campaign element were collected from the relevant agencies throughout the campaign delivery, to feed into the process evaluation and to inform future campaign activities. VicHealth also surveyed ambassadors, staff, supporters and stakeholders to gather insights. A weekly monitoring process during the campaign phase supported real-time insights and gathered both anecdotal and data-driven evidence.

The 2019 research helped develop a greater understanding of women's engagement with and experience of sport, exercise and physical activity. The major elements of the campaign did not change – the objectives, audience and core 'fear of judgement' insight all remain consistent – however the elements of the campaign have been oriented to our audience in multiple ways including:

- Focussing on the 'felt benefits' of being active
- Understanding that weight loss as a motivator is damaging
- Understanding that women's physical activity journeys are inconsistent e.g. they stop and start over time
- Providing activities that feel achievable and can be done in 'micro steps'
- It's important to create comfortable spaces to avoid accentuating the fear of judgement and making women feel like they don't belong
- It's important to highlight the sense of belonging/identity

Segmentation

Early 'life stages' research suggests the prioritisation of the campaign audience (based on greater potential benefit and higher likelihood of activation) should be:

1. Females with children at home – somewhat active
2. Females aged 18-24 years
3. Females aged 25-40 with no children
4. Females aged 40+*

*For campaign purposes, VicHealth prioritises groups 1-3 in the first instance, in order to efficiently target campaign activity, including paid media, with available time, resources and funds.
At least from early adulthood onwards, Australians who are less likely to participate in physical activity and more likely to live sedentary lifestyles include those with lower levels of education, on lower incomes, and those living in socioeconomically disadvantaged neighbourhoods. Indigenous Australians are also significantly less likely to be physically active than non-Indigenous Australians.

Throughout the campaign, ambassadors were carefully selected to appeal to the various audience segments, including women of various ages, with and without children, of different cultural backgrounds, body shapes and abilities.

Value

The further research into women's engagement with and experience of sport, exercise and physical activity will enable sporting facilities and service providers to welcome more women in their doors at a lower/no cost. By understanding women's barriers to engaging in physical activity, facilities will be able to adjust their practices to discount fees for classes, conduct free come and try sessions and create activities that allow having their children to participate (rather than having to pay for additional care).

The updated campaign in year three also highlights simple activities such as walking the dog and home exercise such as yoga, rather than having to join a team sport or sign up to a gym, as a way of making women feel more comfortable and empowered.

Competition

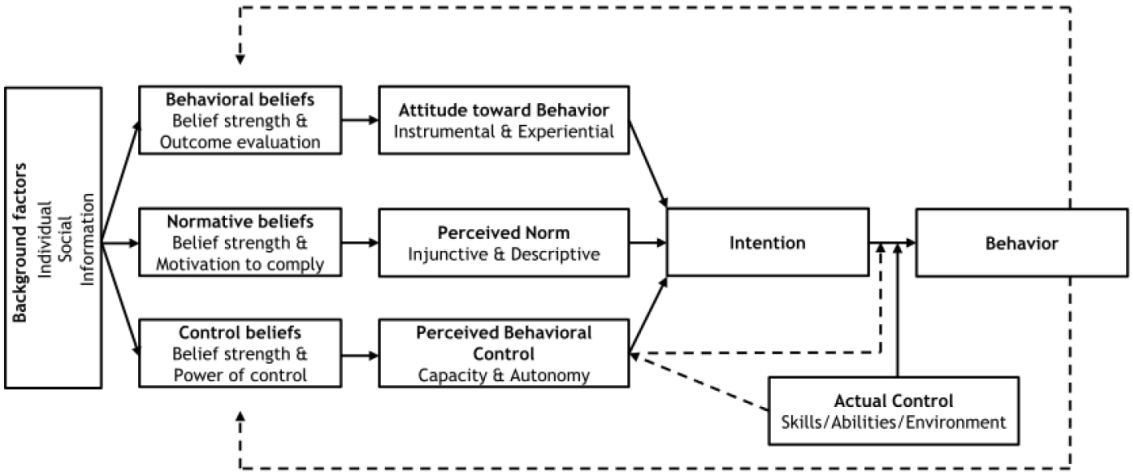
The campaign competes with the traditional fitness industry which promotes intimidating, unrealistic, 'fitspo' imagery that makes women feel like they are not good enough. A recent VicHealth survey of over 1,000 Victorian women found that a third of women feel bad or inadequate about their own bodies and fitness when they see #FITSPO images on Instagram 5. Furthermore, almost 80% of women want to see more women with a range of body shapes included in physical activity advertising 6.

The campaign breaks down the stereotypes of what 'active' or 'sporty' bodies look like and the women in the campaign are relatable real people with real life fears and struggles. VicHealth is also challenging the norm by influencing changes within physical activity environments such as sporting clubs and gyms.

Theory

This campaign draws upon the Theory of Planned Behaviour that builds on the Theory of Reasoned Action and includes an additional major predictor: perceived behavioural control. The Theory of Planned Behaviour suggests:

1. individuals will engage in a behaviour when they evaluate it positively (attitude), believe that significant others want them to engage in it (subjective norm), and perceive it to be under their control (perceived behavioural control), and
2. strong intention and PBC will increase the likelihood of a behaviour.



This theory, applied to physical activity behaviour, suggests that women (in our target audience segments) will be more likely to be physically active if they:

1. believe being active is something they will enjoy, and
2. believe other people see them being active as a positive thing, and
3. feel that they are easily able to be active (they have the necessary skills and opportunities).

Social Marketing Intervention Mix

This Girl Can – Victoria is a comprehensive social marketing campaign, including state-wide advertising, funded partnerships with sports organisations and local councils, stakeholder engagement and a campaign supporter program, as well as a thorough evaluative approach.

The campaign is delivered through:

- **Advertising** on TV, outdoor (e.g. tram and bus shelters and retail shopping centres), radio, print, cinema, online and social media.
- **Media** engagement sharing our ambassadors' stories with national, regional, suburban, Culturally and Linguistically Diverse (CALD) and other targeted media outlets.
- **Social media** – continuing to build and engage a Community of Women on Facebook and Instagram using #ThisGirlCanVIC
- **Campaign supporter program**– Enabling stakeholders to support the campaign through co-branded resources, a dedicated online Campaign Supporter Hub, the Getting More Women Active Guide and website, and ongoing support to create welcoming and inclusive environments for women and girls
- Digital - Improving the digital experience at www.thisgirlcan.com.au showcasing the women featured in the campaign, information about a range of physical activities and sports, and links to physical activity opportunities.
- **Sport partnerships** - extending the campaign reach and providing activity opportunities through high profile sporting organisations
- **Participation partnerships** - funding new, social and flexible activities for Victorian women to get active
- **Local Area Marketing for councils and Active Club Grants** – funding councils and sports clubs to localise the campaign through promotion and activity delivery.
- **Communication to women** – an email program to reach and inspire women.
- **This Girl Can Week** –providing a platform for stakeholders to run free or low-cost, fun beginner-friendly and women's only sessions, right across Victoria.
- **Monitoring and evaluation**, including surveys and focus groups to measure impact.

Partnerships

VicHealth funds and works with high profile sports organisations (including state sport associations and elite teams) as well as local councils and local sporting clubs across Victoria to promote the campaign and provide welcoming opportunities for women to get active.

Evaluation and results

In its first two years, the campaign has inspired more than 400,000 Victorian women (1 in 5) to get active as a result of seeing the campaign. The campaign has built momentum over time, with campaign awareness in year two increasing significantly from 43% to 54%.

After watching This Girl Can – Victoria, many women were inspired to start a sport or physical activity for the very first time. Others were motivated to get back into exercise after taking a break. The campaign features real Victorian women instead of professional athletes or airbrushed Instagram models.

With the cumulative impact of the campaign over two years, we are also beginning to see positive shifts in some 'fear of judgement' related attitudes, with women who have seen the campaign (compared with those who have not) worrying less about:

- being sweaty
- not being fit enough
- not being good enough
- not being feminine
- beginning again after some time off
- wearing tight clothing.

Lessons Learned

As outlined above, the results to date have been incredibly positive and show that the campaign is working. However, we have still learnt a lot throughout the first two years and identified a number of opportunities to improve the campaign into the future. These include:

- Best-practice planning, implementation and an evaluation model has been an important factor in the campaign's success.
- Using everyday diverse women as our campaign ambassadors (instead of actors, models or athletes) was critical to our success.
- Stakeholder engagement is key to enable grassroots support and to build momentum, with more than 1,100 organisations registered as supporters.

The research suggests the importance of focusing on how activity feels – from happy and free to relaxed and calm. When women shift their focus from thinking about how they look when they exercise to how they feel when they move, it helps to moderate the fear of judgement and fosters more enjoyable and more sustained activity patterns.

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Conceptualising Indigenous brand storytelling

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Introduction

Growth in Indigenous businesses in Australia has significantly increased over the last decade. This growth results from a combination of government support programs and policy mandates, along with the rise of community-based entities, such as Supply Nation, Indigenous Chambers of Commerce and Indigenous Business Australia (Commonwealth of Australia, 2018). These mechanisms have attempted to encourage corporate and government sectors to make real, targeted commitments to engaging with and procuring goods and services from majority Indigenous-owned businesses across a variety of sectors (Commonwealth of Australia, 2018). Whereas these changes have stimulated demand for Indigenous goods and services in national, local and state government departments, the uptake by corporations and small to medium enterprises appears patchy and difficult to accurately measure.

While Indigenous services such as tourism cultural experiences have flourished, Indigenous goods have seemingly floundered and until recently were conspicuously absent from the shelves (or sites) of major Australian retailers. There has been a striking shift among Australian retailers following the global Black Lives Matter movement and subsequent #buyblak campaign. Major department stores are now collaborating with Indigenous Australian artists to create a wide range of affordable co-branded home décor, homeware and fashion collections at scale. These collaborations ensure the protection of Indigenous artists intellectual property, appropriate payment of artists and assure consumers of the authenticity of the design and collection (Cook, 2021). Such collaborations have widespread implications beyond providing economic opportunities for Indigenous artists. More importantly, these retail collaborations are actions (not platitudes) that foreground and showcase Indigenous business and businesspeople in 'mainstream' ('whitestream') retail settings, which addresses social injustice in manifest and tangible ways. As social marketing seeks to redress social injustice (Gordon and French, 2019), this research adopts a social marketing perspective to explore Australian consumers perceptions of retailer co-branded Indigenous products.

Knowledge gap and research question

The reasons behind the absence of Indigenous goods in Australian retailers, including larger department stores, are unknown. No research in Indigenous product retailing could be found, leading us to speculate that the dearth of Indigenous Australian goods on department store shelves reflects derived demand in that they do not think Australian consumers would buy these products; it may possibly reflect retailer inertia to enact social justice, or as Foley (2003; 2013) articulated, a

continued deficit view of Indigenous Australians in general and as businesspeople. The perceived success and legitimacy of Indigenous businesses and businesspeople are linked to historical and ongoing colonisation, racism and discrimination (e.g., Ruhan and Whitford, 2018; Foley, 2013; Frederick and Foley, 2006).

Recently, however, there has been a noticeable shift in the attitudes of Australian consumers and the practices of Australian retailers, most likely in response to the Black Lives Matter movement and the #buyblak campaign. Larger department stores, both high-end and low-end, now proudly stock and promote Indigenous co-branded products. For example, Aboriginal artist Emma Stenhouse's designs now adorn a range of products in Myer, Holly McLennan-Brown's popular "New Beginnings" wall art is sold by K-Mart, and mother-daughter duo Lauren Jarrett and Melissa Greenwood operating under their business name of Miimi & Jiinda (Mother & Daughter in Gumbaynggirr language) have a new collection of linen and home décor at Adairs after their first collection sold out within hours. Popular fashion, homeware and home décor brands such as Vue, Maxell and Williams, KOO and Kenji now collaborate with Indigenous artists representing a significant and welcomed shift away from the former narrow focus on Indigenous tourist souvenirs and trinkets of ambiguous origin.

Indeed, high product ratings, fast selling collections and five-star reviews anecdotally show that these authenticated, genuinely Indigenous designed consumer products appear to be well received by Australian consumers. As the rise in these collaborations between department stores and Australian Indigenous artists are at scale and are a recent phenomenon, no research exists. This research aims to address this gap using a social marketing lens and is framed by the research question: What are Australian consumers perceptions of retailer co-branded Indigenous products?

Conceptual model and methodology

The conceptual underpinnings of this research are a fusion of brand storytelling and Indigenous storytelling. Storytelling is an essential part of the human experience—stories convey meaning, impose order, reflect interpersonal relationships, are linked to our identity and shape our impressions and understanding of the world (McAdams, 1993; Pereira, 2019). Many retail brands use storytelling to connect with their customers by creating a cohesive and relevant narrative that evokes emotions and a long-lasting bond (Herskovitz and Crystal, 2010). Brand storytelling often revolves around a persona archetype that is easily recognised and familiar so that customers can see themselves reflected in the brand, which ultimately builds trust.

Storytelling is central to Australian Indigenous peoples knowledge systems and cosmologies (Moreton 2006). Australian Indigenous peoples' knowledge and wisdom are commonly shared orally through yarning (Fredericks, 2008; Fredericks et al., 2011). Yarning scholarship and methodology are grounded in Indigenist research (Rigney, 2006). Yarning establishes relational connections to kin, country and community that involve story sharing (talking) and listening (Shay, 2021). In a retail setting, yarning is replaced with a written story typically conveying the Indigenous artists country, history and narrative about the inspiration for or meaning of the artwork. Indigenous storytelling is about the person and their ancestral connections while brand storytelling is a but a human-like persona. We merge these two notions into Indigenous brand storytelling. How the consumer “sees themselves” in Indigenous storytelling is unknown and the role of the Indigenous artists story beyond establishing authenticity of the work is also unknown.

In terms of methodology, this research will first conduct a content analysis of Australian retailer websites and social media posts identifying references to Indigenous Australians and organising these into key themes and cross-referencing them retailer Indigenous product lines. Next, a quantitative survey of the general Australian adult population (18+ years of age) will be conducted to identify their perceptions of retailer co-branded Indigenous products, if they have or plan to purchase the co-branded products and the role of Indigenous brand storytelling

Implications for theory and practice

To the best of the authors' knowledge, this research will be the first to address Indigenous goods retailing in Australia. Furthermore, the research will augment the Western notion of brand storytelling with Southern Indigenous understandings of storytelling. In addition to these theoretical contributions, Australian retailers will benefit from understanding their consumers' perceptions of their co-branding assist retailers with their decision making with regards to their continued work with Indigenous businesses and businesspeople. For social marketers, the implications include a better understanding of the effectiveness of efforts to counter the ongoing impact of colonisation that furnish the everyday lives of Indigenous Australians.

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First-year expectations in a post pandemic world

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Introduction

Educational inequality is a wicked problem in Australia and abroad (Raciti 2021). In Australia, students from regional and remote (RR) areas are an identified equity group with the recent national 'Napthine Review' highlighting the gap between tertiary education attainment between RR students and their metropolitan peers (Napthine et al. 2019). RR students are typically the first in their family to attend university, and those that do commence find that their actual university experience bears little resemblance to what they expected (Money et al 2017). This mismatch in expectations has the potential to make this transition into higher education a confusing experience with studies indicating students who are less satisfied with their university experience more at risk of withdrawing from their studies (Rivera Munoz, Baik & Lodge 2020). Unrealistic expectations have been a focus of first year research to better understand the drivers behind unmet expectations and how to mitigate negative impacts in a university setting (Maloshonok & Trentev 2017). Many RR students enter higher education without knowing exactly what to expect and are unaware of how significantly the university experience will influence their day to day lives, making the incongruence between expectation and their experience acute (O'Shea et al. 2021). Exacerbating the incongruence is the uncertainty around the continuity of education in the wake of COVID-19 (Brown & Finn 2020). The impacts of today's volatile, uncertain, complex, ambiguous (VUCA) world emphasise the challenges for students as they attempt to cope with the extreme conditions, which fall even further outside the realm of their regular expectations (Hadar et al. 2020).

Knowledge gap and research question

The incongruence between expectations and actual experiences results in cognitive dissonance. The theory of cognitive dissonance was first proposed by Leon Festinger (1957) and centred on the concept of a persons' attempt to harmonise inconsistency in their psychological information. Psychological information may include behaviour, feelings, attitudes, opinions, social mores, communications and virtually any phenomenon people can perceive to create these cognitive representations (Festinger 1962). Cognitive dissonance theory underpins this research, which investigates how first-year RR students reconcile the incongruence between their expectations and experience.

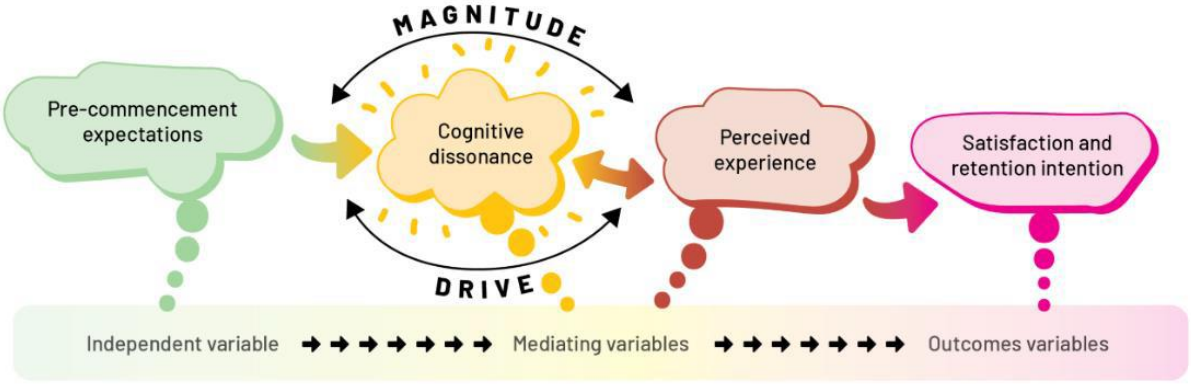
While there is extensive research into the first-year experience, little is known about the impacts of existing expectations on the overall university experience, and whether strategic intervention, such as student engagement activities can better support the impacts of dissonance (Jones 2018). Ergo, this research is framed by the research question: *How does cognitive dissonance between pre-commencement expectations and perceived experience influence the satisfaction and retention*

intentions of first-year regional university students? Objectives of the research are to develop measurement scales and then use these scales in the development and testing of a model that assesses the impact of cognitive dissonance on students' satisfaction and retention intentions.

Conceptual model

The diversity of university culture and ethos, unique to each institution, often creates confusing expectations that play havoc with students' expectations and transition into university (Abbiati & Barone 2016). Supporting students to reconcile differences in their expectations and actual experience at university is needed to address educational inequality (Namaste 2017). The cognitive dissonance theoretical framework provides a multi- dimensional perspective of how first-year RR students rationalise inconsistencies. This research extends this theoretical framework by incorporating the notion of expectations as both a measure of magnitude and a driver in harmonising incongruence, and the ultimate impact on student satisfaction and retention. Furthermore, this research will focus on engagement behaviour as a key output of these constructs, with measurable and tangible results to be observed as part of this process, to draw linkages between expectation, experience, and behaviour. The preliminary conceptual model is presented in Figure 1.

Figure 1: Preliminary conceptual model



Implications for theory and practice

This research has implications for both theory and practice. In terms of theory, this research advances current understandings of cognitive dissonance by examining the antecedent role of expectations as well as the magnitude and subsequent drive of these expectations that are incongruent with perceived experience. Furthermore, the impacts on satisfaction and retention intentions also extend cognitive dissonance theory. How students reconcile the disparity between their expectations and perceived experience in these pandemic times is a timely and valuable contribution to the literature. The context of this research adds to the current stock of knowledge by addressing the apparent educational inequality between first-in-family RR students and their metropolitan peers as highlighted by the 'Napthine Review' (Napthine et al. 2019).

The incongruence between student expectations and experience reflects the changing Australian university landscape. In Australia, the marketisation of the university sector over several decades, coupled with policies aimed at increasing domestic enrolments introduced competition between universities (Brooks et al., 2020; Bradley et al., 2008; Raciti 2010). As a result of the expansion of the sector and introduction of competition, Australian universities have sought to differentiate and

reposition themselves in the marketplace leading to increased marketing efforts influencing students' expectations (Raciti, 2010).

The COVID-19 pandemic has not only revealed the constraints of decades of growing marketisation on higher education but has also served as a catalyst for widespread upheaval in how students engage with their university, creating an opportunity to rethink the sector's approach to enriching the student experience. New teaching delivery models, virtual Open Days and reconfigured outreach activities have profoundly changed the 'grand script' between universities and their students. Potential students now find themselves wrestling with institution-centric engagement configurations of a VUCA world. Indeed, this research is timely for universities as they try to navigate the unfolding VUCA context and the early indications of an amplified disparity between pre-pandemic student expectations and their dramatic shift to novel, untested, pandemic-induced engagement models.

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Increasing Breakfast Consumption: A Review and Investigation

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Hepatitis C 'Easy As' Campaign

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Brief company overview

Queensland Health provides strategic leadership and direction to the public health system in Queensland, as well as promoting and protecting the health of Queenslanders through health promotion campaigns and other disease prevention activities.

Problem statement

In 2018, Brisbane South had the highest number of people living with hepatitis C in Queensland and one of the country's worst rates for treatment uptake at approximately 19.4% (the national average is 23.6%) (Kirby Institute, 2018). The purpose was:

Increase the number of people living in the South Brisbane region, undertaking treatments for hepatitis C, aged 40 to 60 years of age.

Specific objectives included:

- Increase the 2019-2020 second and third quarter hepatitis C treatment rates in the Brisbane South, for men and women aged 40 to 60 years by 5 percent from 2018 levels.
- Double the number of recognised hepatitis C treatment practioners in Brisbane South.
- Achieve a paid social and digital media reach of 750,000 and an engagement rate greater than 0.5 percent for social media advertising, and greater than determined benchmarks for other paid advertising.

Strategy

The central strategy was to integrate engagement, partnership, marketing, and advertising techniques to identify and resolve process and policy barriers in hepatitis C treatment and inform and engage practitioners prior to encouraging at risk individuals to seek treatment for hepatitis C. This holistic approach, provided access to regional hepatitis C treatment and management expertise, opened new and direct channels to engage General Practioners (GP), led to the creation of targeted and localised communication and optimised campaign budgets. The project had a budget of $200,000.

[1] Gregory Howell is a communications team strategist with more than seven years' experience working with government departments to achieve their communication and marketing goals. He has long-term experience managing projects across a spectrum of industries and holds a wealth of knowledge in behavioral change, coaching methods and management to achieve long-lasting cultural change.

Key strategic actions included:

- In collaboration with relevant partners, create and implement an integrated programme of communications for GPs on effectively administering and treating hepatitis C in the primary health setting (as this was not previously available), informing GPs about professional development opportunities and creating awareness of a forthcoming targeted consumer campaign for the region. The campaign commenced in June 2019 and ran through to November 2019.
- Establish a professional development program to promote and support GP centred care options for the management of hepatitis C in the primary health setting. The action commenced August 2019 and was completed in December 2019.
- Develop specific and relatable key messaging for a target audience with proportionally lower literacy level and high levels of stigma and social disadvantage.
- Create targeted advertising and marketing collateral that directly communicates to the target audience, create awareness, and drive engagement via digital and online channels. The creative was in market from September 2019 to November 2019.

Outcomes

Health Pathways

Understanding and managing the patient pathway was critical to ensuring that patients seeking treatment could get assessed, screened and treated in an average of two GP visits. Two visits were considered appropriate for an audience that may not trust GPs or were hesitant to use one. Through consultation and engagement with Brisbane South Primary Health Network (PHN) and the Metro South Hospital Health Service (HHS), several policy, process, and pathway barriers to the treatment of hepatitis C in primary health settings were identified and reviewed. While some policy issues remained unresolved, critical and productive workarounds were developed and agreed during consultation with specialists, GPs, hospitals and program managers. Key outcomes of this activity included development of a GP-to-GP referral process and clarification of GP training requirements for the treatment of hepatitis C in the primary health settings. Without these policy changes, the treatment of at-risk patients in the primary health setting would be difficult with many patients being referred to non-primary care prescribers (i.e., specialist).

General Practioners

Treatment in primary care is suitable for most people living with hepatitis C in particular those with mild–moderate liver fibrosis. A comprehensive communication plan was developed in consultation with Brisbane South PHN and Metro South HHS to reach approximately 1300 GPs in the region. Using existing GP communication channels, it was possible to regularly distribute information directly to GPs and practices in the region. Communication resources included video messages, direct mail, newsletters, factsheets, patient resources, magazine articles, social media and web content. The primary call to action drove GPs to visit websites and other online resources (patient management pathways).

The communication activity generated a significant level of awareness of the upcoming hepatitis C treatment campaign and an updated hepatitis C management pathway. Unique visits to the SpotOn Health Pathways (https://metrosouth.health.qld.gov.au/spotonhealth-healthpathways) online resource doubled and over 100 resources were downloaded. Importantly the GP-to-GP referral page recorded 189 unique visits. The updated process enabled reluctant GPs to refer patients to those GPs experienced in treating hepatitis C.

In addition, the Australasian Society for HIV, Viral Hepatitis and Sexual Health Medicine (ASHM), agreed to deliver additional professional development programs in the Brisbane South region. The

free training was provided to GPs and other prescribers (i.e. Nurse practioners) to familiarise GPs with the screening, treatment and management of hepatitis C in primary care settings. Attendance numbers reached 60 for these hepatitis C specific events where previous attendance was on average 12 to 15.

GP support

Hepatis Queensland developed and delivered the Hepatitis C Elimination Action Team (HEAT). HEAT provided direct and in-depth training, support, coaching and resources to GPs which enabled them to independently undertake hepatitis C treatment in their practices. Hepatitis Queensland also created and distributed several key resources for use at a patient, provider and practice level. Resources included USB web cards, patient factsheets, reference tools, guidelines, posters, flyers, appointment cards, events and fibroscan clinics.

In June 2019 it was estimated there were only seven GPs in the region who regularly managed and treated Hepatitis C infections in their practices. HEAT exceeded all targets including engaging with over 100 surgeries, recruited 25 practices, delivered 29 in house education centres and upskilled 37 GPs, 35 nurses and conducted four hepatitis C screening events at clinics in the area (Hepatitis Queensland, 2020). The capacity of the region was increased 3.5 time and dramatically improved the capacity of the region to treat and manage hepatitis C.

Messaging and communications

Along with other structural and provider barriers, overcoming patient barriers such as stigma and discrimination were important to achieving improved treatment rates. Messaging needed to specifically address audience stigma, literacy levels, low health literacy and low awareness of new direct-acting antivirals (DAA) medicines (Hepatitis Australia, 2017). Critical messaging was developed and included:

- In most cases, a cure is possible with just two visits to a GP.
- Hepatitis C treatment has radically changed, and most people are cured with one to three pills a day for 12 weeks.
- Treatment is not expensive, and most practices have bulk billing through Medicare.
- Unlike previous treatments, successful cure rates are very high.
- Everyone can be cured.

Focus group testing (Kantar Australia, 2019) was undertaken with participants having a lived experience with hepatitis C. All privacy and ethic requirements were met. Two campaign creatives and tag lines were tested with the audience to identify preferences for tag lines, images, and colours. Key results of the focus group testing included:

- “Easy As” tagline was selected after testing indicated that focus group preferences supported a simple and clear message supporting the ease of access, treatment, and personal effort to be cured. It was also a phrase commonly used or recognised by many in the focus group.
- Campaign visuals using actual images of the audience were preferred. Images of 40 to 60-year-olds from several cultures and ethnicities was preferred by the focus group.
- Preferences for representatives of the audience to be smiling and happy supported the ‘Easy As’ messaging and maintained a positive vibe to the campaign. This was also considered important in addressing the stigma issues experienced by the members of the focus group.
- The term “cured” was strongly preferred by the audience when compared to “treated” and “eliminate”.
- Bright orange was also strongly recommended as it was considered attention catching.

Paid Advertising

Out of Home (OOH), targeted digital and search engine optimisation (SEO) were selected as channels for the public facing campaign. This combination of channels was also selected to provide a cost-effective means to drive awareness of the campaign message in a range of environments. The advertising strategy and media buy was coordinated by a media buying agency engaged by Queensland Government.

OOH advertising included bus backs (South Brisbane network) and convenience advertising working together to increase mass awareness of the hepatitis C cure and remind the audience speak to a GP. Six full bus backs were purchased for the six-week campaign with an estimated reach of 24.1% of the 25 – 54 demographics in Brisbane South. Two hundred and sixty-five convenience panels were purchased in 41 licenced venues and 10 shopping centres in the area with an estimated reach of 1,598,084 patrons per week.

Digital and online channels were used to drive campaign reach and engagement. This included social media (Facebook and Instagram), native advertising (Verizon), multichannel advertising (MCN-websites, apps etc.) and SEO (Google).

The combined reach of social and digital advertising was over 2.95M and exceeded campaign targets 3.9 times (Mediacom, 2020). Importantly engagement rates performed strongly with social media achieving an engagement rate of 0.6% which exceeded an engagement target of 0.5%. Verizon outperformed all other media channels in terms of reach and generated 0.15% engagement (less than the 2:00% benchmark). MCN exceeded reach and exceeded the engagement target of 0.05% by achieving 1.44%. Google searches achieved 6.7% clickthrough rate with 2,694 searches recorded for the duration of the public facing campaign.

Results and lessons learned

Since the introduction of the DAAs in Australia in April 2016 the number of people treated overall in Australia has declined between 25 percent and 35 percent per year in all regions and jurisdictions (ASHM, 2021). This decline is inclusive of the impacts of COVID-19 on the treatment rates of hepatitis C in the primary health settings in 2020.

ASHM (2021) notes that from 2016 to 2018, Brisbane North and Brisbane South recorded similar treatment uptake rates. However, treatment uptake at the end of 2020 was higher in Brisbane South (44.6 percent of hepatitis C positive population) than in Brisbane North (41.3 percent of hepatitis C positive population)). It appears that Brisbane South maintained a more stable treatment level during 2019 and 2020. While lacking specific data, this result is positive. While the national treatment trend was downward, the Brisbane South campaign halted or at least slowed the decline in treatment rates in the region. The stabilisation of Brisbane South treatment rates in late 2019 and early 2020 enabled the region to increase its national ranking from 20th to 17th in treatment rates, while Brisbane North declined in ranking during the same period where no intervention was implemented.

A benefit of the activity in Brisbane South was an increase in the number of people living with hepatitis C being treated in the primary health settings. This increased from 38 percent in 2018 to 44 percent in 2020. This means that more GPs were managing and treating hepatitis C instead of referring to specialists (ASHM, 2021). The cost of specialists, the need to take time off work and health system hesitancy are barriers to treatment for the target audience and prevent people with a lived experience of hepatitis C seeking treatment.

The role of the advertising campaign in driving at risk individuals to visit a GP and seek hepatitis C treatment was significant. Overall, display and search channels delivered strongly against our media targets and key performance indicators. The messaging across all platforms was strong, bespoke, inclusive and non-judgemental. It would be advantageous to ensure the future public campaign align with events like World Hepatis Day (28 July each year) to leverage other planned media and public relation activities.

The success of the project required a comprehensive understanding of the patient journey, identification of the roles and functions of the key stakeholders and understanding the capabilities and resources of partners. The sequencing and timing of activities was critical to ensuring the system was prepared to treat and mange individuals seeking hepatitis C treatment prior to commencement of the public facing campaign. Updates to patient management practices supported the system capacity by enabling patients to quickly and easily be referred to "hepatitis C GPs", reducing the chance they would be lost in the system with receiving treatment.

While the GP communication, public advertising and marketing campaign were the most visible aspect of the project, the impact of the HEAT project to recruit and develop GPs (and practices) to confidently treat and manage hepatitis C in the primary health setting was critical to success of the campaign. This is a legacy of the initiative that will continue to service the region into the future. Using localised and targeted approaches to address regional health issues is a cost-effective method to use in other locations. Strengthening the linkages between local stakeholders and partners through forums and working group meetings at the commencement of the project lead to greater partner engagement and understanding. This would enhance coordination and collaboration and possibly allow the projects to be delivered in a shorter timeframe.

In the original project plan, arrangements were negotiated with key government health organisations to access hepatitis C screening data to directly assess the impact of the activity in real time. However due to a policy change this data became unavailable. Future projects should consider locating data sources or use real time data (if available) to assist project management and direction.

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Enhancing healthy eating among on-the-go consumers through persuasive communication

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Abstract

Customers' fast-paced of life drives them to eat on-the-go food. On-the-go food can contribute to an unhealthy diet, which in the absence of above recommended rates of physical activity can lead to overweight and obesity. Applying experimental design, this study investigates how intentions to eat a healthy diet can be enhanced through persuasive communication. We apply the prospect theory to examine the effects of message persuasion on healthy eating intentions. The findings showed that positively framed communication enhances intention to eat healthy alternatives among on the go consumers in contrast to negatively framed messages. The results of study will help health promoters apply positively framed communications to increase healthy on-the-go consumption alternatives.

***Keywords: on-the-go consumption, message framing, prospect theory, healthy eating s*elf-efficacy**

Introduction

On-the-go consumption denotes the purchase and immediate consumption of food and beverages while being in transition from one place to another (Heider & Moeller, 2012). Dairy products, snacks, sandwich, coffee, beverages, ice cream, candies, chocolates, chips, muffins, and donuts are typical products often purchased on-the-go (Heider & Moeller, 2012; Powell & Han, 2011). Customers today are seeking convenience, citing busy lifestyles resulting in an exponential increase in on-the-go food consumption across the globe(Packaging News, 2017; The Nielsen Company, 2017) including Australia (Play Market Research, 2017).Consequently, the on-the-go consumption market is rapidly growing(Heider & Moeller, 2012; Benoit et al. 2016). One negative consequence associated with on-the-go consumption is adverse health issues, including obesity and overweight (Patel et al. 2015)and non-communicable diseases. The aim of this study is to explore whether healthy eating intentions can be enhanced for on-the-go consumers. Accordingly, this study investigates the effects of

message framing (gain frame vs. loss frame) on the intention to eat healthy alternatives for on-the-go consumption and the mediating impact of healthy eating self-efficacy.

Literature review

Healthy eating can be inculcated in the public through messaging (Jones et al. 2003). One strategic approach is "message framing" (Kahneman & Tversky, 1984) which manages outcome expectations in terms of benefits (gains) or costs (losses) (Rothman and Salovey, 1997). Persuasive communication can be framed positively or negatively and accordingly its effect on people's attitudes, and behaviour may vary. Tversky and Kahneman's prospect theory (1981) postulates that people respond based on message framing. Health messages can be framed in terms of potential gains (i.e., advantages or benefits) or in terms of losses (i.e., risks of not performing the behaviour). Negatively framed messages (loss-framed messages) are more effective in inculcating detection behaviours, such as breast self-examination (Goodall and Appiah 2008) whereas positively framed messages (gain-framed messages) are more effective in promoting prevention behaviours, such as regular exercise and obtaining sunscreen (Van't Riet, Ruiter et al. 2010). Healthy eating is a preventive behaviour. According to the literature a positively framed message will be more effective than a negatively framed messages in enhancing healthy eating intention among on-the-go consumers. Accordingly, we hypothesise the following;

H1: *A positively framed message is more impactful in enhancing intention to eat healthy alternatives among on the go consumers than a negatively framed message*.
Self-efficacy also plays a role in the adoption of health-conscious behaviours (Shieh et al., 2015). Self-efficacy refers to an individual's belief in his or her capacity to exert control over one's own motivation and behaviour (Bandura, 1977, 1986, 1997). Research indicates that positively framed messages tend to trigger one's confidence to perform the desired behaviour (Randle, Stirling and Dolnicar, 2016). Therefore, positively framed messages are expected to be more effective than negatively framed messages in enhancing self-efficacy of eating healthy alternatives among on-the-go consumers. We hypothesise;
H2: *Positively framed messages are more impactful in enhancing healthy eating self-efficacy among on the go consumers than negatively framed messages.*
People who demonstrate high self-efficacy and control over behaviour are more likely to perform that behaviour (Randle et al., 2016). We therefore believe that healthy eating self-efficacy is likely to mediate the effects of message framing on healthy eating intentions among on-the-go consumers, and accordingly, we hypothesise the following;
H3: *Healthy eating self-efficacy mediates the effects of message framing on intention to eat healthy alternatives among on the go consumers*

Method

A scenario-based between subjects experimental study was conducted to test **H1- H3** for Australian on-the-go consumers using an online consumer panel. Two screening questions were asked: "Do you buy food or beverages on-the-go at least once a week?" and "Are you older than 18". Only the respondents who answer yes to both screening questions were eligible for this study. To manipulate message framing, four advertisements were designed of which two were in the form of message ads and two were in the form of video advertisements. Three ads portrayed the consequences of consuming healthy alternatives (gains) and one ad featured consequences of consuming unhealthy alternatives (losses) for on the go consumption. Respondents were asked to carefully watch the ad and then respond to the questions. 60-63 participants responded to each scenario. The survey instrument adopted previously validated scales (Riet et al., 2011; Povey, Conner, Sparks, James, and Shepherd, 2000; Kreuter and Wray, 2003; Tax, Brown, and Chandrashekaran, 1998; Andreyeva, Long, & Brownell, 2010; Burns & Inglis, 2007; Wirtz & Kulpavaropas, 2014; Thompson and Malaviya,

2013; Pham and Avnet 2004; Yoo, Donthu, and Lee, 2000; Gerend, Shepherd,and Shepherd, 2013). Involvement in the advertisement, respondents' perceptions relating to price and availability of healthy alternatives, and their healthy eating awareness might affect their intentions to consume healthy on-the-go alternatives (Andreyeva, Long, & Brownell, 2010; Burns & Inglis, 2007; Riet et al., 2011; Wirtz & Kulpavaropas, 2014), and hence they were considered co-variates.

Results and Discussion

We first performed manipulation checks which suggested that message conditions were perceived as different in terms of consequences of healthy and unhealthy eating for on-the-go consumption. A one-way MANCOVA (Multivariate ANCOVA) was performed to examine whether intention to eat healthy items for on the go consumption, as well as healthy eating self-efficacy differed between messages featuring consequences of healthy and unhealthy eating for on-the-go consumption. The results showed that, even after controlling for the co-variates, intention to eat healthy items ((F (3, 228) = 2.61, p<0.1)) varied across four message framing conditions- message ad- positive (M= 3.58, SD=.98), message ad- negative (M= 3.54, SD=.99), video ad- moderately positive (M= 3.69, SD=.88), video ad- highly positive (M= 3.88, SD=.84). Overall, these results suggest the acceptance of ***H1.*** Particularly, the intention in the highly positive video ad condition (M= 3.88, SD=.84) is significantly higher (mean difference= .34, p<0.05)) than the negative message ad condition (M= 3.54, SD=.99). However, healthy eating self-efficacy did not differ ((F (3, 228) = .724, p>0.1)) across the conditions- message ad- positive (M= 3.76, SD=.80), message ad- negative (M= 3.86, SD=.81), video ad- moderately positive (M= 3.81, SD=.68), video ad- highly positive (M= 3.75, SD=.77). Hence, ***H2*** was rejected. We performed the regression bootstrapping procedure in the PROCESS module (Model 4) to test mediation effects. The findings showed that the indirect effects of message framing condition on intention to eat healthy items for on the go consumption via healthy eating self-efficacy were not significant (b= -0.01, with confidence intervals varying between LLCI= -.05 and ULCI=.04), suggesting the rejection of ***H3***.

Implications for theory and practice

This study identified that positively framed communication enhances intention to eat healthy alternatives among on the go consumers in contrast to negatively framed messages. Underpinned by prospect theory, we established that positive message framing would encourage OTG consumers to eat healthy alternatives. This study extends application of prospect theory in a new direction, i.e., healthy on-the-go eating practices. Further, our study indicated that healthy eating self-efficacy is indifferent to message type and does not play any mediating role in the association between message framing and healthy eating intention among on-the-go consumers. Limited evidence about marketing healthy choices to on-the-go shoppers
is available. The results of study will help health promoters to apply positively framed communications to increase healthy on-the-go consumption alternatives.

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Segmentation and audience analysis in social marketing for the promotion of seasonal influenza and COVID-19 vaccination among university students

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Introduction to the Research Problem

Policy makers worldwide have been struggling to get their citizens vaccinated against COVID-19. Vaccine hesitancy has also been observed for seasonal influenza (MacDonald, 2015). Following SAGE Working Group recommendations, this study approaches vaccine hesitancy through the lens of audience segmentation (Dietrich et al., 2017; Nowak et al., 2015a) in a group with lower vaccination rates when compared to the general population that are known to increase flu infection rates. Segmentation is one of the least applied social marketing benchmarks. An umbrella review identified only 16% of 93 studies reported segmentation (Kubacki et al., 2017). Segmentation recognises target populations (e.g. university students) are heterogenous. Identification of groups can assist in delivering a vaccine uptake program that better meets the varying groups needs and wants.
The aim of this study is:

To identify homogenous non-intersecting groups of university students to inform a social marketing flu vaccination campaign design.

This study addresses the following two research questions in line with this aim:
RQ1: Among sociodemographic, psychographic and behaviour segmentation variables, which could be used to identify flu vaccination segments in university students?
RQ2: How can seasonal flu and COVID-19 vaccination behaviour be motivated for each segment?

Literature Review

Despite the morbidity and mortality resulting from seasonal flu, many university students choose not to receive vaccinations. This is referred to as vaccine hesitancy (MacDonald, 2015). Vaccine hesitancy has also been observed for the COVID-19 pandemic (Dror et al., 2020). Flu

vaccines have been confirmed as the most effective preventive measure against seasonal flu (WHO, 2012). University students have one of the lowest flu vaccination rates in the general population (Nowak et al., 2015b), which is concerning given university students are vulnerable to the virus. Illnesses brought by flu can lower student attendance and it can undermine their academic performance or work during internships (Nichol et al., 2008). Secondly, university settings enable faster transmission of flu due to the high proximity of students (Uchida et al., 2012). Since a flu outbreak on campus could lead to an outbreak in the larger community surrounding the campus (Plans-Rubió, 2012); preventing the spread of seasonal flu within campuses is important for the protection of the high-risk individuals who work at, or live in close proximity to, university campuses (Nichol et al., 2008). WHO and its advisory group have been advocating for the application of social marketing to increase voluntary vaccination uptake (WHO, 2013). Social marketing is comprised of a set of unique principles (see Carins & Rundle-Thiele, 2014; Rundle-Thiele et al., 2021) and research indicates the behaviour change (e.g. increased flu vaccine uptake) is more likely when more social marketing principles are applied (Carins & Rundle-Thiele, 2014). To date, some studies have identified distinct flu vaccine segments among American adults (Ramanadhan et al., 2015) and healthcare professionals (Lau et al., 2020; Plourde et al., 2008). Less is known about university students. To fill this gap, this study demonstrates how audience segmentation is applied within a university student population to acquire insights that can be applied to inform social marketing campaign design.

Method

A cross-sectional convenience online survey was sent to full-time students in one Hong Kong university. Survey participants were recruited from 11,000 students with 530 valid responses returned across all major academic disciplines. A Chinese-English bilingual questionnaire was designed. The survey was comprised of six sections: (i) sociodemographic and academic background (Lau et al., 2020); (ii) personal medical history, other previous vaccination experience, and family members' vaccination behaviours (Lau et al., 2020); (iii) behaviours, attitudes, and intentions regarding seasonal flu vaccine (Betsch et al., 2018; Schmid et al., 2017; Zaichkowsky, 1994); (iv) information search, exposure, and trust concerning seasonal flu (Ramanadhan et al., 2015); (v) promotion message and influencers for seasonal flu vaccination; and (vi) behaviours, attitudes, and intentions regarding COVID-19 vaccination (Betsch et al., 2018; Schmid et al., 2017; Zaichkowsky, 1994).

Results

Four homogeneous segments were identified using two-step cluster analysis in SPSS (Rundle-Thiele et al., 2015)., namely: segment 1*: "convinced"* (9% of respondents); *segment 2: "informed unconvinced"* (12%); *segment 3: "open to persuasion"* (40%); *and segment 4: "disengaged sceptics"* (39%). Two categorical variables including vaccination behaviour in the previous flu season (2020-2021) and active seasonal-flu-related information searching behaviour and two continuous variables including level of involvement in flu vaccination decisions and level of attention to flu-related information exposed to were identified as segmentation variables in the study. All students in the "convinced" segment were vaccinated in the last season against flu and this segment demonstrates a high level of involvement in vaccination decisions. While most of them do not search for seasonal-flu-related information actively, they pay high attention to flu-related information or news exposed to. All students from the other three segments were not vaccinated in the last season. All students in the "informed unconvinced" segment search for flu-related information actively and have the highest attention to flu-related information or news. Although they demonstrate high

involvement in vaccination decision making, they have the lowest confidence in flu vaccines. 85% of students in this segment have not been vaccinated in the past 5 years. The "open to persuasion" segment demonstrates low involvement in making vaccination decisions with none of the students in this segment searching for the related information actively. Yet, a high level of attention would be given if they were exposed to the information. The "disengaged sceptics" segment demonstrates the lowest involvement with none of the students actively searching for flu-related information. This segment would pay minimal attention to any vaccine related information. 94% of students in this segment have not been vaccinated in the past five years and most of them indicated that they definitely would not receive flu vaccines in the coming flu season.

Among the 22 promotion messages tested, incentive focussed messages could best motivate the "convinced" and "open to persuasion" segments for vaccination, followed by collectiveoriented messages. However, none of the tested messages could motivate the "disengaged sceptics" segment. Messages highlighting the relationship between vaccination and academic performance (both gain-framed and loss-framed) were found to be ineffective across all segments. Doctors, healthcare professionals, and family members are reported to be effective influencers for vaccinations except for the "disengaged sceptics" segment. Regarding COVID-19 vaccination, all students except for "disengaged sceptics" segment expressed willingness to be vaccinated for the protection of themselves and others, fulfilling job requirement, travelling, or avoidance of mandatory quarantine. Yet, no reason could motivate students in segment four.

Discussion and Implications

This study demonstrates how university students could be organised into various homogeneous clusters with audience segmentation. Findings show the existence of a resistant segment with members indicating no interest in vaccinations (flu or COVID-19). Findings in this study highlight which segments to prioritise to ensure vaccine rates are increased in the short term.

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System influences in creating a sense of service safety for alleviation of vulnerability

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Services are integral to social marketing programmes such as mental health, family and domestic violence, drug and alcohol, men' health and breastfeeding, with scope to increase value through these services (Zainuddin & Gordon, 2020). Social marketing services contribute towards service users' health, wellbeing, and the fulfilment of social marketing goals (Russell-Bennett, Fisk, Rosenbaum, & Zainuddin, 2019). Within such service contexts, service safety comes to be expected as built-in a way that make users feel comfortable and that reduces their level of vulnerability and enable behavioural change. Despite this, the notion of service safety within service systems remain unexplored in the social marketing literature. Particularly, key drivers that influence emergence of service users' perception of service safety is missing. This is concerning given that feelings of safety are important for service users to improve their well-being and reduce vulnerability, and service users seek resources from their service providers. In this conceptual paper, we examine the notion of service safety in social marketing services and consider its key drivers through a system perspective, to propose that achieving service safety will reduce the vulnerability of service users (See Figure1 for visual representation).

Literature Review

Sense of Service Safety: Within commercial services marketing, researchers increasingly acknowledge that whether service users trust their service providers to keep them safe and secure as paramount to adapt or transform services (Berry, Danaher, Aksoy, & Keiningham, 2020). Berry et al. (2020) propose the idea of service safety which illustrates consumer's vital needs to ensure personal safety while using services. The authors propose that service safety has four key domains—physical safety, emotional safety, financial safety and information safety. Given the fact that consumers can barely avoid interacting with services (e.g., fitness, healthcare, as well as public transportation) in their daily lives, service safety has become paramount. For instance, physical safety in post-pandemic has become significant criterion as to how consumers choose service providers.

Within the healthcare literature such as in mental health services, a sense of safety has been shown to empower patients and families to voice in high risks situations (Hunt, Bailey, Lennox, Crofts, & Vincent, 2021). Perceptions of psychological safety established in suicide prevention and intervention also creates a sense of control for individuals and enables them to work with goals and better manage their psychological distress (Tunno, Inscoe, Goldston, & Asarnow, 2021). Thus, a

sense of safety is critical to bring about positive behavioural and social change. While service safety is integral to promoting positive well-being thereby improving social marketing services outcomes, the path to creating a sense of service safety is unclear. We introduce a theoretical framework to capture key system influences at micro, meso and macro level that can create a sense of safety, potentially alleviating the vulnerability of service users.

Micro-level System Influences: We propose two micro-level influences of *social stigma* and *coping abilities* that can impact on users' sense of safety. In some social marketing services, negative associations or stereotypes assigned to people impacts on whether they are ignored or minimized within service systems (Dudley, 2000). In mental health services, a fear of being stigmatised creates barrier to users seeking treatment, adherence, or attaining overall well-being (Kirkwood & Stamm, 2006). Substance abusers also face shame and negative consequences associated with addictions leading to social stigma (Lavack, 2007). Coping refers to cognitive and behavioural efforts to manage external and/or internal demands appraised to exceed an individual's resources (Folkman, Lazarus, Christine, DeLongis, & Rand, 1986). Studies show individuals with problem-focused coping mechanism sought help with mental health services (Kauer, Buhagiar, Blake, Cotton, & Sanci, 2017), whereas functionally illiterate consumers sought more avoidant coping strategies (Viswanathan, Rosa, & Harris, 2005). We propose that micro-level influences have implications on users' self-determination and independence, that inevitably determines whether they experience a sense of safety when using social marketing services.

Meso-level system influences: We argue two meso-level influences of *nature of service provider interactions* and *access to social support*. Service providers within social marketing services have been viewed as instrumental to providing emotional social support and technical expertise to service users (Russell-Bennett, Wood, & Previte, 2013). Through a combination of concern for users and strong influence on behavioural goals (Leo, 2013), service providers help to realise behavioural change. At a meso-level, Krawczyk et al. (2019) propose that transformative service intermediaries such as government agencies, medical practitioners, community organisations, peer groups can create safe zones for vulnerable service users. We propose that meso-level factors should create feelings of safety through reducing fears of negative consequences, judgement and prompt willingness to invest personal energies towards behavioural change.

Three macro-level system influences are considered: *Safety in servicescape design*, *regulatory policies*, and *socio-cultural narratives* surrounding vulnerability that can impact on users' sense of safety. Social marketers have long acknowledged that individual behaviours as tied to the larger environment, representing the place to "use the product" (Wallack, 1984). Physical environments such as health -related resources and community design impact on health and well-being (Woolf & Aron, 2013). Online environments act as safe places to support vulnerable consumers (Parkinson, Schuster, Mulcahy, & Taiminen, 2017). Formal policies or laws (e.g., drunk driving prevention or healthy eating) (Truong, 2016) provide systemic change that can bring about individual level change in attitudes and behaviours (Kennedy, 2015). Social-cultural beliefs also impact on individual attitudes and behavioural differences (Smith, 2006), such as cooperation is highly valued in Indian population and risky-taking in American culture. We propose that macro-level factors influence users' sense of safety given shared understanding, unique meanings and values associated with the behaviour and service delivery.

Implications for Theory and Practice

This paper contributes to social marketing theory by introducing service safety as an important concept for social marketing services that can reduce the vulnerability of servcie users. It contributes from a systems perspective to understand the key system influences that can impact on users' sense

of service safety. This study presents implications for social marketing practitioners by drawing attention to the need to consider users' need for different types of service safety to ensure uptake and continuity in use in social marketing programs and services. The study also enables the design of safe social marketing programs and services by drawing on micro-meso-macro key influences.

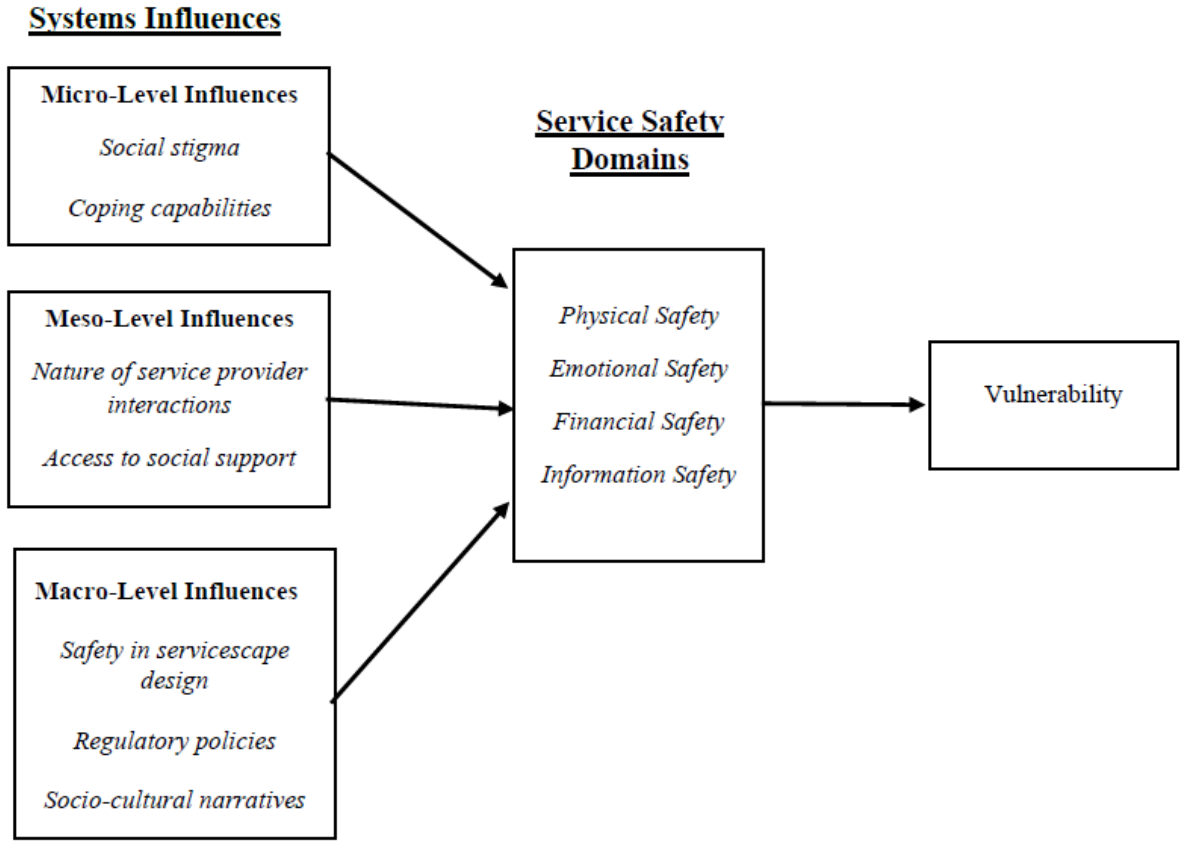

Figure 1: Model of System Influence on Service Safetyto Alleviate Vulnerability

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Let the solution fit the barrier: Shaping the environment for compliance behaviour

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Introduction/Background

To maintain the safety and wellbeing of all, guidelines and rules are necessary. Once rules are created however, human behaviour takes centre stage as each of us makes a choice to follow the rules or not. That is, we make compliance decisions. There are generally penalties for non-compliance, which may be best categorised as fitting the 'smack' categorisation of the behavioural forms exchange matrix (French, 2011). However there are three alternatives to the smack - hug, nudge and shove – therefore social marketers and policymakers should consider the environment in which the non-compliance occurs and the type of non-compliance to develop appropriate interventions. Non-compliance can be categorised into two types: intentional, and unintentional. To be considered intentional non-compliance a behaviour needs to meet five conditions (Malle & Knobe, 1996) and assume a deliberate conscious action within the control of the individual; an intention to perform the action, a desire for an outcome, beliefs about an action that leads to an outcome, skill to perform the action and awareness of fulfilling the intention while performing the action. Conversely unintentional non-compliance occurs when people are motivated to comply but other factors (generally outside of a person's control), intervene and cause an outcome that is unplanned (Malle, 1999). For example, a person may intend to comply with their taxation obligations but lack the skill to do so without errors, or a person may intend to maintain safety regulations yet does not have work processes that easily facilitate safety. Given that law and regulation is often the appropriate approach for intentional noncompliance where people have the motivation, opportunity and ability to comply (resistant to behave; Rothschild 1999), we focus on unintentional non-compliance where motivation is present but the barrier may be a lack of opportunity or ability. In this instance social marketing is an appropriate approach (Rothschild, 1999).

Previous literature indicates that diverse barriers influence unintentional non-compliance, ranging from social norms (Al-Subhi, Bose, & Al-Masroori, 2013) to knowledge (Teperi, Lappalainen, Puro, & Perttula, 2019) and even fatigue (Brooks et al, 2019). This tension between the motivation to comply

and the ability and opportunity to do so creates a problem for policy makers, social marketers, and anyone interested in ensuring people comply with *any* rule or request: if a person *intends* to comply but faces numerous barriers that impede their intentions – how can opportunities and ability be created to provide an ecosystem that supports compliance? This paper aims to bring together compliance policy and social marketing practice, and reports the findings of two exploratory co-design workshops conducted with participants working in the maritime industry. The following research question is proposed *"How can a supportive environment be designed to increase opportunity and ability to comply?"* The frameworks of customer experience (Gentile, Spiller, & Noci, 2007), behavioural bias (Behavioural Insights Team, 2015) and social support (Cutrona & Russell, 2015) were used to address the research question.

Method

Data were collected using two qualitative co-design workshops with 19 Australian participants. This sample size reflects key informants and is drawn from a small population. Co-design is a user-centred technique drawing on divergent thinking, bringing together multiple perspectives on a service in a holistic way to improve interactions between service provider/s and consumers (Trischler, Pervan, Kelly, & Scott, 2018). Participants collaborated in a half-day session which included compliance customer journey mapping with a specific focus on barriers and motivators, and ideation of support mechanisms needed in the environment for supporting compliance. Textual analysis (of participant notes taken as part of the activity) and pictorial analysis (of images/post-it note maps) were conducted, which is a common approach for co-design workshops (Čaić, Odekerken-Schröder, & Mahr, 2018).

Results/Findings

The participants engaged in a detailed discussion of compliance barriers which were analysed and categorised by the research team, revealing a diversity of barriers that aligned with literature review findings. In addition, when classified according to the customer experience framework (Gentile, Spiller & Noci, 2007), the most common barriers to compliance were pragmatic, cognitive, or relational in nature (these are different to barriers in the literature for intentional noncompliance). Most of the specific barriers listed were focused on the self, but barriers related to other people functioned as the most influential motivators (or barriers) to compliance, indicating that both the self and the surrounding social environment are important. Given this interaction of social and self, the ideation data collection revealed that participants favoured social support options that appeal to both the self and the social environment, specifically the provision of tools, timely information, and being a part of a trusted network where advice could be found when needed. Customer journey analysis revealed differences based on the value proposition of compliance and participants identified a need to 'match' the barrier that led to the unintended non-compliance with the intervention. Using the EAST behavioural bias tool (Behavioural Insights Team, 2015), participants ideated creative hug and nudge interventions to support unintentional noncompliance for different compliance personas. Interventions tended to be practical, tangible, provide knowledge and leverage existing or new relationships – in keeping with the barriers identified. One example intervention for time-poor unintentional non-compliers was the provision of multi-channel 24/7 support – potentially partially via artificial intelligence – to provide guidance at critical times – as many in this industry work outside of regular office hours, timing limits access to otherwise well-designed support mechanisms.

Discussion and conclusion

This research shows that frameworks from social marketing and behavioural economics can be combined using co-design to develop opportunity and ability for a supportive environment for compliance. Theoretically, we contribute to the compliance literature and the social marketing literature by demonstrating that while unintentional non-compliance aligns with the positive axis of the Exchange Matrix (French, 2011) there is variance between the specific types of hug and nudge interventions based on different motivations and barriers (personas). Given the clear difference between intentional and unintentional non-compliance, the contribution to practice is that policy and social marketing programs should differentiate between intentional non-compliance and unintentional non-compliance when developing interventions. The fines (and similar 'smacks') commonly applied in regulation may in fact be failing to curb unintentional non-compliance as they do not address the core barriers. For instance, the person who lacks the skill to comply with safety regulation is unlikely to change from a 'smack' (fine) but may benefit from a nudge (AI assistant to help with online forms). Interventions are likely to take on a more supportive, even creative, tone for unintentional non-compliance which positions the regulatory organisation as a friend rather than as 'big brother'. Future research should test the influence of different interventions (hug, nudge, shove, smack) across the two types of non-compliance, and we recommend an experimental design be utilised. Overall, this research highlights the importance of differentiating between intentional and unintentional non-compliance, and the need to go beyond the individual to design interventions that alter the environment surrounding the behaviour.

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Addressing dry mouth via community pharmacies: piloting a new channel for promoting better oral health

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Project/Issue Overview

Addressing dry mouth via community pharmacies: piloting a new channel for promoting better oral health

Background and social context

Xerostomia or 'dry mouth' is a common and debilitating condition that affects quality of life. It can be extremely uncomfortable. Often those with dry mouth can have difficulty swallowing, speaking and even sleeping.

Dry mouth is associated with a reduction in the amount of saliva produced in the mouth. Saliva plays an important role in reducing the amount of bacteria in the mouth. Those who experience dry mouth are therefore at a higher risk of gum disease, cavities and tooth sensitivity.
Dry mouth is a common side effect of many medications such as those used for chemotherapy, or can be the result of salivary gland dysfunction, conditions such as Sjogren's syndrome or drug use.

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There are simple steps that can be taken to reduce the impact of dry mouth, yet the condition is often not recognised, either by the consumer themselves or by their health professionals. Many people do not even realise they have a condition. Many do not know they should take extra care with their oral hygiene. And many are not aware of how they can reduce these symptoms.
Over recent years there has been increasing focus on role of community pharmacists in primary care and prevention in academic publications, policy frameworks and in practice, in both the UK and Australia. (Giannitrapani, 2018) (Hindi, 2019)

What role can community pharmacists play in improving quality of life and oral health outcomes for those experiencing dry mouth? The objective of this study is to pilot an approach aimed at increasing the capacity of pharmacists to manage clients affected with dry mouth.

Behavioural/Social Change Goals

The ultimate behavioural goal (consumer focused) is for those experiencing dry mouth to take one or more steps to reduce their symptoms (such as drinking more water, cleaning their teeth more regularly, seeing a dentist and/or discussing their medication options with their doctor or pharmacist).

The long term social change goals are to improve the quality of life and reduce the incidence of cavities, tooth sensitivity and gum disease amongst Australians experiencing dry mouth.
The behavioural goal (pharmacist focused) is to increase community pharmacists' confidence, skills and propensity to discuss dry mouth with relevant consumers by equipping community pharmacists with information, education and tools to raise awareness and improve oral health outcomes for their customers who experience dry mouth.

As a pilot program, the project team envisages that the results from this stage will be used to inform a larger randomised control trial.

Primary objectives of this study are:

- To work with end-consumers and expert advisors to co-design educative materials for both consumers and pharmacists
- Test and pilot a possible approach to improving oral health outcomes for people experiencing dry mouth, utilising community pharmacists as a new channel
- To educate and equip pharmacists with the knowledge and tools to identify and discuss dry mouth symptoms with those most likely to experience dry mouth
- For consumers to take one or more of a range of actions that improve their dry mouth symptoms

Citizen orientation
Following a literature search, we sought to understand citizens' perspectives and experience of dry mouth via the use of a co-design workshop. Participants' input was used to inform the style, design, format, content and messaging of the materials.

Additionally, we recruited an advisory group consisting of subject matter experts, and consumer representation. The role of the advisory group was to provide input and guidance in all aspects of the project, from development of materials and content; to appropriate ways to interact with

pharmacists. Given the involvement of pharmacists within this group, we were also able to gain their input in how best to orient the approach and materials to this target group.
A pre intervention evaluation survey incorporated measurement of awareness, knowledge, reported knowledge and attitudes amongst pharmacists, in relation to the condition of dry mouth and the proposed program.

Further research stages are planned, and will examine a post intervention evaluation via both quantitative and qualitative measurement.

Research and Insight

The following research insights informed the project approach:

1. Reduced salivary flow is associated with increased risk of caries and poorer reported quality of life

Saliva plays an important role in maintaining the health of the oral cavity soft and hard tissues, clearing food and beverages from the mouth and modifying the pH of dental plaque [Biofilm] (Mandel, 1987) Inadequate salivary flow rate is an indicator for increased risk of developing caries (Tooth Decay).

2. Many common conditions and life factors can reduce the amount of saliva produced, leading to 'dry mouth' in a significant proportion of the population

Reduced salivary flow may be brought on by age, medication, dehydration, mouth breathing, Sjogren's syndrome, infection, nerve problems, chemotherapy and radiotherapy to the head and neck (Pitts, 2017)

Medications that can lead to dry mouth as a side effect includes: decongestants, antihistamines, analgesics, antidepressants, antihypertensives, antipsychotics, methadone, asthma medications. Illicit substances, such as cocaine, can also cause dry mouth.

In the absence of normal salivary flow, the pH stays at a low level for an extended period of time after exposure to dietary sugars. Stimulated saliva, because of its higher flow rate (increased volume) and enhanced buffering capacity (bicarbonate buffering system), dilutes and neutralizes biofilm acids.

The incidence of dry mouth is estimated at approximately 22% of the population, with older age groups experiencing a higher rate of dry mouth. (Agostini BA, 2018) (Locker, 1995)

3. Some populations are disproportionately affected by negative outcomes of dry mouth

Access to dental services can be difficult for population groups that are at high risk to oral diseases, including those in regional and rural locations where pharmacies often operate. A review of the literature reports that the uninsured, people on low incomes and infrequent dental attenders, tend to attend emergency departments, medical practices and pharmacies for dental problems (Barnett T. H., 2014). These behaviour patterns could be confounded by the perceived high costs of dental treatment and limited access to dental practitioners, particularly in rural and remote communities (Barnett T. H., 2015)

Dry mouth is one of the most …" underappreciated, underdiagnosed and undermanaged oral health conditions". (Frydrych, 2016)

4. Dry mouth is a significant issue that impacts individuals' quality of life and oral health

In their systematic review of 129 papers, Aliko et al found that medically induced salivary gland dysfunction constitutes "…a significant burden in many patients and may be associated with important negative implications for oral health." (Aliko, 2015)

There is an established association between the experience of dry mouth and reduced quality of life. Examples include for those undergoing chemotherapy and radiotherapy (Memtsa, 2017) and for those with diabetes mellitis (DM1) (Busato IM1, 2009)

People experiencing dry mouth are at higher risk of dental caries (cavities). (Su N, Merek CL, Ching V, Grushka M., 2011)

5. *A number of simple changes can be made to reduce the effects of dry mouth*

Changes to the choice of medication can reduce the impact of dry mouth, as can simple changes to oral hygiene such as drinking more water and brushing teeth more regularly, and switching to alternate toothpastes and mouth washes (Australian Government Department of Veterans Affairs, 2018)

In addition there are 'over the counter' products which have also been shown to reduce symptoms, such as gels and sprays. (Su N, Merek CL, Ching V, Grushka M., 2011)

6. Community pharmacists may be well-placed to improve the awareness and uptake of behaviours that reduce the detrimental impacts of dry mouth

Pharmacists have been identified as potential primary healthcare providers who can be integrated into a model of oral health care to deliver timely and cost effective preventive oral health care (Tiang, MW et al, 2016) (Freeman CR, 2017). This is due to the fact that their role is central to the healthcare system for ensuring quality, prescribing, preparation, provision and monitoring of therapeutic medicines. More recently, the role of appropriately trained pharmacists in Australia has expanded to provide vaccination services (Demarte, 2016).

The 2015 landmark joint position statement on oral health by the Australian Dental Association (Vic branch), the Pharmaceutical Society of Australia and Dental Health Services Victoria recognises the key role of pharmacists in oral health (Pharmaceutical Society of Australia, 2014).

Segmentation

The target group for this pilot trial was community pharmacists working in settings where they fulfill a significant number of prescription medications. We incorporated a selection of metro and regional community pharmacists in both New South Wales and Victoria, in order to explore differences across location type.

The second target group for this project was people taking prescription medication, particularly chemotherapy medications, anti-depressant or anti-anxiety medication, steroids, anti- hypertensive medication (for high blood pressure or a heart condition), non-steroid anti-inflammatory medications, antihistamines, amphetamines, diuretics or decongestants. The target group needed to be those who source their prescription medication from a community pharmacist.
The age profile for people taking these medications tends to skew towards older age groups, but includes all ages and lifestyle profiles.

This target group is likely to be unaware that dry mouth is a condition, and not aware of ways they can improve their quality of life or oral health outcomes.

Value

Value for community pharmacists

1. Increased awareness, knowledge and confidence amongst pharmacists involved in the study, in identifying those at risk of dry mouth

2. Additional skills, confidence, knowledge and tools to start a conversation about dry mouth with their customers who may experience dry mouth, and to discuss ways to ameliorate symptoms

3. Improved ability to provide better outcomes for their clients

4. Better job satisfaction

Value for those experiencing dry mouth

1. Increased awareness and knowledge of evidence-based approaches to address their dry mouth condition

2. Improved oral comfort

3. Improved confidence, quality of life and participation in their community

4. Economic savings by reducing the risk of more complex, high-cost dental procedures

Value to community

Potential benefits this research may provide to the community and humanity in general include:

1. A framework and recommendations for an oral health educational program targeting community pharmacists and focused on dry mouth

2. Clear direction and guidance for the next steps of a wider oral health program, which will focus on quality of life and health impacts of addressing dry mouth

3. Insights to inform a planned wider approach to addressing and quantifying the health cost and quality of life impacts of dry mouth

4. Improved management of dry mouth and therefore better oral health and quality of life

5. Increase in community participation amongst those whose lives are severely affected by dry mouth

Competition

From a community pharmacist perspective, incorporating education of their customers and facilitating simple behaviour changes could be seen to compete with their time and role dispensing medications, managing their pharmacy from a business perspective and serving customers more generally. The dry mouth message may also compete with other health promotion messages such as suggesting a flu vaccination.

From a consumer perspective, many people experience dry mouth as a side effect of medications for serious health concerns. Their attention is understandably focused on their more serious concerns. These could therefore be seen as competition for consumers' attention and share of mind in relation to dry mouth messages and behaviour changes.

Theory

The transtheoretical model of the stages of change (Prochaska, 1986) was used in the design of this program. This model suggests that there are six stages of behaviour change: pre-contemplation, contemplation, preparation, action, maintenance, and termination.

For pharmacists, this campaign aimed to address pre-contemplation, contemplation, preparation and action, by building awareness of dry mouth as a condition as well as the medications commonly associated with dry mouth, providing a framework to have conversations with likely clients, and by equipping pharmacists with materials to guide consumers to make one or more changes in their oral hygiene.

In addition, this campaign also considered end consumers with whom the campaign aimed to address pre-contemplation and contemplation by addressing awareness of dry mouth as a condition, and providing guidelines and encouragement to improve oral hygiene practices.

Flay and Cook (Flay, 1989) suggest that social marketing campaigns are generally most effective in initially creating awareness, modifying and influencing perceptions by providing motivations to change attitudes. The authors suggest that as attitudes change, propensity to make behaviour change increases.

For this reason, in evaluating the program effectiveness, the pre and post survey design incorporated measures of awareness, knowledge and confidence in having a conversation about dry mouth with consumers.

Social Marketing Intervention Mix

This campaign incorporated the following social marketing mix elements:

Education: Materials were designed to educate both pharmacists and consumers. In terms of pharmacists, the materials provided information about the condition of dry mouth, common causes including a focus on medications associated with dry mouth, and suggestions of how to address symptoms.

In terms of consumers, the materials provided simple steps and encouragement to improve awareness of and address their dry mouth and oral health symptoms.

Services: The printed materials were supplemented with telephone support conducted by specialist oral health dentists, in order to provide context, explanation and encouragement.

Lobbying and influence: By involving a range of stakeholders in the advisory group, the campaign has sought to raise the profile of dry mouth within professional groups, academia and industry, garner the support of the group and build industry influence in order to address the effects of dry mouth for consumers.

Members of the Advisory Group include representatives from the Pharmacy Guild, The Pharmaceutical Society of Australia, the Australian Dental Association and academics with expert knowledge, based across four universities (La Trobe University, Deakin University, University of Queensland, University of Adelaide).

Place: The campaign was conducted at the point of prescription medication dispensing, that is within a community pharmacy setting.

The use of stickers on repeat prescriptions was used to prompt awareness and actions. From a pharmacist perspective, the prompt was aimed at their initiating a discussion about dry mouth at the point of dispensing. For consumers, the prompt was aimed at reminding them to initiate simple changes such as drinking more water, and/or raising any concerns with their pharmacist.

Design/ promotion: A catchy image featuring a dry, cracked tongue, and tag line ("Don't suffer in silence") were key features of the design of materials for both consumers and pharmacists. The design look and feel, the tag line and the calls to action were all based on input from consumers at the co-design stage. Consumers identified with the chosen image, with a number of participants suggesting that the image encapsulated how their mouth can feel. They indicated a preference for a design that clearly communicated the symptoms of dry mouth.

Given the likely low awareness of dry mouth within both community pharmacists and within consumers themselves, a direct and very clear design approach was chosen.

Partnerships (if relevant)

This project was undertaken in partnership with North Richmond Community Health, in Victoria. NRCH has a long history of providing public dental health services, and was the first setting in Victoria to provide a safe injecting room. Dry mouth is a side effect of consumption of illicit drugs. While consumers taking illicit drugs were not the primary target in this pilot, it is hoped that the findings can be generalized and tested with this target group as well.

The project partners also included Deakin University and La Trobe University.

The advisory group incorporated representatives from relevant professional bodies including Australian Dental Association, Pharmaceutical Society of Australia, Pharmacy Guild, oral health practitioner research partners from Flinders University, University of Sydney and University of Queensland, and community partners including Wathaurong Aboriginal Co-operative. The incorporation of a community representative with lived experience was vital to the group's success. This advisory group included representation from Victoria, NSW, Queensland and SA.

Evaluation and results

The purpose of this study is to pilot a new approach, as the basis for implementing a wider randomised control trial. Given that this study is a pilot, only a small number of pharmacists (n=9) have participated to date. During the intervention period, each pharmacist has interacted with between 10 and 50+ consumers who experience dry mouth.

The following evaluation methods have been used in this study:

- Pre intervention survey of participating pharmacists

- Post intervention survey of participating pharmacists
- Pharmacist record of clients (with whom they have spoken about dry mouth)
- Post intervention one-to-one interviews with pharmacists

Detailed below are the key preliminary indicative findings in relation to this study.

1. In general their responses to knowledge questions (such as what can cause dry mouth and typical effects of dry mouth) were accurate. Based on their responses, this group of pharmacists appeared to have a good understanding of the possible complications of dry mouth.
2. Among the cohort who responded to this pre-intervention survey, there was a wide range of responses in terms of the steps they would take when interacting with a client with dry mouth, and in terms of their likely recommendations.
3. In answer to the question, "on average, how many clients do you see each week, who have or are who at risk of dry mouth?" respondents indicated from 1 per week to 10 per week. This is likely to be an under-estimate of the clients seen who experience dry mouth, given the incidence estimates of dry mouth, being approximately 1 in 5 Australians. (Agostini BA, 2018) (Locker, 1995)
4. While community pharmacists have received exposure to dry mouth as a condition, and to the medications most likely to cause the condition, there appears to be a feeling that this was not taught in a cohesive manner within undergraduate training. The pharmacists in this study would therefore welcome the opportunity and support to learn more about dry mouth and how they assist their customers.

Completion of the infield research is expected in April / May 2020 (including post intervention surveys and interviews), and after this point additional reporting will be available to share.

In the post-intervention stage, it will be of interest to explore any barriers experienced by pharmacists in undertaking conversations regarding dry mouth.

Lessons Learned

The co-design stage was highly informative and provided unexpected insights that were very valuable in the design stage.

This study also suggests there is a low awareness of dry mouth amongst pharmacists and the community at large. Even amongst those who experience significant dry mouth symptoms, there can be a very low awareness of the problem. In consumers we spoke with, many did not recognise their symptoms as a condition, perhaps because they face multiple medical considerations. Comfort and quality of life can come second to fighting cancer or dealing with unstable diabetes.

Many community pharmacies are very busy and it can be difficult to catch pharmacists who work shifts or who work in high volume dispensaries. Providing online learning for pharmacists is likely to improve their knowledge and uptake, as ongoing professional development is an annual requirement.

Involving professional groups such as the PSA and ADA in the Advisory Group was very helpful in building awareness and securing ongoing support for future research stages.

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Providing a supportive system for change: Repositioning home energy efficiency for liveability not cost

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Introduction/Background

The field of social marketing is extending beyond the understanding of individuals to consider how the individual operates within a system (Truong, Saunders, & Dong, 2019). For the social issue of energy efficiency in the home, typical approaches have involved campaigns that provide appliances, tips and advice about cost minimisation (Economidou et al., 2018). These approaches ignore the broader system consisting of home buyers, sellers, real estate agents, builders and landlords that influence the structural nature of homes and that frame how energy efficiency is viewed. As well as cost, home buyers are influenced by home features that meet their needs in terms of comfort, location, and layout (Reed & Mills, 2007; Sundrani, 2018), however current policy continues to frame energy efficiency in terms of the societal benefit of emissions and energy supply concerns (Hesselni & Chappin, 2019). An alternative approach, which considers the interests of a variety of stakeholders at the micro and meso level of the social marketing ecosystem, is the reframing of energy efficiency as a liveability feature. Liveability as a concept has numerous definitions but generally includes good community, enjoying place, habitability and accessibility, equity and inclusiveness, health and safety, participation, open space and greenery, design, dwelling quality, and cost of living (Hwang et al., 2008; Leby & Hashim, 2010; Niemelä et al., 2010; Veenhoven, 2013). The current research focusses on liveability in the home, as the home is the core of government consumer policy and is central to the multi-million real estate and construction industries which provide the structural context for the

individual. The aim of this research is to understand the meaning of “liveability” for homebuyers and the preference for energy efficiency features in their next home.

Method

An online survey was conducted using a professional consumer panel provider to recruit a nationally representative sample of 1,016 Australians who were intending to purchase a home within the next three years. Survey items included measures of consumer liveability derived from the literature (see below), preference for energy efficiency features (using a 17-feature list from liveability.com.au), and attitudes towards energy efficiency. After testing the liveability measures to establish a robust scale (including a comparison of alternative conceptualisations), a two-step cluster analysis was used to segment households based on different conceptualisations of energy efficiency as liveability. Using Bayesian Information Criteria (BIC) as the threshold for optimal cluster formation, iterations were run to determine the best fit.

Results/Findings

Nine liveability dimensions emerged from the construct validity and reliability process. These measures included global personality traits, as well as operationalising these traits in terms of how they might influence what a person wanted in a home. Thus, for the construct of narcissism, we measured narcissism as a personality trait, and also the degree to which being able to “show off” their home was important to a person.

1. Nature Relatedness: People's interest in, fascination with, and desire for nature contact (Nisbet & Zelenski, 2013).
2. Environmentalism: People’s concern about the environment (Chang, 2011).
3. Long term versus short term cost perspective: Importance of investing in the right home that could lower their long-term running costs?
4. Narcissism: Grandiose sense of self, feelings of entitlement, and a dominant and antagonistic interpersonal style (Gentile et al., 2013).
5. Materialism: exaggerated belief in the importance of goods in one’s life (Flynn et al., 2016).
6. Security importance: Importance of safety/security in one’s life (Roehm & Roehm, 2010).
7. Voluntary simplicity: measures the phenomenon of people distancing themselves from the idea of a life principally centred on materialistic consumption and are who are voluntarily adopting a non-materialistic, simple way of life (Boujbel & D’Astous, 2012).
8. Time pressure: sense of a shortage of time (Dobson & Ness, 2009).
9. Independence: preference to act independently rather than as members of a group (Sharma, 2010).

Our segmentation uncovered 7 liveability profiles for the Australian home buyer market using these nine constructs. The most important liveability dimensions for determining the segments were, in order, security importance, followed by environmentalism, nature relationships, materials, and lastly independence. Analysis of these segments found significant differences on energy efficiency attitudes and some socio-demographics.

1) Exhibitionists (9%) have the highest levels of every dimension, including materialism. If they care about the environment or are fiercely independent, they want everyone to know about it. Highest proportion of those who want appliances with 8-star energy ratings.
2) Idealists (19%) score almost as high as the exhibitionists but aren't materialistic. They want to live their best lives, privately. Largest proportion wanting double glazed windows and best insulation possible.

3) Minimalists (15%) have higher levels of nature relatedness and environmentalism than the other dimensions and are anti-materialistic. Likely the most authentically eco-friendly segment.
4) Individualists (7%) only care about security and independence, nothing external to their household. Strong desire for efficient heating and cooling device and efficient hot water systems, and water efficiency.
5) Survivalists (17%) care about security more than anything else. This segment is focuses on bare necessities first. Least likely to care about star energy ratings.
6) Strategists (22%) score more highly in security, independence, and environmentalism than the other dimensions. They're interested in the practicalities that make a difference to their present, and future.
7) Non-conformists (12%) don't want to be put in a box, even if that box is labelled 'independent'. They score low on every dimension.

Discussion and conclusion

Liveability in the home consists of nine dimensions. The combination of these liveability dimensions reveals seven segments of consumers that have different preferences for energy efficiency features in a home. Thus, to increase home energy efficiency in Australia, social marketing programs and policy could position energy efficiency as a liveability feature and provide a supportive system. This research paves the way for the real estate and construction industries to market energy efficient houses based on liveability rather than relying solely on the traditional factors of price, location, and size. Further research is needed to provide an evidence-base for industry that develops and tests the effectiveness of an *energy efficiency as liveability* rating system that can be used in communications materials e.g. using icons, to appeal to different segments. For instance, house advertisements aimed at exhibitionists would have 'status' icons designed to appeal to materialism and narcissism. Retailers could focus on visible features such as roof-top solar panels and external battery systems for this segment. In contrast, behaviour change programs for the minimalist segment would highlight the environmental benefits of appliances and housing features. A systems approach to repositioning energy efficiency that involves policy to support meso-level actors in the real estate and construction industries in incorporating energy efficiency features would provide an environment that aids individual choices that lead to a more sustainable future for society.

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Call to arms: Childhood immunisation influenza campaign

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Project/Issue Overview

Each year in Australia, thousands of influenza (the flu) associated hospitalisations are recorded. The flu can lead to serious complications and even death, particularly in high risk groups such as young children. After 2017 saw the worst flu season on record, free flu vaccines for all Queensland children aged between 6 months to under 5 years were introduced. As a result, Queensland Health developed a childhood immunisation flu social marketing campaign which launched in 2018. Following positive evaluation in its first year in market, the research insights played an integral part of an adaption of this concept in 2019, resulting in an even stronger and more successful behaviour change campaign for the 2019 flu season, that will potentially be rolled out nationally in 2020.

Background and social context

Pandemic influenza (flu) remains a key global health threat. The Queensland flu season occurs annually, typically between May and October. Flu season commencement, its severity and the number of people affected by the flu virus varies each year, depending on circulating strains. Children under 5 years have the greatest risk of severe complications, contribute most to virus spread and are more likely than any other age group to be hospitalised for the flu.

Flu notifications hit an all-time high in 2017, with more than 56,000 notifications recorded in Queensland, prompting both the National Immunisation Program (NIP) to extend its eligibility for free flu vaccines to all Queensland children aged between 6 months to under 5 years, and Queensland Health to launch a childhood immunisation flu campaign.

The 2018 campaign proved to be successful in its first year in market, increasing awareness and driving positive attitudes and behaviours towards flu vaccinations amongst the target audience of parents of children aged 6 months to 5 years. Flu notifications also drastically went down in 2018 with 14,558 notifications. Whilst the campaign had some initial positive results, post campaign evaluative research indicated that there were still some reservations amongst Queensland parents, particularly around the safety of the vaccines and severity of the symptoms. Queensland Health took on the challenge to strengthen the campaign by using these learnings to shape the future strategy and direction of the 2019 childhood immunisation flu campaign *Call to arms*.

Behavioural/Social Change Goals

Leveraging on the successes of the 2018 campaign, the *Call to arms* campaign aimed to generate awareness that the flu vaccine is free for children between 6 months to under 5 years, is required annually and is the safest and most effective form of protection against the flu virus. The campaign also aimed to increase the proportion of parents who had their children vaccinated during the 2019 flu season as well as increase advocacy of flu vaccinations.

Key campaign objectives for the target audience included:

- Increase awareness that the influenza vaccine is:
    - **free** from a baseline of 63% in October 20181 to 65% by October 2019
    - **required annually** from a baseline of 67% in October 2018 to 69% by October 2019.
- Increase the proportion that:
    - have had their children **vaccinated** with the influenza vaccine during flu season (or intend to) from a baseline of 39% in October 2018 to 41% by October 2019.
    - **strongly support** influenza vaccine from a baseline of 69% in October 2018 to 71% by October 2019.
- Reduce the proportion who still have reservations around the safety of the vaccination from a baseline of 26% in October 2018 to 24% by October 2019.
- Generate over 15,000 **website views**, from a baseline of 12,762 in 2018, on the *Vaccination matters Children and flu* web page by October 2019.

Citizen orientation

Many life-threatening communicable diseases can be prevented through immunisation and vaccination continues to be the best and safest way to prevent the spread and severity of the flu. There is support for immunisation among the majority of Queensland parents, however, some parents remain cautious regarding vaccination in particular for flu, mostly due to lack of information or incorrect information. When support and the subsequent rate of immunisation is high within a population, communities benefit from herd immunity. Herd immunity serves to help protect those people who can't be vaccinated because they are either too young, immuno-suppressed, their immune system doesn't respond to vaccination or for other medical reasons.

Since 2015 Queensland Health has commissioned regular qualitative and quantitative research undertaken of mothers/parents of children 0-6 and expectant mothers, in order to monitor changes in Queenslanders awareness, attitudes, beliefs and behaviour around immunisation.

Evaluation research has followed each phase of campaign activity, to help refine campaign messaging and inform future phases according to parents needs. The key insights from the 2018 quantitative evaluation research informed the decision to adapt the creative approach and refine messaging with a clearer call to action for the 2019 iteration.

Research and Insight

The 2018 evaluative research showed positive results in terms of awareness levels (63%), message cut through, likability (through the use of kids to deliver the campaign messages) and initial behavioural changes such as 3 in 5 parents taking a direct action by talking to their GP. However, the research also outlined that there were still some reservations amongst Queensland parents. The first around the safety of the vaccines, and the second on that the 2018 creative executions (with children talking of flu symptoms they have experienced) could be deemed to downplay the severity of the flu.

In developing the 2019 campaign Queensland Health wanted to not only leverage these positive insights but to also learn from the ongoing barriers and reservations. Resulting in the *Call to arms* campaign. This required the full campaign to be reworked through a new shoot with new talent, new scripts and full production roll out in time for the 2019 flu season.

Segmentation

The audience segmentation approach to date has been defined from those high-risk groups receiving NIP funded flu vaccines in Queensland. They include:

- Aboriginal and Torres Strait Islander children aged 6mths to under 5yrs, and 15+yrs
- People aged 6+mths with medical conditions predisposing them to severe influenza
- Pregnant women
- People aged 65+yrs.

Then in 2018, following the severity of the 2017 flu season, the program extended eligibility to all Queensland children aged 6 months to under 5 years.

While it is recommended that all Queenslanders above the age of 6 months are vaccinated annually against the flu, the *Call to arms* campaign was targeted specifically to parents and carers of children aged 6 months to under 5 years of age, including Aboriginal and Torres Strait Islander children. Parents were identified as the primary audience because they are the key decision makers when it comes to their children's health and wellbeing.

A secondary target segment of the campaign activity was General Practitioners & GP Clinics. Research shows that medical practitioners remain the most common source of information when it comes to making the decision about immunising children for the flu2. To compliment the campaign call to action of driving people to their GPs to get vaccinated, we ensured that they were equipped with the resources and information required.

Value

Increases to immunisation rates contribute to a decreased health burden on the State, a reduction in the amount of virus circulating and to a safer environment for those vulnerable and at risk who are unable to receive effective vaccination. Clinical studies have shown that flu vaccination is very effective in protecting against the severe consequences of infection, including among children.3 By providing parents with the facts we are helping them make informed choices to protect their children, and in turn parents will be contributing to reducing the chance of further disease outbreak within the broader community in the future.

Competition

Competition exists in the form of getting the key audience we are targeting, who tend to lead busy lives, find that scheduling in an annual flu vaccination on top of all of the other recommended childhood vaccinations children within this age group receive can sometimes fall off their to-do list or be forgotten, to understand the importance and prioritise annual flu vaccinations.
Other barriers to flu vaccinations include: access to free immunisation providers, as whilst the vaccine is provided free, some providers such as GPs may charge a consultation fee for the appointment; and the common misconception amongst the public that the vaccine is a live virus from which people can get sick from the vaccine resulting in those who generally don't get sick not wanting to risk experiencing these side effects; and anti-vaxxers who in recent years have been using social and other platforms to have their voices heard and make noise about the unsafety and side effects of vaccines contributing to new parents being pre-cautious.

Queensland Health worked with a media buying agency to better understand consumer consumption data and developed strategies to achieve the most cut-through with our target audience during the right moments.

Theory

The Trans theoretical model of behavior change (Prochaska & DiClemente, 19834) was used to guide the development of the campaign strategy. Interventions were targeted to particular stages of change. The target audience for this campaign includes pre-contemplators and contemplators, however it also engaged consumers in the action and maintenance stages by providing a resource and ongoing reminders to ensure they don't regress to earlier stages.

Social Marketing Intervention Mix

The Queensland Immunisation Program functions effectively through successful partnerships built with all levels of government and with all immunisation providers including general practitioners, Hospital and Health Services, local government community health services and Aboriginal and Torres Strait Islander community health organisations.

Product: Introduction of free flu vaccines funded by the National Immunisation Program Queensland for all Queensland children 6 months to under 5 years from 2018.

Price: By parents getting their children vaccinated against the flu they are protecting themselves from contracting a virus that could potentially see them end up in hospital as well as minimizing the risk of further disease outbreak or the length of deadly flu seasons. The mass media campaign and website provide parents with the facts and information around the severity and consequences of the flu on young children allowing them to make informed decisions around support and participation in annual flu vaccinations.

Place: Each year the Queensland Health makes direct contact with vaccine service providers, including GPs throughout Queensland, to update and advise them of the strains being covered in the vaccine. This also includes ordering procedures, relevant information and resources such as accurate administration of vaccines for different age groups, timing of vaccines or clinical advice from the Australian Technical Advisory Group and to advise of campaigns in market to prepare them for the flu season. The Queensland Immunisation Program functions effectively through successful partnerships built with all levels of government and with all immunisation providers including general practitioners, Hospital and Health Services, local government community health services, Aboriginal and Torres Strait Islander community health organisations and other stakeholders such as Department of Education and Training, Office of Early Childhood Education and Care, Public Health units, Hospital and Health services whom are engaged to distribute communication materials through their networks.

Promotion: The mass media campaign has appeared across out of home signage, print, digital and social. The campaign is also supported by the Vaccination matters website, a reputable repository for factual childhood immunisation information. The placement of the campaign delivery was tailored to reach the key audience in areas most relevant to them such as parenting magazines, parent rooms and on websites most visited by our target audience.

Evaluation and results

The *Call to arms* campaign performed strongly, exceeding all campaign objectives and had a positive impact on social behaviour change.
Significant highlights include:

- 75% of parents are aware that the flu vaccine is free for children aged 6 months to under 5 years. 12% increase against the 2018 benchmark, exceeding the KPI by 10%.

- 83% of parents are aware that the flu vaccine is required annually. A remarkable 16% increase from the 2018 benchmark.
- the number of parents not vaccinating their kids due to reservations around the safety of the vaccine decreased to 23%, showing a 3% decrease from the 2018 benchmark.
- 51% of parents had/intended to get their kids vaccinated during the 2019 flu season, a remarkable 12% increase against the 2018 benchmark, and exceeding the KPI by 10%.
- 73% of parents strongly support the flu vaccine for kids, showing a 4% increase from 2018.
- The *Children and flu* page of the Vaccination matters website reached 35,052 views during the campaign period. A staggering 174% increase in number of page views from 12,762 the previous year.
- 64% of parents said they took action as a result of seeing the campaign such as speaking to their GP about the flu vaccine, had their child immunised against the flu or made a plan to get their child vaccinated against the flu.

Lessons Learned

The '*Call to arms'* campaign was well received and performed strongly – supporting that taking action from the research insights for 2019 was a success. Parents liked the use of kids to convey the message, stating the ad felt more personal with the realisation that their children could also potentially end up in hospital.

Support among parents for general immunisation is high and increasing year on year at 95%, however, support specifically for flu vaccinations is slightly lower at 73%. This shows that ongoing work is required to increase support for flu vaccinations to bring it in line with overall immunisation support rates. Whilst 77% of parents feel there is nothing more they need to understand about immunisation, there is a continuing interest among some parents to learn more around possible short-term and long-term side effects of flu vaccinations, composition of vaccines and how these are tested and the immunisation schedule, which will be factored into 2020 activity.

In 2019, the flu season hit Queensland earlier than previous years, and has been declared to be worse than 2017. However, the hospitalisations and fatalities were largely made up of older Queenslanders, with hospitalisations and severity for children under 5 years seeing a decrease in 2019 compared to 2017 and 2018. This outlines that continuous communication is required to educate Queenslanders of all ages on the importance and benefits of annual flu vaccination for it to be considered the social norm.

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Mitigating Value Co-destruction: Refocusing community involvement in social marketing

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Introduction to the Research Problem

Community-based approaches in social marketing promote community involvement through participatory processes, generating solutions to socially complex, often wicked problems. The shared principle amongst community-based approaches is the motivation of movement in communities to gain sustainable behaviour change for positive societal, health-oriented and environmental outcomes (Hastings & Domegan, 2017; McKenzie-Mohr, 2011). It is generally considered that community-based approaches reduce social marketing's unintended negative consequences and heighten support for interventions by involving impacted, vulnerable, and minority groups so that communities feel their voices are heard (Antric et al., 2021; Rundle-Thiele et al., 2021). Despite the growing adoption and benefits of community-based approaches, there is little guidance for practitioners on involving communities in intervention design (MacQueen et al., 2001). This research proposes that community involvement, a concept derived from community-based approaches, is an effective method for preventing unintended negative consequences and creating sustainable behaviour change solutions. Adopting a practice-based theoretical lens, this research provides a framework for community involvement in social marketing intervention design.

As part of a larger research project this paper presents findings on: effective community involvement practices in the intervention design process; and, how practitioners best mitigate value co-destruction during community involvement. The research has practical implications for practitioners, providing an extended framework of social marketing community involvement and guidance on mitigating value co-destruction, with particular emphasis on Māori communities.

Community-based Approaches to Social Marketing and Value Co-destruction

Social marketing has faced criticism for its positivist ontology, lack of critical self-reflection, and ethical dilemmas (Gordon & Gurrieri, 2014). In particular, there are concerns over unintended negative consequences that can occur, such as inadvertent stigma and victimblaming (Brace-Govan, 2015). This has been attributed to practitioners letting their biases and perspectives guide intervention design, leading to misinformed campaign details, low adoption from target audiences, and resistance to change (Cook et al., 2020).

Theoretically, community-based approaches in social marketing should promote community involvement through participatory processes that generate solutions to problematic behaviours (Hastings & Domegan, 2017; Luthi et al., 2010). Likewise, the

concept of co-creation postulates that interventions should be designed with individuals, rather than treating them as passive recipients of solutions (Dietrich et al., 2016). Von Heimburg and Ness (2020) highlight the importance of community participation in the cocreation of positive health and wellbeing outcomes. Despite the growing interest in cocreation, it has received criticism due to the lack of literature pertaining to the process of application (Lefebvre, 2012; Russell-Bennett et al., 2013). Dietrich et al. (2016) demonstrate that this lack of understanding can result in challenges during co-design of interventions, especially in balancing the involvement of the audience and experts. Although there is growing advocacy for co-creation in social marketing intervention design, academics note that it can be exploitative and manipulative by demanding resources from individuals without appropriate compensation or recognition (Cova & Dalli, 2009). Ple and Caceres (2010) introduced the concept of co-destruction - the destruction of well-being, value, or relationships during an interactive collaboration between individuals and firms/governments (Jarvi et al., 2018). The rise in co-destruction literature highlights the importance of understanding challenges in the co-creation processes to mitigate negative consequences. Involving communities is a form of co-creation between government/practitioners and community members, thus ineffective processes can lead to co-destruction of intervention design outcomes, community welfare, and overall value.

Method

Using a practice-based approach, this qualitative research involved semi-structured interviews with nine social marketing practitioners in Aotearoa. Purposive sampling was used to recruit participants with relevant expertise, experience, and capabilities to reflect and articulate on social marketing community involvement practices (Flick, 2009). Recruitment criteria were membership of the New Zealand Social Marketing Network, a practice-based community, and at least two years relevant practitioner experience. Interviewees included practitioners from government, non-profit, private practices, and marketing agencies. Reflective analysis (O'Leary, 2009) and circular processes of coding (DeCuir-Gunby et al., 2011) guided the data analysis. The coding approach was both theory and data-driven (Guest & MacQueen, 2007).

Findings

This research extends the current stages of community-based social marketing with a new framework of best practice of community involvement in the social marketing intervention design process (Figure 1). This high-level framework deepens our understanding of what community involvement fundamentally is (core principles) and what constitutes community involvement (boundary conditions), while providing guidance for how practitioners should involve communities (mitigation of co-destruction factors) to prevent co-destruction of wellbeing/value (key challenges) and guide the co-creation of mutually beneficial outcomes.

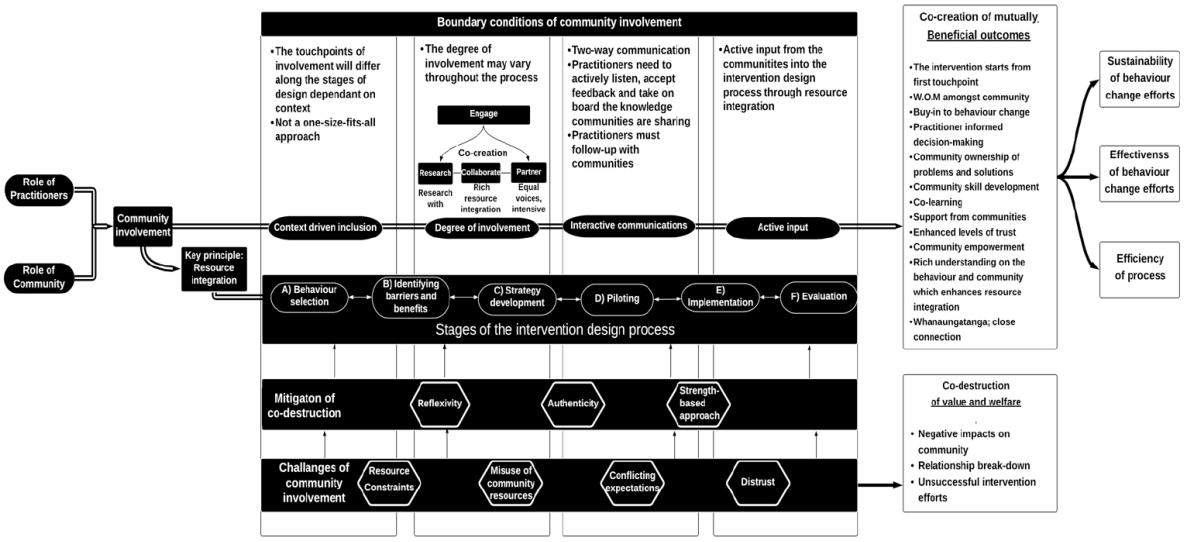

Figure 1. Best Practice Social Marketing Community Involvement Framework

Figure 2 supports the overall framework of Figure 1, demonstrating that mitigation of co-destruction factors are interconnected with boundary conditions as they work together for best practice. Both of which are underpinned by the principle that community involvement is an iterative process in which resource integration between practitioners and community must take place. Three key themes encapsulate specific approaches and actions to mitigate value co-destruction in the intervention design process: reflexivity, authenticity, and strengths-based approach (Figure 2). *Reflexivity* uncovers hidden ideologies from participants and generates open and comfortable spaces for marginalised voices to be heard, resulting in more credible reporting, ethical relationships and quality outcomes (Berger, 2015). *Authenticity* influences relationship formation, effective communications, community openness, and keeping practitioners aligned with expectations. Dialogue and narrative are key sub-factors within authenticity that move towards community commitment to behaviour change. *Strengths-based approaches* encourage practitioners to value the experience and wisdom within communities they are working with. This will have positive effects on change by enforcing positive thinking, strengthening of capabilities, innovation, and mobilization of community (Myende & Hlalele, 2018). The two key sub-themes are dissemination of information and practitioners relinquishing control.

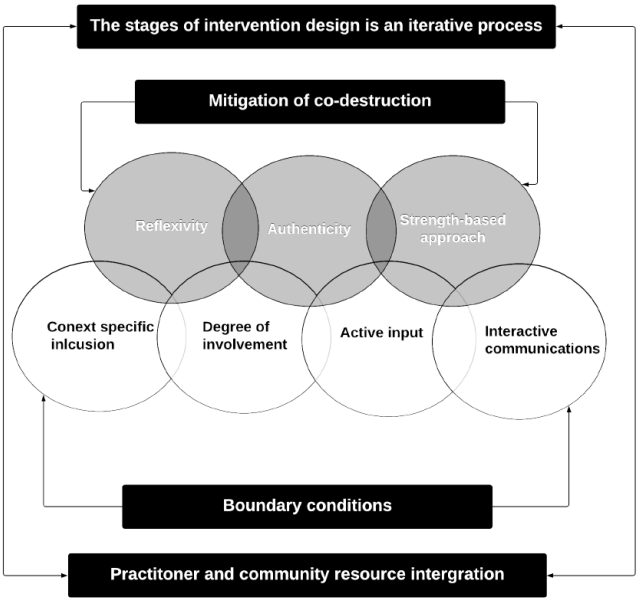

Figure 2. Conceptual Model for Community Involvement Best Practice

Discussion and Implications

Academics have called for proactive, egalitarian, and multiple-perspective approaches that move away from traditional practitioner-driven intervention design in social marketing to reduce unintended negative consequences and enhance the effectiveness of behaviour change efforts. This research proposes that community involvement is an effective method for enhancing the reputation of social marketing, preventing unintended negative consequences of social marketing, and designing effective, efficient, and sustainable social marketing interventions. Contributing a new framework of best practice of community involvement in the social marketing intervention design process this research extends the current stages of community-based social marketing. Importantly, this framework acknowledges the challenges that occur when involving communities and introduces three factors to mitigate the co destruction of value. For practitioners this means designing effective, efficient and sustainable behaviour change interventions that positively impact communities and society.

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Lots of bots or maybe nots: A framework for detecting bots in upstream social listening

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Introduction

Including citizens in informing decision making around policy is important. Dobson (2014) argues that centralizing "listening at or near the heart of the democratic process leads us in the direction of dialogic democracy (p. 6). A key component of effective upstream social marketing is social listening (Kennedy et al, 2018), which is the act of extracting and analyzing online community comments to inform policymaking and give policy makers a clear insight into people's attitudes and preferences (Mehmet and Simmons, 2019).

This process includes assessing data appropriateness (Kozinets, 2020). A problem, however, lies in the use of software robots (bots), which are algorithms designed to engage in human like conversations (Bollen et al., 2011; Ferrerra et al., 2016). Newer bot have evolved to have personalities. They have fake names, bios, photos; at times AI generated and only post occasional to avoid detection, using subtle, interwoven propaganda.

The risk for social marketers attempting to influence policy, is that social bots have been used to infiltrate political discourse and spread misinformation (Daniel et al., 2019; Reuters and Lee, 2019). Bots have been skewing social-media discussions for nearly a decade. Nearly a fifth of all tweets about the 2016 US presidential election were published by bots, according to one estimate, as were about a third of all tweets about that year's Brexit vote.

This highlights the importance of the detection of social bots data to ensure the credibility (Ferrera et al., 2016) and validity of research (Reuters et al., 2019) in the field of upstream social marketing. Therefore, this study aims to demonstrate how a bot detection framework can assist in discerning potential bot data identified by bot detection software.

Conceptual Model

Social listening procedure's typically follow a set of established steps that include establishing aims, scope, collection of data, filtering, coding, analysis and report (Mehmet and Simmons, 2019). This study advocates a three-step framework within the filtering process, which essentially attempts to identify all appropriate data relevant for the study.

Step 1. Use bot detection software e.g. botometer® to identify potential bot comments, users and followers. This will result in subset of comments and user profiles to review.

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Step 2. Not all bots are bad or designed to be nefarious, some are created by authorized accounts e.g. government agencies and authorities to inform the population (Allem et al., 2017; Ledford, 2020). Hence, it is important to manually review each comment to determine if the data is suitable. Applying the bot detection categorization framework to assess the validity of comments is presented in Table 1. The framework originally developed by Ferrera et al. (2016, p.6) has been modified to suit a social marketing setting. This step is conducted by each researcher (Saldana, 2015), or for sole researcher's as part of an inter-coder reliability framework. It is important to note, due to sophistication of new bots, a single indicator may be used to red flag a comment. Upon the completion of individual coding, the group would reconvene to review and negotiate consensus. This would ensure greater accuracy of detection.

Table 1: Bot detection categorization framework.

Class	Description
Network	Network features capture various dimensions of information diffusion patterns. Here we would look for patters of destruction and clustering
Users	User features are based on meta-data e.g. type of language used, geographic location, and account creation time. For example, if we have comments from the other side of the world, using formal language from a new account, we need to be suspicious.
Friends	Friends' features include descriptive statistics related to an account's social contacts, such as median, moments, distribution of number of followers, followers, and post. For example, if we have a comment originating from an account that only has two followers and is a one off comment, we need to be suspicious.
Timing	Timing or temporal features can indicate the average time of two consecutive posts, if this time is below the human threshold, we need to consider it a bot produced comment
Content	Content features are based on linguistic cues assessed through natural language processing and review part of speech tagging on verbs, nouns and adverbs in comments
Sentiment	Sentiment features are build using general-purpose models, including affect emotions and arousal-dominance-valence.

Step 3. Crowdsourcing. If a dataset is too large for a small group or bot detection is unclear, Wang (2013) proposed crowdsourcing. Here a large team would review the comments (each comment would be reviewed three times) to gain consensus on the authenticity of a comment.

Implications for theory

A core component of social listening theory is the authenticity of voice and the notion that listening itself is a "profound democratic act" (Macnamara, 2016, p.30). However, Macnamara (2016) warns that although many scholars across disciplines related to communication are celebratory in their discussions on social media and Web 2.0, no guarantee exits that these technological innovations will ensure people are heard, or listened to by those informing or influencing decision-making.

Bots represent a challenge to the core democratic nature of social listening in an upstream context. The conceptual model outlined in the paper contributes to, and strengthens social listening theory by ensuring that its democratic nature and power is retained in favour of those whom it seeks to

benefit, i.e., citizens and those who are often excluded in more formalised listening processes, such as, written submissions or town hall meetings.

Implications for practice

The positive and negative implications for practice are represented in Table 2.

Table 2: Positive and negative implication for practice

Positive	Negative
- More accurate insights into attitudes, preferences and reasoning	- Time consuming, especially with a larger data set
- Increased reliability of recommendations	- Costly
- Reputation of researcher ensured	- Advances skill, particularly linguistics and computational
- Appropriate allocation of resources improved	

In sum, social bots presented a real risk for upstream social marketers in understanding citizen attitudes and preferences. It is vital bot data be removed from data sets to ensure that recommendations for policy are truly presentative of the community and do not leave the research open to criticism.

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Measuring illicit tobacco using a macro-social marketing lens: The Australian case

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Introduction

Illicit (tax evaded) tobacco is an issue for many countries around the globe as it undermines tobacco prevention and control interventions (Dutta, 2019). Illicit tobacco sales results in a loss of excise revenue for the government, involves criminal activities, and has health concerns as it is more likely to contain contaminants such as bacteria, fungal spores (mould), residue of pesticides and insecticides (Bittoun, 2004; Walsh et al., 2006). In Australia for instance, consumers of illicit tobacco have significantly worse health than smokers of legal tobacco (Aitken et al., 2009).

How can the illicit tobacco trade be effectively confronted? From a macroeconomic point of view, measuring the size of this illegal market is a crucial starting point. However, there is no consensus on the size of this illegal market. To be accurately estimated, high-quality data on both the legal consumption and illicit trade activities is required. Unsurprisingly, the illegal nature of tax evasion and the potential social stigma associated with tax avoidance make the task of measuring the scale of these activities extremely difficult (Ross, 2015).

This research proposes a new methodological approach to estimating the size of the Australian illicit tobacco market, benefiting policy, law enforcement, and public health. There are three approaches currently put forward by the Department of Health (DOH), the Australian Tax Office (ATO), and KPMG. The estimates obtained and the methodology used for each is summarised in Table 1 below.

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Table 1: Overview of recent studies of the Australian illicit tobacco market

Authors	Period covered	Methodology	Estimate of illicit market share
DOH[1]	2013, 2016	National Drug Household Survey	3.4%, 3.8%
ATO[2]	2015-2018	'Supply side/bottom up' – Analysis of distribution channels of: import, bonded warehouse, domestic grown	Range: 5.0-5.5%
KPMG[3]	2013-2018	Empty Pack Survey	Range: 13.5-15.0%

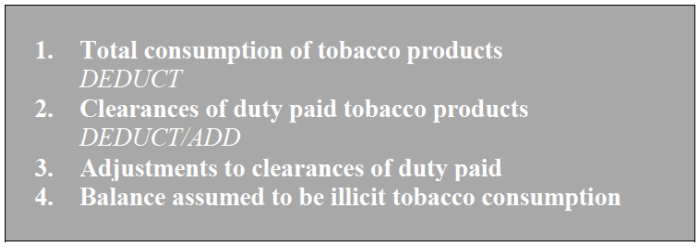
Source: Authors

While these three approaches provide an estimate, they appear limited in that (Preece, 2019): 1) DOH's non-annually conducted Drug Household Survey approach may underreport illicit consumption as respondents potentially hide their use or they are not aware the product was not taxed; 2) ATO uses a range of data that are not publicly available and details of the methodology used to extrapolate the data into estimates is not fully disclosed, limiting the ability to exam the methodology or conduct a cross-validation of the results; and 3) KPMG is using data collected by a third party on behalf of tobacco companies. It is also possible that in the process of collecting empty tobacco packaging, "foreign looking packaging" in areas "frequented by foreign students" are included (p. 30), which raises the question of sample bias, and the role of the tobacco companies in classifying which of these empty packs are illicit and which are tax paied is not transparent.

Proposed new 'top-down' approach through the lens of macro-social marketing

In using a similar approach as the UK's estimate of the 'tax gap' for tobacco products, this study examined whether such a 'top-down' methodology could be applied in Australia using publicly available data. To establish the four-step equation as outlined in Figure 1, several sources were sought to determine if suitable data existed for measuring total consumption and legal clearance. It was found that the 'top-down' methodology could be applied, however only for cigarettes.

Figure 1: Proposed methodological approach to estimate the extent of Australia's illicit tobacco



Source: Authors

1. Total consumption of tobacco products

The greatest challenge to the study was the availability of reliable data which identifies the extent of total tobacco consumption. Bayly and Scollo (2019) highlight that industry is not required by law to report retail sales of tobacco products and such data is most likely only available through specialist market research companies. They used *Euromonitor* data as a source to identify retail sales. It should

[1] AIHW (2017); Preece (2019).
[2] ATO (2019).
[3] KPMG (2019).

be noted that specialist market research companies are more likely to be considered independent as they are not a stakeholder in the tobacco industry nor are they funded by a stakeholder.

In this study several potential sources were investigated to obtain the total consumption such as the ABS 5206.0 *Household Final Consumption Expenditure* (HFCE) (ABS, 2019b), the Australian Institute of Health and Welfare's *National Drug Strategy Household Survey* (AIHW, 2019), and the ABS' *National Health Survey* (ABS, 2019a). However, none of these sources offered a set of data to produce the total consumption of tobacco.

As a result, similarly to Bayly and Scollo (2019), this study used the *Euromonitor International 'Tobacco in Australia 2019'* (Euromonitor, 2019) report to compile its market data to establish a total consumption quantity. As the data integrity of non-cigarette products (e.g., loose leaf tobacco, cigars) was not the same, this research focused on cigarettes only.

2. Clearances of duty paid tobacco products and 3. Adjustments to clearances of duty paid
Unlike total consumption, official government data is publicly available for both the extent of lawful clearances, and for 'adjustments' to those lawful clearances, as assessed by the relevant government agencies being the ATO with jurisdiction over domestic manufactured tobacco, and the Department of Home Affairs (DOHA) with jurisdiction over imports. Under *Freedom of Information* (FOI), this clearance data is now available publicly for the period 2014/15 – 2018/19.

4. Balance assumed to be illicit tobacco consumption
As a final step, the method was applied to the period 2015-2018 as shown in Table 2. The calculation of illicit cigarette market estimates is derived from deducting formal net clearances in column 3 from total consumption in column 2, and is expressed as both a number of individual cigarettes in column 4 and as a percentage of the total market in column 5.

Table 2: Illicit cigarette market estimates

Year	Actual consumption estimates per *Euromonitor*	Formal 'net' clearances FOI	Illicit sticks (cigarettes)	Illicit % estimate
2015	17,584,652,830	16,582,010,218	1,002,642,612	5.7%
2016	16,537,835,763	15,812,270,108	725,565,655	4.4%
2017	15,485,628,878	14,201,090,460	1,284,538,418	8.3%
2018	14,488,070,742	13,531,905,345	956,165,397	6.6%

Source: Authors

This study estimates the illicit share of the tobacco market to be between 4.4% and 8.3%. It should be noted that there is a potential anomaly in 2016 which requires further investigation. One explanation could be that this is the first year in which a restructure of the tobacco industry resulted in the cessation of cigarette production in Australia and the tobacco companies moving to fully supply the market with imported finished sticks. Hence, it may be possible that the 2016 illicit estimate of 4.4% should be higher and the 2017 estimate of 8.3% lower.

Implications for theory

This research looks beyond individual behaviour change – for example, a person smoking illicit tobacco should stop their behaviour – but looks at a macro-level intervention, as macro-social marketing has posited to do this (Kennedy & Parsons, 2012).

Using the lens of macro-social marketing (Kennedy, 2016, 2017) or strategic (upstream) social marketing (French & Gordon, 2020), this research has endeavoured to contribute to the social context, that is, seeking societal rather than individual-level change. More accurate data and information on the illicit tobacco market may help the Australian government to address this issue on a macro level. Tobacco, in general, offers a good example in demonstrating strategic social marketing (French & Gordon, 2020) as proponents and opponents lobby policymakers and regulators, and employ public relations to shift policy.

Implications for practice

The illicit tobacco trade by its criminal nature is secretive and inherently difficult to measure with certainty. This study places its estimate of the Australian illicit tobacco market between the studies regularly conducted by the ATO and KPMG (Table 1). Although this study only investigated the cigarette market – i.e. about 83.6% (value of sales) of the tobacco market (Scollo & Bayly, 2019) – it puts the illicit tobacco market share lower than that published by KPMG and closer to the ATO's estimates.

The research also shows that more credible data need to be available to estimate the illicit tobacco as accurate as possible, and considering other tobacco products. As a result, the 'top-down' approach may then be a suitable option to measure the extent of the whole illicit tobacco market in Australia.

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"We've been lucky in Queensland": COVID-19 formative research findings

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Introduction

Much has been written about the uptake of COVID-19 vaccines around the world. Countries have sought to understand vaccine acceptance, hesitancy, resistance, and refusal of their residents as high and equitable levels of vaccination coverage are required to achieve inoculation (World Health Organization, 2021). While some countries experienced high COVID-19 vaccine hesitancy, resistance and refusal rates, Australia was not one of these. Indeed, it was reported that Australia may have a COVID-19 vaccine refusal rate of only 6% (Edwards et al., 2021), unlike 26% reported for France (Peretti-Watel et al., 2020) or up to 30% for the USA (Motta, 2021).

As international studies of COVID-19 vaccine hesitancy, resistance and refusal highlight issues in other countries, their relevance to the Australian context was brought into question given that 59% of the population indicated they would definitely get the vaccine, with 29% expressing low levels of hesitancy and only 7% reporting high levels of hesitancy (Edwards et al., 2021). However, the international literature did bring to light that factors influencing attitudes and intentions around COVID-19 vaccines are not universal. Social, political, environmental, and cultural factors, as well as experiences of COVID-19 outbreaks and lockdowns, together shape attitudes and intentions, requiring a nuanced, local understandings of a country's residents, including state or territory

observations (World Health Organization, 2021). Therefore, it is key to better understand how these personal and broader context-specific factors shape people's behaviour and vaccine uptake, how consumers might segment according to vaccine uptake, and to better inform social marketing vaccination programmes.
This paper presents the findings of formative research conducted in the first quarter of 2021 in Queensland. In order to understand the mental models that underpinned Queenslander's COVID-19 vaccine intentions, a segmentation approach was employed that focused on the generation of personas to capture key differentiating features to help inform and tailor communication strategies. The research question framing this study was: how does COVID-19 vaccine uptake intentions differ across Queensland's residents?

Method

Segmentation is critical to social marketing efficacy (Rundle-Thiele et al., 2017). People vary in their values, attitudes, concerns and opinions, and segmentation helps social marketers to identify like-minded groups for targeted, tailored programs (Dietrich, 2017). Personas are one way to describe segments. Personas are a fictitious representation of participants that aggregate seminal characteristics into a hypothetical archetype (Pruitt & Adlin, 2006). Personas were developed for this research via data collected from nine focus groups with the general population (n=72). Focus groups were approximately 90 minutes in duration, were conducted online and at four locations across Queensland, ensuring representation of metropolitan and regional Queenslanders. Quotas were used to ensure representation in terms of age, gender, education, income, dependent children, private health insurance status, health literacy and carer or disability status. Of the sample, 12.5% (n=9) identified as Aboriginal or Torres Strait Islander, and 9.2% (n=7) were from culturally and linguistically diverse backgrounds. Data were collected in the first quarter of 2021, prior to the roll-out of COVID-19 vaccines in Queensland. A commercial research company collected the data and performed the preliminary analysis with the test instruments, methodology, and interpretation of the findings vetted by a Technical Advisory Group (n=18), including academics, doctors, health experts, as well as market and social researchers.

Findings and Conclusion

Three Queenslander vaccine uptake personas emerged. Only one persona, The Hesitant, exhibited signs of COVID-19 hesitancy, while individuals in The Scared persona were eager to be vaccinated, and those associated with The Compliant persona were happy to wait their turn to be vaccinated when they were told to.

The Scared comprised approximately 25% of the sample. The Scared were focused on 'self-preservation' as they were more likely to be at risk of contracting COVID-19 due to working in a role with high people contact, or they were at elevated risk of medical complications if they contracted COVID-19. The Scared tended to have more contact with their G.P. and they took protective measures, such as social distancing and hand washing, seriously, while being motivated to get a COVID-19 vaccine as soon as it is available. They actively promote and advocate for vaccinations in general but want reassurance that COVID-19 vaccines are safe, considering their health complications. The Scared were more likely to be vaccinated, as they maintained a high level of trust in the health care system and were not concerned with COVID-19 vaccine development process. However, they did harbour some concern regarding the implications of getting vaccinated for their medical conditions.

The Compliant represented approximately 50% of the sample, and they were focused on 'the greater good' as they viewed COVID-19 vaccination as a civic duty. The Compliant were more likely to get vaccinated in response to work requirements (e.g., their workplace provides annual flu shots), and they typically vaccinated for overseas travel. They are amenable to vaccination as a practice in general but tend not to proactively seek out vaccination. The Compliant trust in the efficacy of vaccination despite having a low level of knowledge about what vaccines are or how they work. The Compliant were more likely to wait their turn to receive a COVID-19 vaccine after priority groups. They were motivated to protect others and saw it as their duty to help achieve 'herd immunity' for the greater good.

The Hesitant constituted approximately 25% of the sample. The Hesitant focused on 'the consequences' of getting vaccinated, with many holding the opinion that the government's push for vaccination was driven by a desire for economic recovery rather than the health of the nation. They were wary of COVID-19 vaccines, particularly of their ingredients, side effects, and the profit-driven motives of vaccine manufacturers and pharmaceutical companies. While they had been inattentive acceptors of vaccination products in the past, the intense public discussion about the merits of different COVID-19 vaccines had brought to light a range of factors they had not previously considered (such as the quality and effectiveness of each vaccine option), which fuelled their sense of uneasiness and uncertainty. The Doubtful were more likely to wait and see the consequences of the COVID-19 vaccine roll-out before making their decision regarding vaccination. They were doubtful that the COVID-19 vaccines would address the issue of transmission and were suspicious about the lack of transparency around the vaccine development process.

This study has demonstrated identifiable consumer segments relating to vaccine acceptance, hesitancy, resistance, and refusal that are shaped by personal, social, political, environmental, and cultural factors. The vaccine uptake personas generated in this study offer a novel way to think about vaccination social marketing efforts not yet evident in existing Australian or international research. The three Queenslander personas developed in this research informed the COVID-19 vaccine social marketing strategies demonstrating their usefulness and meaningfulness to practice.

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Masculinity, procrastination, burnout, and health in middle-aged men

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Introduction and Research Aim

There is increasing recognition that middle age (45-70) is significantly underrepresented in health promotion policies (Dept of Health 2018). Middle age is a pivotal period in one's life course in terms of finding a new or renewed purpose in life, addressing the excesses of youth, reducing work and home stress, and setting up behavioural patterns that influence positive and healthy aging (Lachman et al., 2015). The focus of this research is middle-aged men and it argued that a more nuanced social marketing approach is needed to influence men's behaviour and promote healthy lifestyles (Robinson & Robertson 2010).

The aim of this study is to examine two significant trait-based factors that influence the health and wellbeing of middle-aged men and address two research questions in line with this aim. RQ1: To what extent do notions of masculinity, and procrastination, influence burnout, current and proactive health behaviour (Kelly et al., 2016). RQ2: To what extent are noted relationships influenced by a strong Purpose in Life (Musich et al. 2018).

Although men generally fare better than women on economic indicators, they often face poorer outcomes for physical and psychological wellbeing (Kelly et al. 2016). While biological factors contribute to men's health issues, psychological and social factors are also significantly important. For example, Mellor et al. (2017) identified associations between men's poor psychological health (depression, social isolation), poor lifestyle choices (drugs, alcohol, diet, activity) and increased risk of poor health outcomes (heart disease, cancer, diabetes). Men are also less likely to proactively manage their health, often lack preventative health and wellbeing goals, are more likely to delay seeking medical help, and have fewer supportive networks compared to women (Sirios 2016). Further, changing notions of masculinity and the perceived

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traditional role of males in society are having a negative effect on men's physical and mental health as they attempt to negotiate new socio-behavioural expectations (e.g. Smith 2007). Rightly so, some men are being challenged to transform their behaviour regarding intimate partner violence and to improve their health and social contributions (Salter 2016). It is important that research supporting men's health and wellbeing receives continued support and attention to foster improved intergenerational communication and modeling of positive male lifestyles. (Lohan 2007). Based on the conceptual model several hypotheses have been developed. H1: A higher level of procrastination is associated with (a) higher levels of burnout, (b) less proactive health behaviour, and (c) poorer current health. H2: More traditional notions of masculinity are associated with (a) increased procrastination, (b) increased burnout, and (c) less proactive health behaviour. H3: Higher levels of burnout are associated with (a) less proactive health behaviour, and (b) poorer current health. H4: Higher levels of proactive health behaviour are associated with better current health. H5: Respondents with a clearer or more defined purpose in life will have better health outcomes.

Methodology

The data for this study were obtained through a pretested quantitative online survey hosted by an accredited field house. 508 respondents completed the survey. Regarding measures, procrastination was measured using items from the Irrational Procrastination Scale (Svartdal & Steel. 2017). Masculinity was measured using items from the Gender Role Conflict Scale (GCRS) short form (Wester et al. 2012). Burnout was measured using items from the Copenhagen Burnout Inventory (Kristensen et al. 2005). Proactive health behaviour was constructed for the study based on men's health reports and known statistics (www.healthdirect.gov.au/mens-health;). Finally, current health was measured using a modified MOS SF-20 (Ware et al. 1992). SEM analysis of the measurement model (SmartPLSv3,Ringle et al. 2015) showed appropriate Cronbach's alpha, composite reliabilities, and AVE. Factor analysis of the masculinity items resulted in a two-factor solution representing more negative traditional masculine attitudes and more positive masculine attitudes.

Results

Procrastination as a trait was associated with higher levels of burnout ($p < .001$) and lower levels of both proactive health behaviour ($p < .001$) and current physical and mental health ($p < .001$). Negative masculinity, denoted by avoiding any perceived feminine behaviour, was associated with higher levels of procrastination ($p < .001$) and burnout ($p<.05$). Conversely more positive notions of masculinity, denoted by self-reliance, strength, and ability, was associated with lower levels of burnout ($p<.05$) and more proactive health behaviour ($p<.01$). Burnout was associated with lower proactive health behaviour ($p < .001$) and lower current health ($p < .001$). More proactive health behaviour was associated with better current physical and mental health ($p < .001$). Multigroup analysis highlighted that all paths were different between those with a more developed purpose in life and those that didn't, however procrastination's influence on burnout, and on proactive health behaviour were statistically significant.

Implications for Theory and Practice

This study contributes to our understanding of how middle age men's traits may undermine their current and future health and wellbeing as they age and undergo significant life transitions e.g. retirement. The research specifically shows that traits related to poor self-regulation e.g. procrastination, can foster increased burnout and stress, and undermine the setting and

achievement of health goals. The research shows that traditional notions of masculinity are related to this trait-based failure and may also undermine health and well-being. The research highlights the need for a more insightful discussion around men's notions of masculinity and health and wellbeing related behaviours and highlights the importance of understanding both individual level notions of masculinity and also the changing social context of men's sense of themselves and their social roles. Undertaking this reflection offers opportunities for more nuanced health-related communication and social marketing interventions at home and in the workplace. Importantly, the research highlights that functioning at middle age is variable and flexible and that there is an opportunity for change and improvement at both the behavioural and neural levels. Implications exist for helping middle-aged men develop a more futurefocused sense of themselves, set health and wellbeing goals and foster behaviour change that sets them up for a healthier old age.

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Behaviour change social impact measurement model

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Introduction/Background

The need to measure the social impact of an intervention or campaign, is increasingly a reporting requirement and deliverable sought by funders who are seeking to further evidence 'value for money' (Banke-Thomas, Madaj, Charles, & van den Broek, 2015). Many social marketing and health promotion interventionists already need to evidence short and longer term outcomes being achieved and increasingly they are being asked to demonstrate the lasting impact their work delivers for communities over the longer term (Pulimeno, Piscitelli, Colazzo, Colao, & Miani, 2020; Wright et al., 2018). However, demonstrating social impact remains challenging. Social impact is often ill-defined, poorly understood and rarely measured within social marketing and health promotion within the academic and practitioner fields. Inconsistent terminology appears to have added to the challenges of furthering the application, measurement and evaluation of social impact (Grieco, 2015; Maas & Grieco, 2017; Millar & Hall, 2013).

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The theoretical/knowledge gap

Effective behaviour change intervention implementation within social marketing and health promotion ought be informed by the following three key components: theory, stakeholder engagement and evaluation or measurement (Fernandez et al., 2019). Evidence of the quantity of theoretically informed interventions and theory based evaluations (TBE) (Van den Broucke, 2012) is surprisingly low. Within social marketing several systematic reviews identify low theory use (Kubacki & Szablewska, 2019; Luca & Suggs, 2013; Pang, Rundle-Thiele, & Kubacki, 2018; Truong, 2014), an issue also identified across health promotion interventions (Harris, Carins, & Rundle-Thiele, 2021; Nutbeam, Harris, & Wise, 2010; Yuksel, Şahin, Maksimovic, Drid, & Bianco, 2020). Behaviour change interventions need to be accountable in the implementation, delivery and demonstration of outcomes and social impact. Enhancing theory application may offer one means to more accurately measure changes.

Research aims/objectives and questions

Prior research has aimed to understand social impact measurement and the broader applications to behavior change within social marketing (Mook, Maiorano, Ryan, Armstrong, & Quarter, 2015; Truong et al., 2021) and health promotion (Baker, Courtney, Kubinakova, Crone, & Billingham, 2020; Banke-Thomas et al., 2015). An evidence review has been conducted, to understand what is being implemented currently within children's primary school health promotion (*authors name withheld to ensure anonymity during the peer review process)*. This research involved a systematic literature review , to understand, *To what extent has the social impact been considered and evaluated in health promotion interventions in primary school contexts in Australia, Canada, New Zealand, and the United Kingdom?* Findings from this review have informed the conceptualisation of a social impact measurement model.

Conceptual Model for Impact Measurement

There are discrepancies in implementation and measurement of interventions, with social impact poorly understood (Campbell et al., 2018; Evans & Hurrell, 2016; Lloyd & Wyatt, 2015) and difficult to measure (Adab et al., 2018; Lloyd et al., 2018). The predominant issue found was a the lack of TBE (Adab et al., 2018; Hector, Edwards, Gale, & Ryan, 2017; Ofosu et al., 2018), low levels of stakeholder engagement (Adab et al., 2018; Fairbrother, Curtis, & Kirkcaldy, 2020) and measurement of behavioural change remains predominantly at the individual determinant level (Brennan, Previte, & Fry, 2016) with broader social and economic determinants overlooked (Fry & Zask, 2017; Thompson, Watson, & Tilford, 2018; Wilberg, Saboga-Nunes, & Stock, 2021). The proposed social impact measurement model in Figure 1, would strengthen how behaviour change interventions are designed and measured, aiming to embed stakeholders, theory and benchmarks or frameworks as central.

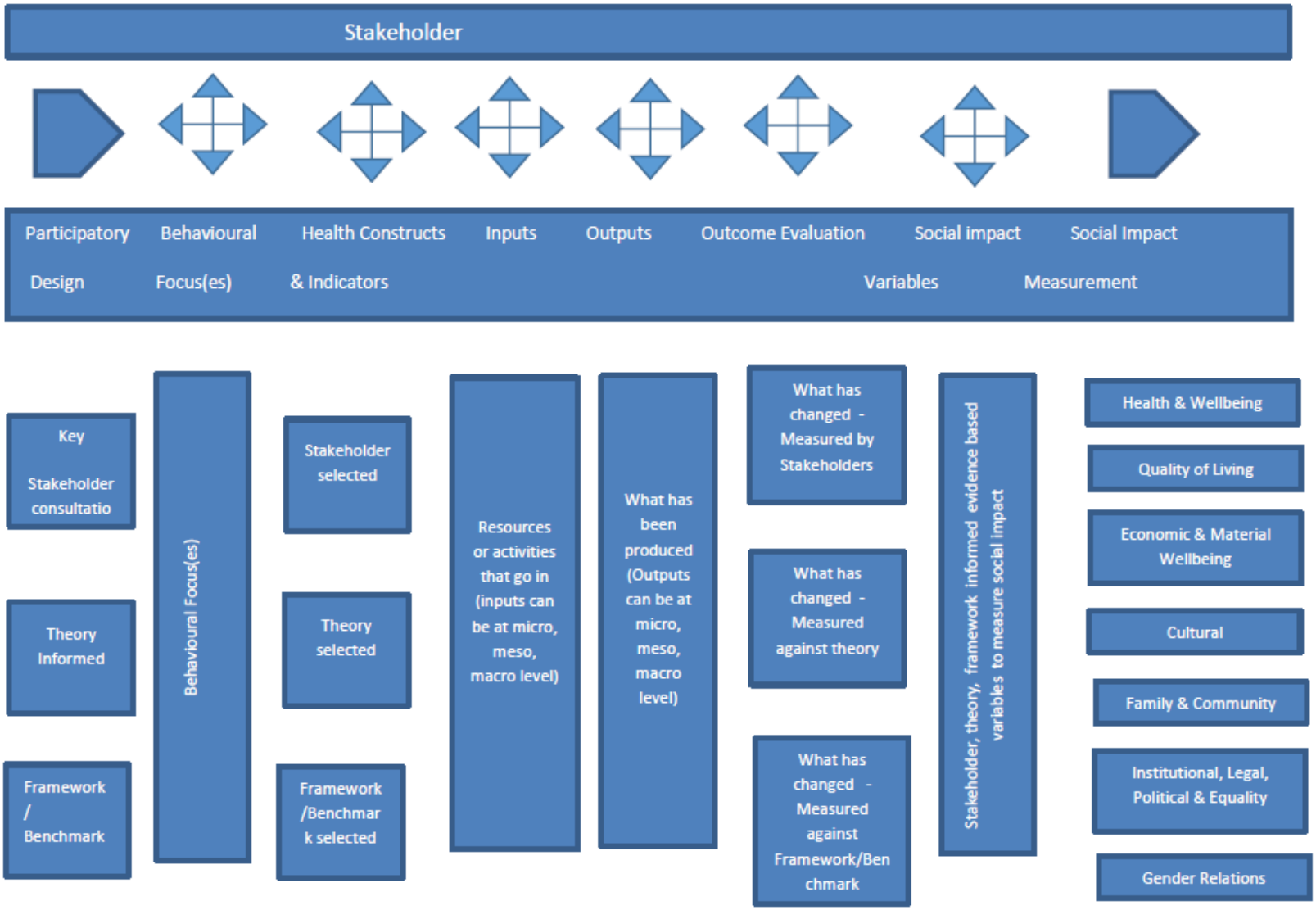
The proposed social impact measurement model embeds a participatory approach to behaviour change interventions, from design through to evaluation. The model's key feature is an iterative, reflexive nature where stakeholders are central throughout the stages of behaviour change interventions, and stakeholders are the drivers for advancing to the next stage, or returning to an earlier stage. For example, key stakeholders may be involved in the selection of the key behavioural foci, constructs and measures in the design phase, however, may later decide that the evaluation 'fails to measure what matters' and the intervention model is designed to loop back to an earlier stage ensuring adaptive approaches involving

rapid learning are applied to drive outcome change and in time impact. The second part of the model is more consistent with a Theory of Change (ToC), where there are target behaviours, inputs and outputs and outcomes identified. This part of the model extends on previous research (Breuer, Lee, De Silva, & Lund, 2016), with two additional elements added to capture the social impact of the behaviour change intervention: 1) Social impact variables – derived from the stakeholder consultation, theory or frameworks selected, and 2) Social impact measurement – where outputs, outcomes and variables are assessed as having a negative, neutral or positive benefit on the chosen area of social impact. The conceptual model has been informed by the findings from reviews of behaviour change interventions and campaigns which have predominantly measured individual determinants (Brennan et al., 2016). This model proposes that future interventions include: stakeholder consultation, theory and frameworks so that they are mapped and measured from design to social impact measurement that include the broader social, economic and health determinants. For example, to the model considers social impacts such as 'Health & Wellbeing', 'Family and Community' or 'Institutional, Legal, Political & Equality' (Kwon, Kim, & Park, 2017.).

Implications for theory and practice

This conceptual model places emphasis on theory informed and TBE, with stakeholders seen as being pivotal for achieving social impact measurement. Interventions need to be directed at understanding outcomes and social impacts, not activities and output, if we are going to tackle the 'wicked problems' faced by our societies that include (but are not limited to) obesity. We need to intervene and measure at the broader social, economic and policy levels (Brennan et al., 2016). The implications for behavior change interventions or campaigns is clearing mapping and measurement. Through alignment more effective behavior change interventions and 'value for money' interventions would be evidenced and in turn would help to enhance practice overall. Refer to Figure 1 for the proposed social impact model.

Figure 1 Proposed social impact measurement model



(Figure adapted Kwon, Kim, and Park (2017)and Fernandez et al. (2019))

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Realist evaluation: A primary school health protocol

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Abstract

Realist evaluation delivers a reflexive, participatory approach for program evaluation. In contrast to traditional linear evaluative approaches, realist evaluation requires a significant shift in how health promotion is designed, delivered, measured and evaluated. Realist evaluation protocols guided by theory measurement consider context, mechanisms and outcomes (CMO). Social marketing, public health and other behaviour change disciplines can benefit from measuring program impact through multiple stakeholder perspectives. The Theory of Change offers one theoretical perspective delivering a guiding logic that indicates the expected relationships between mechanisms, outcomes and impacts as identified by stakeholders.

Introduction

Health Promotion is defined as 'the process of enabling people to increase control over their health and its determinants, and thereby improve their health' (World Health Organization, 1986, 2005). In a school context, health promotion is defined as the promotion of 'health, health behaviour, health-related competencies or other social and material determinants of health for students or other school-related stakeholders' (Griebler, 2017). Providers of health promotion and evidence-based early intervention in primary schools are facing increased expectations that they demonstrate

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the impact of their intervention, delivering clear evidence that programs are an effective allocation of resources (Banke-Thomas, Madaj, Charles, & van den Broek, 2015).

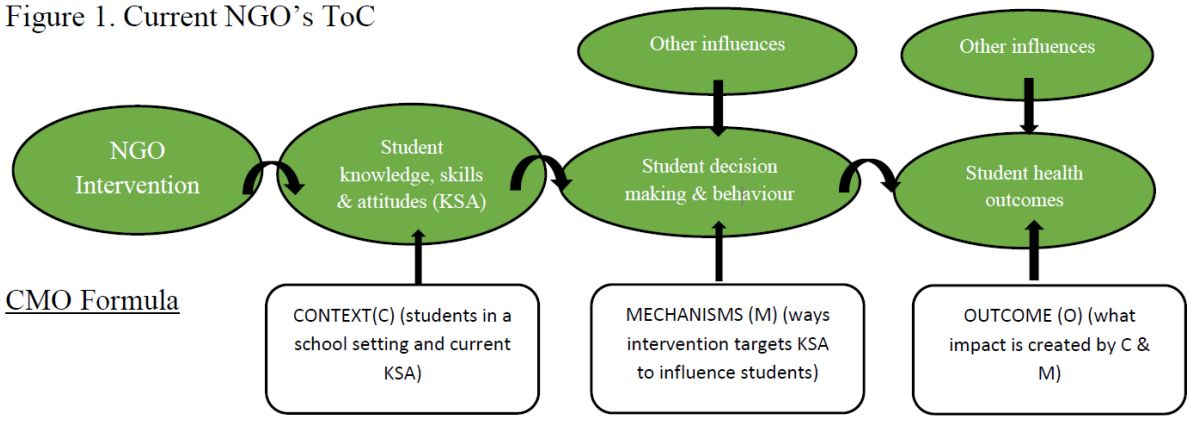
This emphasis on evidencing impact has several important implications for government departments, organisations and businesses involved in health promotion. Organisations (for-profit and not-for-profit) and businesses are required to demonstrate: (1) effective, cost-efficient ways of delivering impact (Grieco, 2015; Yates & Marra, 2017); (2) robust ways of measuring and conveying impact of the program or intervention (Yates & Marra, 2017); (3) ways to meet program and evidence requirements of funders and decision-makers (Molecke & Pinkse, 2017); and (4) methods to inform the strategic planning and service delivery to ensure the sustainability of programs for the future (Kumar & Banke-Thomas, 2016; Yates & Marra, 2017).

Previous interventions have targeted children's physical activity (Aceves-Martins et al., 2017; Belton, O'Brien, Meegan, Woods, & Issartel, 2014; Fairclough et al., 2013), obesity (Boddy et al., 2012; Grassi, Evans, Ranjit, Pria, & Messina, 2016; Malakellis et al., 2017; Pettman et al., 2016), and wellbeing (Simovska & Carlsson, 2012; Turhan, Onrust, Klooster, & Pieterse, 2017). Most of these interventions have targeted individual-level motives. Education, which delivers activities and outputs (e.g. delivery of a module in classrooms) needs to be evaluated on the basis of outcomes achieved to then determine lasting impact (Khanom, 2015). There is a need to take a broader view to understand the effect these health interventions have on creating healthier children, which is likely to require consideration of the effect on health behaviour, competencies and/or other social determinants of health (Griebler, 2017) from multiple stakeholder standpoints. Both within the fields of social marketing, public health and other behavioural sciences, there is a need to understand and measure impact from multiple stakeholder perspectives.

A realist approach

Realist evaluation is increasingly being applied in the evaluation of complex healthcare interventions across a diverse range of health fields and contexts: from dementia (Keogh, Pierce, Neylon, & Fleming, 2018), medical education (Wong, Greenhalgh, Westhorp, & Pawson, 2012), and physical activity (Chalkley et al., 2018; Whitelaw, Teuton, Swift, & Scobie, 2010; Willis et al., 2018). The Context, Mechanism, and Outcome (CMO) formula recommends examination of context, mechanisms and outcomes to understand the important precursors or chains of events that lead to impact or change in an NGO's intervention - see figure 1 (Nurjono et al., 2018).

Figure 1. Current NGO's ToC



The CMO Formula should capture the contextual factors. This contextual examination considers what does or does not occur from a student standpoint - do knowledge, skills and attitudes change and does this lead to the desired outcome? Examination of mechanisms focuses assessment on

understanding how the intervention influenced student's decision making and behaviour through the sequence of activities they actively participate in. By understanding the clear links between student's active participation in the program and resultant changes an understanding of the role of the program in positive health outcomes is achieved for the NGO's program (Wong et al., 2012). For example, an intervention increasing physical activity would: 1) determine the context the modules are being delivered in; 2) evaluate 'what works, for whom, under what circumstances' to increase physical activity with the intervention (mechanisms) beyond the service provider and funder's perspective; and measure the social outcomes and positive health outcomes as perceived by multiple stakeholders of increased physical activity of the children (outcomes). Through applying the CMO formula to evaluate the program the conceptual model is aiming to deepen current approaches to measuring impact of a complex health promotion intervention.

The realist evaluation proposed in this protocol aims to progress our theoretical understanding. Within context consideration of the factors known to influence the behaviour must be examined. This could occur theoretically through measurement of all constructs within a theory known to explain the variance of the targeted behaviour (Rundle-Thiele et al., 2019). Mechanisms of action mapped to the theoretical constructs can then be evaluated utilising additive designs to determine which mechanism delivers which outcomes. This demonstrates a linear programme logic approach. However, systems thinking indicates that many problems are wicked and multi-level stakeholders interact within settings to influence the targeted behaviour. Nonlinear approaches have been identified and reflexive, circular logics may be needed to capture the complexity indicating contexts where programs are impacted by factors beyond NGO control.

Implications for practice

Social marketing is participatory in nature, with a growing focus on co-design and collaboration in interventions and service design (French, Russell-Bennett, & Mulcahy, 2017; Lim et al., 2016; Trischler, Dietrich, & Rundle-Thiele, 2019; Vella et al., 2018). Less attention has been directed at extending participatory approaches to evaluation. An evaluation approach that measures what works and what does not when encouraging children to make healthy and safe choices during program delivery extends understanding beyond traditional linear evaluative approaches that occurred post program delivery. The CMO formula aligns to Social Marketing Systems Theory (SMST), (Domegan et al., 2016; McHugh, Domegan, & Duane, 2018), where understanding the system an intervention is within, assists in understanding the context of the intervention, the mechanisms that create behaviour change and the outcomes (Keogh et al., 2018; Wong et al., 2012) and the surrounding influences that support or undermine program outcomes.

Additionally, a realist evaluation framework allows clear illumination of core social marketing benchmarks including the 4Ps marketing mix (place, promotion, price and product). By clearly illuminating mechanisms and aligning these to behaviour change theories understanding of what works, when, where and why can emerge from multiple stakeholder perspectives. This requires a bottom-up approach to be applied, instead of the top-down approach traditionally taken in health promotion and public health programs (Domegan et al., 2016; Thackeray & Neiger, 2000). By adopting a participatory approach, realist evaluation can treat people as active rather than passive recipients (French et al., 2017; Hastings & Haywood, 1994; Parker & Lukas, 2014; Veale, 2015). There is a need to go beyond activities and outputs to understand whether health promotion interventions do or do not deliver health outcomes in these communities (Domegan et al., 2016; Kok, Gurabardhi, Gottlieb, & Zijlstra, 2015).

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Empowering the female STEM identify: a social identity approach to student experiences at university

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Introduction

The importance of a skilled and innovative STEM workforce is emphasised by nations competing to attract and retain the brightest minds to ensure economic growth (Office of the Chief Scientist, 2014). Female underrepresentation in STEM fields remain an ongoing challenge despite significant research into the area (Crawford et al., 2018; Drew et al., 2015; Tupper et al., 2010). Increasing female representation in STEM fields offer an avenue to deliver economic growth and innovation (Corbett & Hill, 2015; National Academy of Sciences et al., 2010; Riegle-Crumb & King, 2010; Suresh, 2007; Uncles, 2018).

Despite progress in the field, ongoing attention is still needed to attract and retain females in STEM. Social marketing advocates for the use of theory as it may impact the effectiveness positively. To date, no application of social marketing to retain females in STEM in university higher education has been reported. Similarly, the use of theory remains limited in social marketing (Truong et al., 2018). Social identify theory (Tajfel, 1978) centres around a social comparison process, namely the formation of social identify through self-categorisation and social comparison. Self-categorisation refers to the self being reflexive, meaning the self can be considered as an object and classify/categorise itself in relation to other classifications and categorisations. The self-categorisation constructs the identity in response to perceived similarities between the individual and the in-group and out-group members. (Stets & Burke, 2000). The in-group is concerned with two aspects including, a psychological sense of belonging, that being considering oneself as part of the STEM community and social acceptance referring to the social acceptance of the STEM group (Kim et al., 2018). The social environment and sense of belongingness have previously been suggested to facilitate or obstruct the STEM identity (Cheryan et al., 2015; Kim et al., 2018), providing warrant for the social identity theory.

This study investigates the STEM experience among university students by offering a social identify perspective to illuminate a STEM identity which in turn could help inform behavioural change efforts to change the STEM environment for females.

Method

The current study adopted the seven-step co-design process involving resourcing, planning, recruiting, sensitising, facilitating, reflecting and building for change (Trischler, Pervan, Kelly, & Scott, 2017). Six co-design sessions were then conducted, wherein 30 STEM students participated across two university campuses from one large Australian university. Participants were recruited using a convenience sampling method. The duration of each co-design session was approximately 90 minutes. In turn for their time, participants received a $AUD50 gift voucher. Sessions were audio recorded and files were transcribed verbatim by an external transcription service. Both genders (12 males and 18 females) were represented and all were enrolled in a STEM degree. A discussion guide was developed and used by two co-design facilitators featuring three activities, namely; 1) free association test (FAT), 2.1) group discussion, 2.2) generating barriers + voting and 3) co-creation of new programs. This paper is only concerned with activity 2.1 and 2.2.

The discussions were centred around the STEM experience, guided by questions: *"How is it studying a STEM degree at [name withheld] University?"* and *"In what situations, do you find it hard to keep studying in STEM degrees?"*. Following the general discussion, participants were asked to list barriers that impact their STEM university experience on sticky notes and asked to cast their vote on the barriers most important to them. Participants could see and vote for other participants barriers if they believed them to be more important or prevalent. Following an inductive approach, data analysis was undertaken at a semantic level informed by social identity theory in-group and out-group classification, to understand the experiences faced by STEM university students. The institution, unconscious and
implicit bias and self-efficacy was found to influence the STEM experience.

Findings

The institution and classroom experience were characterised as a discouraging learning environment in the light of lectures, peers, resources and autonomy. The university climate was considered chilling, lonely and lacking support and encouragement. Social categories are constructed in a structured society only existing in relation to contrasting categories (Hogg & Abrams, 1988). The students will construct their STEM identify in response to their perceived similarities with the institution and its culture suggesting a less inclusive in-group. In continuation, unconscious bias was evident. Sexism and academic sexism, referring to the perception of academic incompetency served as barriers. Females were at times, not perceived as the prototype of STEM in contrast to their male companions (in-group members). This was particularly emphasised by females however, some males also supported this notion. Unconscious bias are automated and happens when decisions are influenced by a behaviour (Rykers, 2016). A repetitive incident in a lab occurred, where males seek consultancy on assignments and tasks purposely turning to their male peer whose lab partner was female. The male student referred them to his female lab partner, as she had helped him with his questions. In contrast, others expressed neutrality toward sexism, and others ignorant. One male participant disputed notions of sexism in the university STEM environment, having taken part in conversations in labs with other classmates, that involved obscene and degrading remarks about a female teacher wearing a lab coat. This could imply the notion of implicit bias which questions the unconscious part. Self-views are enhanced by members of the group they identify with (Stets & Burke, 2000). Receiving affirmation for a behaviour from their peers enhances in-group belonginess and fosters an in-group out-group divide between genders.

Self-efficacy was also identified to impact the STEM experience. Females who had experienced negative attitudes/discouraging behaviour were less susceptible to the negativity. Categorising oneself in a group/role can serve to fulfil the self-esteem and self-efficacy motives (Stets & Burke,

2000) that being part of a minority, can serve as empowering (Ong, Wright, Espinosa, & Orfield, 2011). In plain terms, as females had experienced disparaging remarks or behaviours due to their gender – and remained enrolled, would find themselves more immune to similar experiences in the future.

Discussion and conclusion

The findings advocate that a STEM social identity exists. This social identify involves an element of in-group/out-group social involvement, favouring males in the in-group. In particular, females experience challenges with inclusivity towards the in-group through often unconscious bias or behaviours considered 'normal' that in reality disparage female STEM student success. Reinforcing the in-group's distinction to the out-group enhances the group members' self-image (Abrams & Hogg, 1988). Encourage female representation in STEM fields require the stereotypes to be challenged.

Aligning with Kim et al (2018), we recommend focussing on in-group members to develop efforts to change perceptions, merely to encourage inclusivity in the STEM environment. Other studies support the notion, that the STEM identity is being less vulnerable among successful females (Kim et al., 2018; Ong et al., 2011). Program efforts should move beyond the individual STEM student, employing a holistic approach targeting midstream and upstream for behavioural change outcomes. The results of the current study are limited to participants representing one university impacting the generalisability of the study. Future research could benefit from engaging other parties such as university staff and STEM industry representatives to capture a broader STEM identity.

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Understanding stakeholders matters: On-ground stakeholder observation

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Introduction

Agricultural run-off continues to impact the water quality of the iconic Great Barrier Reef negatively. Despite substantial investment by Federal and State governments into projects, reaching water quality targets is proving difficult. Agricultural practices are complex, multi-casual and interconnected with other issues; and as noted by some scholars, single scale solutions targeted at stimulating farming practice changes may not be sufficient (Domegan et al., 2017). Social marketing has been criticised for a consumer myopic focus (Brennan et al., 2016). Systematic reviews identified the majority of change efforts continue to be directed at individuals (Almestahiri et al., 2017; Brennan et al., 2016) although systems and macro approaches are emerging (Truong et al., 2018). A broader management lens and a systems stance is required to understand why changes are (or are not) occurring and consideration of on-ground stakeholders is therefore needed to deepen understanding. A stakeholder orientation offers a theoretical lens that can account for the various groups who have a vested interest in the environmental issue. Previous literature has identified stakeholders as impeding practice change (McHugh et al., 2018). However, inclusion of multiple stakeholder groups is not without its challenges; stakeholders can hold other agendas (McHugh et al., 2013), priorities (Lefebvre, 2006), motivations (Thomas, 2008) and they can even hold conflicting interests (Hoek & Jones, 2011). Gaining a deeper understanding of the stakeholders in the system and their actions and interactions may reveal why programs are successful or not (Buyucek et al., 2016). Working with different stakeholders has previously been attributed to social marketing program success (Gordon et al., 2016) however consideration of a variety of stakeholders is rare (Buyucek et al., 2016). To understand why water quality targets are not being realised research is needed to extend beyond the farmer to consider the array of on-ground project stakeholders (Rodriguez et al., 2008).

A project involving sugarcane farmers aiming to foster farming practice change to improve water quality is the context for this study. The aims of this paper are twofold. First, in line with calls to extend beyond social marketing's downstream focus the paper redirects attention beyond the farmer observing how on ground project stakeholders may be facilitating and/or impeding practice change. Second, this paper responds to the call to extend theory in social marketing, applying stakeholder theory to examine on ground stakeholder interactions.

Method

To examine on-ground stakeholder interactions an unstructured observational methodology was employed utilising a convenience sampling approach (Weathington et al., 2010). Numerous of stakeholders operate in the agricultural system impacting farming practices. Primary project

stakeholders were the focus of the current study and included sugar cane farmers, industry representatives, extension provisional staff, agronomists and farming practice change stakeholders. Settings for data collection included project team meetings (n=2), annual industry events (n=2) and one-on-one meetings between extension provisional staff and sugarcane farmers (n=5) over a two-year period. A total of nine events involving more than 300 stakeholders were observed by one or more researchers.

Field notes, photographs and videos were gathered during observations following the salience hierarchy strategy, a technique that impacts the data in terms of determining the use of tacit knowledge. Tacit knowledge has been highlighted as important to consider in deciding whether observations are considered worthy of reporting (Wolfinger, 2002). This strategy is in contrast to a comprehensive/systematic note-taking procedure (e.g. voice/video recording), which would be far more intrusive for in-field observations. Field notes were manually transcribed. Where multiple observers were present cross-ratings of field notes was undertaken.

Observation guides were developed and modified to match the events being observed by the project team. Overall, all event and interactions observed centred around farming practice change. Issues considered to be salient that were observed included trust among stakeholders, authority and communication skills. Themes were identified using Excel and emerging themes were cross-checked between a minimum of two researchers to increase data confidence.

Results

Three overarching themes were identified. These are interrelated. The theme 'strong relationship ties' refers to the well-established relationship between different stakeholder groups with closest ties observed for stakeholders interacting on a one-to-one basis. Farming practices, delivery of farming advice and the sharing of personal stories between parties dominated one-on-one meetings. In small group meetings, a wider array of stakeholders was present. Stakeholders present were able to offer their expertise in a language matching the target audiences day-to-day lived experiences achieving the highest levels of engagement and interaction. For example, one scientist was always available to answer questions and through strong localised understanding was able to forge trusted relationships with a broad range of farmers. This was identified as a key facilitating factor to support farming practice changes.

Another theme identified was the lack of facilitating water quality conversations, 'Information break down'. Despite the genuine relationships observed, some stakeholders were not facilitating nor advocating for changes in practices in one-to-one settings thereby not directly supporting water quality improvement efforts. This is considered to be a key barrier that prevents farming practice change. 'Ownership' was the third theme identified. This theme encompasses understanding of the issue by some stakeholder groups and the ability of stakeholders to create interest and engagement with the issues. Direct involvement increased trust and confidence and led to stakeholder interactions to address the key issue. In contrast, conflicting understanding of the issue prevented engagement initially or across time. Poor knowledge of focal farming practices by onground project stakeholders was observed and is considered as a key barrier that is preventing water quality targets from being met.

Discussion and conclusion

The aims of this paper were twofold. This paper employed a semi structured observational research methodology redirecting focus beyond the farmer to understand whether on ground project stakeholders may be facilitating and/or impeding practice change. Responding to the call to extend theory application in social marketing (Truong & Dang, 2017) this paper was guided by stakeholder

theory (Freeman, 1984). Stakeholder theory is far from a new concept, management literature has leveraged off stakeholder theory over time reflecting the understanding that better outcomes are observed as stakeholder interaction increases (McHugh et al., 2018). This paper extends research practice in two ways. First it moves beyond individuals outlining a methodology that was used to observe stakeholder interactions and extends beyond dominant self-reporting methodologies (e.g. surveys and interviews (Kubacki & Rundle-Thiele, 2016).

By observing on ground project stakeholders this paper delivers evidence supporting Rodriguez and colleagues (2008). The failure to clearly communicate project outcomes suggests some stakeholders are not adequately equipped to assist farmers to change to more sustainable agriculture practices. The flow of information from agricultural research and development is mostly a top-down approach where knowledge stems from a few sites and trials and is then articulated to farmers through different channels or actors (Jiménez et al., 2016). Recent research highlights the importance of changing the top-down linear approach of knowledge and information dissemination to an exchange-based system consisting of collective two-way learning between change agents and farmers (Sewell et al., 2017) as occurred for farmers involved within the project with positive outcomes observed. A key contribution of this observational study is identification of factors facilitating and/or impeding practice change. A widened focus that observed on-ground stakeholder interaction across an array of events to support farming practice change identified that lack of communication about the project and inability to address questions raised by farmers participating in the project impeded rates of farming practice change.

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Creating the environment for change by enhancing experience

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Introduction/Background

In order to drive societal change, we increasingly rely not just on individuals, but on how individuals interact with the spaces and cities around them. Public transportation is one such space, where individuals make choices for the benefit (or detriment) of themselves and society. There have been countless studies on encouraging individuals to use public transport (See Ettema, Friman, Garling, and Olsson (2016) for a review), but fewer on how to support them to use it *effectively*. This study examines the multi-modal journey, that is, encouraging individuals to use the optimum set of transport options (e.g., commuters driving to their nearest train station; shoppers taking connecting buses to get them to their errands faster). Research has revealed that behavioural biases affect the way people use public transport (Garci-Sierra, van den Bergh & Miralles-Guasch, 2015; Metcalfe & Dolan, 2012; Young & Caisey, 2010). Behavioural biases explain the non-rational ways that human beings can sometimes think, feel, and behave (Tversky & Kahneman, 1974). Social marketing research also shows that individual's behaviour not only relies on their motivation (which can be influenced by behavioural biases) but also on their opportunity and ability to enact a behaviour (Rothschild 1999; Saha & Idso, 2016; Karatas, Stoiko & Menassa, 2016). Social marketing aids us in designing environments that take into account the biases and enhance the opportunities and abilities – and even motivation levels – of citizens, helping them to enact optimal behaviours. We are

often influenced by our environments, for example in grocery stores the cigarettes are hidden behind the counter while the fresh produce is the first section customers enter – both clever designs to influence our behaviours. In transport, designing the environment might mean that bus stops are more conveniently located than car spaces, or making 'park and ride' spaces available. We further propose that it is the elements of customer experience that make the environment design workable – that is, someone who cares most about sensorial experience may not be as swayed by conveniently-located public transport as they would be by well-designed, beautiful shelters. The customer experience framework (Gentile, Spiller and Noci, 2007) is useful for understanding the variation between people, as it offers a multifaceted understanding of customer experience. It comprises six dimensions including: cognitive, emotional, lifestyle, sensorial, pragmatic, and relational. The experience elements that take precedence may also be determined by what people value. We propose that the Customer Value Framework (Holbrook, 2006) can help explain behaviour that is related to the experience an environment provides. When motivation is extrinsic the value that is perceived can be economic/functional (when the focus is on the self) or social (when the focus is on others). When motivation is intrinsic, the value that is perceived can be emotive (when the focus is on the self) or selfless/altruistic (when the focus is on others). Hence, in order to understand the type environment design needed, we first need to understand which biases, and elements of the customer experience and customer value are important to different people. Hence the following research question is proposed: *"How might individual differences in behavioural biases, preferred experience and customer value influence the design of physical and digital environments for multi-modal travel?"*

Method

Data were collected using a qualitative co-design workshop approach. Co-design is a user-centred technique drawing on divergent thinking, bringing together multiple perspectives on a service in a holistic way to improve interactions between service provider/s and consumers (Trischler, Pervan, Kelly & Scott, 2018). Twenty-five individuals participated in a full-day session which included customer journey mapping with a specific focus on barriers, motivators, and pain/pleasure points. Participants also completed a short survey designed to determine levels of behavioural biases. Analysis included textual analysis (of participant notes taken as part of the activity), pictorial analysis (of images/post-it note maps) and quantitative analysis of the behavioural bias questions.

Results/Findings

The results indicated that behavioural biases and experience elements did indeed vary across individuals. The three most common biases across participants were familiarity bias (preferring what has been known or experienced before), illusion of control bias (feeling one has control over events when this is not the case), and status quo bias (preferring to keep things as they have always been). While all elements of customer experience were apparent in individual preferences, there was considerable variation in which elements were deemed important. From these two data sources, four personas emerged:

- The Rationalist: (Economic/Functional Value) Focused on cognitive and pragmatic experience, has familiarity bias and illusion of control. "I stick with what I know works; it's the only way that makes sense."
- The Experientialist: (Social Value) Focused on all experience *except* cognitive and pragmatic. Has status quo bias. "Richness has always made my journeys better."
- The Realist: (Emotive Value) Focused on emotional, pragmatic, and sensorial. Has status quo bias "I know what makes for a stress-free journey."

- The Idealist: (Altruistic Value) Focused on lifestyle, pragmatic and sensorial. Has status quo bias and illusion of control "How I get from A to B is part of who I am, and it helps me shape the world around me."

Importantly, all four of these personas switched to functional and pragmatic concerns whenever a minimum standard was unmet (e.g., The Experientialist cared more about the switch between modes being efficient and easy; once this was established, other priorities like a pleasant walk between travel modes emerged). Implications for the design of environments are discussed in the next section.

Discussion and conclusion

This research yields two theoretical and two practical contributions. Theoretically, we contribute to the social marketing and consumer psychology literature by demonstrating how biases can work together with citizens' innate sense of customer value and preferred elements of customer experience to determine how physical and digital environments should be designed to support optimal behaviour. Until now, these seemingly disparate concepts have not been combined in this way – we show that all three work together to influence how citizens relate to the environment around them. We introduce four personas that emerge from the data and which illustrate the marriage of these concepts. Practically, we show that an 'effective' multi-modal journey means different things to different people, so it is necessary to understand the important elements of customer experience and the behavioural biases at work *before* environments are designed. Environments may not necessarily be able to be all things to all people, but the results of this study highlight the importance of focusing on more than one experience element, and of offering people comfort in the familiar, a sense of control, and a way to try new things whilst also feeling that things are 'as they've always been'. Specifically, this may mean convenient stop locations or transit paths (illusion of control; pragmatic, cognitive) near favourite shops (familiar; lifestyle) that are safe and aesthetically appealing (emotional, sensorial – and perhaps retaining some traditional features: status quo), and provide space to be together or separate (relational). Overall, this study not only finds that behavioural biases, customer value, and customer experience preferences determine the type of environment design needed, but that these decisions can be made *with* citizens: environments can – and perhaps should – be co-designed with citizens.

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Avoiding pitfalls when designing household organic waste recycling interventions: Preliminary findings from Systematic Literature Review

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Abstract

Rates of civic participation in environmental initiatives often fall short of intervention targets (Karkanias, Perkoulidis, & Moussiopoulos, 2016). Several studies have linked this phenomenon to personal and/or socio-ecological factors and mixed results are evident. Mixed results may reflect heterogeneity regarding study participants and location (Li, Huang, & Harder, 2017; Wu, Liu, & Brough, 2019) and also indicate limited synthesis of existing knowledge in this field to inform future social marketing intervention design. To date, few scholars have attempted to critically and systematically evaluate the design of waste-management interventions measuring their behavioural outcomes and impact for behaviour change. Building on prior research, this study sought to apply NSMBC criterion to identify shortcomings in the design of identified worldwide household-level composting interventions. This paper reports the preliminary findings emerging from the systematic literature review.

Background

Globally, around 2.01 billion tonnes of municipal solid waste (MSW) are generated annually, out of which 40 percent ends up in landfills (Kaza, Yao, Bhada-Tata, & Woerden, 2018). Despite technological advancements, only 19 per cent of MSW are recovered through recycling and composting, 11 percent are incinerated, while almost 33 per cent are openly dumped (Kaza et al., 2018). Lower-income countries that lack sanitary landfills are prone to higher rates of open dumping and burning of waste. While high-income countries only dump 2 per cent of waste, lower-income countries dispose almost 93 per cent of waste through burning or dumping near roadsides, vacant land, or waterways (Kaza et al., 2018). Improper incineration of rubbish releases toxic atmospheric gases such as chlorinated organic chemicals and black carbon, while methane gas is generated from unsanitary landfills, negatively affecting both human health and the environment (Mukui, 2013).

Importantly, the opportunity to recover useful materials, and associated income from waste, are forfeited (Oduro-Kwarteng, Anarfi, & Essandoh, 2016).

Organic materials constitute a larger portion of MSW in developing countries (Nsimbe, Mendoza, Wafula, & Ndejjo, 2018) and tourism-based economies (Reddy, Vijayalakshmi, & Reddy, 2018). The highest percentage of organic waste composition is found within the East Asia Pacific region (i.e. 62 percent), closely followed by the Middle East and North Africa countries at 61 percent (Boonrod, Towprayoon, Bonnet, & Tripetchkul, 2015). Moisture content in food waste makes incineration difficult (Li et al., 2017) and much of methane and leachates are generated from food waste at landfills (Palijon, Hara, Murakami, De Guzman, & Yokohari, 2017). The 2012 World Bank report estimates that around 46 percent of MSW generated globally comprise of food waste (Li et al., 2017), most of which can be composted. Home composting is known to be an effective way of reducing waste quantities at source and recover resources (Mbuligwe, Kassenga, Kaseva, & Chaggu, 2002).

The recovery of waste materials from domestic sources is reliant upon voluntary input from householders (Williams & Kelly, 2003). Organic waste can be diverted through kerbside composting carts, however, the efficacy of kerbside waste diversion programs remains underexplored (Wu et al., 2019). In addition, although psychological research touches upon waste-minimising behaviour, such as source-separation, literature on composting and reuse is less apparent (Tobias, Brugger, & Mosler, 2009). There is a need for rigorous scoping reviews and systematic assessments of waste-management interventions, especially biodegradable municipal waste (BMW) interventions, to identify best-practices and delineate shortcomings in program design, implementation, and evaluation (Purcell & Magette, 2011). As such, this study adopts the UK's *National Social Marketing Benchmark Criteria* (2017) to assess household-level composting interventions that were identified through a systematic literature review process.

Method

Guided by PRISMA [preferred reporting of items in systematic reviews and meta-analysis] (Liberati et al., 2009), this research sought to include peer-reviewed journal articles that focused on empirical studies of household-level composting behaviour published between 1995 to 2019. The primary aim of this research was to investigate the design of composting interventions using NSMBC, as utilized by (Kim, Rundle-Thiele, & Knox, 2019). Specific key-terms were used during search in databases such as EBSCO, OVID, ProQuest, Scopus, Web of Science, Emerald, Sage and Springer. After removing duplicates, articles that passed through first-level screening on Endnote for inclusion criteria of English-language peer-reviewed journal articles published within 1995-2019 and related to composting behaviour, were transferred to Covidence for multi-coder screening and quality assessment (Hong et al., 2018).

Out of 3,595 articles originally retrieved from database search, 14 records met the final eligibility criteria and were assessed using NSMBC. An inter-reliability test was performed and any discrepancies between coders were resolved through robust team discussion.

Results and Discussion

Our preliminary findings indicate that all interventions, with the exception of two programs, targeted specific waste-management behaviour – for instance, source-separation, backyard composting, or a combination of source-separation and composting behaviour. Prior studies indicate that adopting specific and measurable behavioural indicators can further strengthen program

efficacy (Kubacki, Rundle-Thiele, Lahtinen, & Parkinson, 2015). Examination of the second benchmark criteria indicates that while targeting is evident, no work to understand different household groups was undertaken and therefore, segmentation was absent. Only one waste-management intervention in our review was designed using behaviour-change theory (i.e. social norms marketing reported in Geislar (2017)), indicating lack of theory application in composting intervention design, execution, and evaluation.

Further investigation was conducted on the application of a user-centric approach by addressing its associated benchmark criteria – insight, consumer orientation, competition, and exchange. Our results indicate that only one intervention gained consumer intelligence (or insight) through formative research (Bernstad, 2014). Similarly, only two interventions were co-designed with the target audience (Bernstad, 2014; Boonrod et al., 2015) and/or pre-tested (Manomaivibool, Srivichai, Unroj, & Dokmaingam, 2018). Less than half of interventions (n =6) identified competitive factors that interfered with desired behaviour. And only 50 percent of interventions (n=7) offered a value package (i.e. composting equipment and/or green waste collection services) for the targeted audience. Of the four traditional marketing-mix elements, promotion and place were most commonly addressed within waste-management interventions. Information leaflets or brochures, seminars, and door-stepping were the most popular mechanisms used to disseminate information about source-separation and backyard composting. Many interventions (n=11) were directly tested in the audiences' residential area, with the justification to increase convenience or to improve the likelihood of behaviour-change. Six interventions offered products ranging from green-cone food digesters, composting bins, special equipment for kitchen waste, to green wheelie bin collection services. Eight interventions addressed the price element, by either selling the product at a commercial rate or offering a subsidy for early adopters. Overall, none of the interventions incorporated all eight social marketing elements.

Conclusion

This systematic review offers useful insight into empirically designed waste-management interventions and lessons that could be drawn to guide future interventions. We used the eight social marketing benchmark criteria (NSMBC, 2017) to investigate whether interventions were designed using a user-centric approach and whether behaviour-change theories were used for program design and evaluation. The major pitfalls we found were linked to five (5) benchmark criteria: theory, audience segmentation, insight, customer orientation and competition. Fifty percent or more interventions had addressed the remaining benchmark criteria – that is, behaviour change objective, exchange, and marketing mix elements. The missing elements correlate to the pre-planning stage which requires formative research to gain consumer insights and to understand factors (both internal and external) that influence behaviour change. Without this fundamental information, interventions run the risk of providing product(s)/service(s) that lack lustre for users and fail to initiate or sustain long-term behaviour change.

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Ageing consumers' transition across life-stages: Perspective of changing needs and wants

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Introduction/Background

Increased longevity is giving rise to a dramatic shift in global demography with over half a billion people worldwide being 50 years plus. In United States alone there is more than 9.2 million citizens aged 80+ years. The Centre for Aging in London estimates that there will be nearly 700 million elderly (age 65+) individuals in the world by the end of 2020. While these numbers seem remarkable, marketers are struggling to understand the needs of this growing market because of false assumptions, perceived homogeneity across all ageing consumers and lack of understanding of how this market is different to younger markets. While like other markets, senior markets can vary by country or region, age, income and lifestyle, this population also varies due to unique considerations around cognitive ability, physical health, financial capability and social connection. All of these change and transition over time as consumers age.

These misperceptions mean that older consumers are largely ignored in marketing literature and marketing practice despite their importance (Gottliebsen, 2017; Sudbury-Riley, 2014) and this misunderstanding inhibits the ability of industry, government and society to contribute to the quality of life of older consumers. This requires redesigning product and service attributes, training people to interact effectively, establishing trusted connections with extended social networks and much more. Overall it requires an understanding followed by remodeling business/government/social frameworks.

These gaps require systematic exploration of the needs of ageing consumers across the ageing consumer timeline. The current study explores the 'lived experience' of aging consumers at different stages from 'pre-retirement' through to 'frail' and proposes a conceptual framework and propositions to map out the dynamic nature of needs.

Method

An exploratory qualitative research design is utilized to identify and describe consumers' needs and wants from experience of living the life as aged. The data for this study originated from qualitative interviews with retirement village and aged care residents carried out during 2018 in Australia. As a

general overview, interviews in this study suggest that the participants are situated in a similar set of socio-cultural circumstances, share a common generational effects and have common life concerns. The hermeneutical approach of interpreting meaning from people's phenomenological experiences offers the opportunity to distil the detailed rich descriptions of lived-experience into themes. In the current study this logic entails researchers engaging in an iterative process of documenting, repeated reading and uncovering themes from the interview transcripts systematically (Thompson, 1996). The process of reflexivity was undertaken prior to analysing the data, to avoid interpretive bias (Creswell, 2013). To ensure accurate and thorough exploration of both the established preliminary research themes and emerging perspectives, each of the three coders read all of the interview transcripts to gain a sense of each individuals' whole experience. Data are examined, with concepts identified through interpretation of indicators and their properties. The causes identified here are known a posteriori on the basis of the lived experience (effects) shared by aging individuals. After interpreting the causes and effects, the researchers considered the findings in relation to existing research to put forward the propositions and conceptual framework.

Results & Discussions

The purpose of the current article is to advocate the transitioning life-stages approach for understanding various types of needs and demands exclusively for aging consumers. Based on the current study, people age in complex ways, affected by their social connections, psychological processes as well as their physiological changes (Moen, Dempster-McClain, & Williams, 1992) which does not always follow same sequence as individuals' chronological age (Ahmad, 2002). This explores the nonlinear pattern of life's progression taking into account the loops, pauses and necessary shifts in life's direction (Pearlin and Skaff, 1996) which are influenced by the timing of events, human agency, socio-cultural and the historical events (Elder, 1998).

Aging individuals confront numerous biological changes in mobility, flexibility, elasticity, strength, vision and hearing but at a different rate. Chronological age is not a good indicator for many consumers as they all age differently based on their cognitive, social ("*I look after everyone here*") , physical ("*I use the gym and facilities a lot*"), financial capabilities and at different rate. This cause variation in needs and demands to be met living in the same place as one community. Quoting participants "*I still work*", "*we travel a lot*", "*I socialise with friends from where I used to live*", "*I use the gym and facilities a lot*". Two-thirds of the Australians are single, female. The marital status at the later life has great impact on aging peoples' lifestyle *"I moved in this village when my husband died,..Its been 5 yrs"*. Contrary to the common view, today's aging consumers are less likely to live in poverty because of the pension benefit, accumulated wealth and increase in the social security. Major life events such as change in the partner status, family and kinship role, starting volunteering, chronic health issues can has the drastic impact and act as the breakpoints which act a s atranition phase to another life-stage. Based on this variation in the pattern of need and major life events, an ageing individual is expected to travel through the 'newly aged', 'older' and 'old-old'.

It has already been established that older consumers are retiring in greater numbers, with more wealth (Euromonitor, 2017) and with more demanding requirements than ever before (Chen & Shoemaker, 2014; Sikkel, 2013). This supports the proposition that '*Aging consumers matter'.*

'Ageing' is also multidimensional (Moschis, 1996) which manifests certain biological-social-psychological changes in human needs. As older consumers transition through ageing their needs and wants change depending on their physical and cognitive capabilities (Feldman & Vogel, 2009; Tinsley, 2000) as well as financial abilities. As individuals mature, their social, professional and kinship roles and networks change. Marketers to older populations must understand the heterogeneity and segment the market. The current study exposes the reality that ageing consumers

exhibit needs different to other consumers and within ageing cohorts exhibit distinct set of needs that transition over time. This supports the proposition that '*ageing consumers are unique', 'the needs of the ageing consumers are heterogeneous'* and that *'an important component of that heterogeneity is due to needs transitioning over time'.*

A dynamic framework (Figure 1) can be progressed which follow temporal order of life starting from an individual's pre-retirement stage of life (50+ years when people usually start planning for their retirement and the life after that). It presents an individuals progression through a series of age-based social roles where the major life events lead to transition and unfold new trajectories. Taking the 'transition' into consideration along with the composition of specific life stage components. Five socially defined, age-based stages are identified where each stage is the segment of distinct episode where certain level of biological-social-psychological need exists which are different from other stages.

Conclusion

This study puts forward propositions about the heterogeneity and transitioning needs of ageing consumers. It present the transitioning needs in a conceptual model of transitional life-stages.

From the social marketing perspective, to get some actionable directions this study offers marketers a full understanding on how well they can understand the needs and wants associated clearly with the ageing process with an especial emphasis on managing transitions well. This also gives researchers the freedom to explore dynamic components such as stakeholder involvement in decision making, management and delegation of financial wealth etc across various life stages.

Appendix

Figure 1 – Conceptual Model

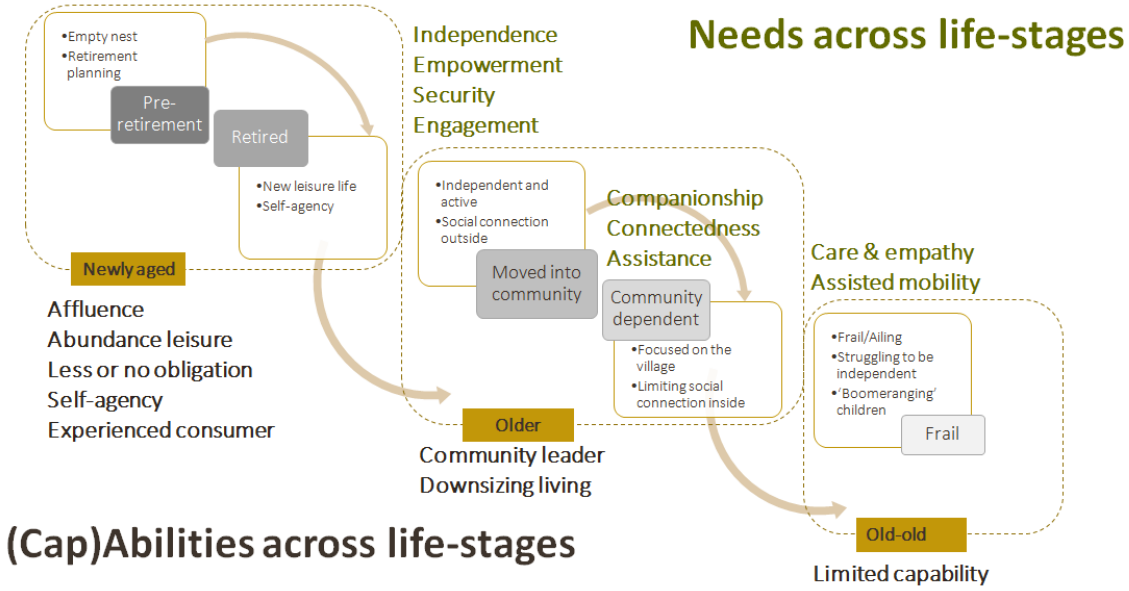

Figure 1B: Transitioning across ageing life-stages: changing needs and wants

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The use of digital media for social change: A case study on Egypt

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Introduction

Sexual harassment has become prevalent in Egypt in recent years. A survey conducted 2013 reported the number of women who experienced any form of harassment to surpass 99 percent of women population in Egypt (Trew, 2013). Additionally, Egypt was ranked as the worst country for women amongst 22 Arab countries according to another survey conducted in the same year (BBC News, March 2013). Although incidents of mass rape were first reported back in 2006 (Trew, 2013), Egypt has witnessed a hike of harassment incidents following the revolution of 2011 (Amar, 2013; Sheikh, & Kirkpatrick, 2013; Tadros, 2015). Scholars suggested various reasons contributing to this increase, including lax security, rising criminality and economic downturn (Tadros, 2015). Despite the prevalence of the issue, these incidents were quickly ignored and failed to capture public engagement.

HarassMap is the first independent organisation seeking to counter the persistence of sexual harassment. Launched in December 2010 by youth volunteers, HarassMap uses crowdsourcing application, supported by Google Maps, text messages, and social media platforms to encourage filing reports about harassment incidents. HarassMap strives to change social norms to consider sexual harassment, whether verbal or physical, as intolerable by society and to empower women to take action, while overcoming social challenges and stigmatisation. In this paper, HarassMap is analysed to demonstrate how the use of digital media could provide avenues for collective action and discussions of sensitive issues.

Case study

HarassMap aims to promote social intolerance towards sexual harassment; and therefore, aims to encourage discussions of sensitive and alter deeply rooted socio-cultural views pertaining to accusations to women and restrictions to their freedom. It also seeks to encourage a bottom-up action using documentations of incidents required for setting new laws and regulations

Marketing Mix Strategies

Product HarassMap crowdsourcing map allows anonymous reporting of incidents by victims or witnessers. Allowing anonymous reporting enable consumers to overcome social shaming obstacles that retrain women from reporting. In this way, the map empowers necessary action and encourages public discourse related to changing socio-cultural values which supresses the problem and shames victims. Besides, it acts as a documentation to reveal the prevalence of the problem to policy makers, which in turn, urges for setting necessary regulations. Furthermore, the platform provides information to support services, including legal, medical and psychological support,

Price The use of digital media enabled for overcoming multiple costs of involvement, through providing freely accessible software and providing anonymous reporting which overcomes challenges related to encountering social influences and consequences.

Place Digital media provides avenues for reaching out to consumers and prospects while overcoming geographic and demographic barriers, and thus, allowing for a wide accessibility of means of reporting incidents and gaining knowledge.

Promotion In addition to promoting the reporting map, HarassMap raises awareness and encourages public discourse using several online and offline campaigns.

Results/Findings

HarassMap has successfully received a total number of almost 3,000 reports in 34 cities and towns all-over Egypt as of January 2020 (HarassMap, 2020), and managed to gain tremendous engagement with its various campaigns on social media. One of the Hashtag campaigns #FirstTimeIWasHarassed yield 1,913 testimonials (HarassMap, 2014), and another campaign gained 2,600k+ retweets, 200k+ Facebook reach and 2,300k+ YouTube impressions (HarassMap, 2019). This engagement demonstrates HarassMap's ability to contribute to constructive discussions. Moreover, HarassMap attracted over 1,500 volunteers to engage in anti-sexual harassment workshops and reach out. Finally, HarassMap currently collaborates with ten universities all-over Egypt and public and private corporations to establish internal units to implement policies by respective authorities. On that front, HarassMap successfully reached out to employees with awareness programs. For example, HarassMap programs reached out to almost 50,0000 Uber drivers in 2015 (HarassMap, 2019).

Discussion and conclusion

Although achievements related to law introduction and enforcements of 2014 cannot be directly attributed to HarassMap, HarassMap has played an integral role in encouraging action taking by victims or witnesses by providing an alternate avenue for reporting that is timely, accessible and convenient to use. In doing so, HarassMap addressed diverse limitations to official reporting, including social and administrative barriers that have long discouraged women from reporting. Second, the map served in collecting data that is used for research purposes and allowed unpacking the problem. These data inspired designing awareness campaigns, and further challenged widespread social misconceptions that challenge women and limit their freedom, such as providing statistics of veiled women who encountered harassment and using these data to challenge accusations to women as provokers and calls for restraining their freedom. In a nutshell, effective use of digital media demonstrates alternative solutions that generate mass public discourse of sensitive issues which is a major step in changing behaviours and social norms.

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Towards a multi-actor engagement framework in social marketing

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Introduction

Social marketing adopts marketing tools to deliver effective voluntary behaviour change programs across a variety of public health and social wellbeing contexts (e.g., Kubacki et al., 2015; Xia et al., 2016). As social media have become an integral driver of communication (Brodie et al., 2013), social marketers have started utilising social media in their programs (Neiger et al., 2013). Although the prominent advantages of social media include their ability to engage communities through two-way conversations (Evans, 2008), along with allowing them to create their own content (Thackeray et al., 2008), research suggests that social marketers have meagre levels of knowledge about the use of social media for creating customer engagement in social marketing programs (James et al., 2013; Neiger et al., 2013). Recognising the importance of creating customer engagement to ultimately achieve behaviour change along with the noticeable dearth of research that has assessed the effectiveness of social media in creating such engagement, this study seeks to provide new insights into how social marketing programs can better manage and measure engagement on social media.

Methods

This research involves a series of three inter-related studies. Study 1 comprises a systematic literature review of social marketing programs that have reported the use of social media to engage participants and aims to identify and describe the use of social media in creating participants' engagement. Study 2 involves thirty-two qualitative in-depth interviews with social media practitioners and users to gain a deep understanding of their perceptions of engagement on social media and propose an empirically grounded framework with appropriate measures to assess customer engagement. Study 3 involves qualitative netnographic approach focusing on customer engagement within a social issue Facebook community group ("Women of Egypt"), providing a practical application and validation of the engagement framework developed in Study 2. This research is guided by Sashi's (2012) customer engagement life cycle which distinguishes between

seven levels of engagement: connection, interaction, satisfaction, retention, commitment, advocacy and engagement.

Findings and discussion

Study 1: Twenty-nine social marketing programs published between 2005 and 2017 were identified and reviewed for the use of social media to create engagement. The majority of programs used Facebook, and social media were mostly employed to share content-based information. Social media were primarily used to connect with audiences and reach target markets with campaign messages (*connection*). Social media served as an extended channel to traditional media efforts. However, very few programs used social media to engage and build relationships with their target audiences (Shawky et al., 2019).

Study 2: Using Sashi's (2012) seven stages of the customer engagement cycle as a baseline, interviews were conducted with social media marketing practitioners and users to develop a new multi-actor engagement framework consisting of four distinct engagement levels, namely *connection*, *interaction*, *loyalty* and *advocacy*, along with a practical set of measures for each level. *Connection* emerged as a fundamental level through which an organisation creates a social media presence to recruit and retain followers using one-way communication. *Connection* is crucial in raising awareness and can be measured through indicators focusing on "receiving" the messages through measuring the number of posts' views and reach to identify any users who encounter the communication. *Interaction* signifies the beginning of two-way communication between multiple users co-creating value by expressing themselves, generating content, and providing feedback. Interactions on social media can be measured by the number of likes, emojis, GIFs, inbox messages, comments, and replies to comments. *Loyalty* is a higher level of customer engagement than *interaction*, in which interactions are repeated over a period of time or across multiple posts. *Loyalty* signifies the beginning of long-term relationships with customers. Therefore, *loyalty* (i.e. continuous and repeated interactions) can be measured by the number of actors who interact with the organisation on multiple occasions over a period of time. *Advocacy* represents the highest level of engagement, in which customers contribute to the welfare of organisations through generating new content that reinforces or initiates communications and spreading the organisations' messages through their networks. *Advocacy* can be measured by the number of actors engaging in content creation inside the network (internal advocacy) or through the number of shares, the number of friends tagged, or the amount of eWOM (external advocacy)

Study 3: The initial application of the four levels, namely *connection*, *interaction*, *loyalty* and *advocacy*, and their respective measures has indicated that the framework developed in Study 2 can be used to identify and codify practical differences between the levels of engagement. *Connection*: The initial analysis shows that the highest number of reach, and clicks achieved by "Women of Egypt" were 71,097 and 16,793, respectively, in relation to posts associated with two info-graphics that presented statistics about discrimination against women in different fields in Egypt. In contrast, the lowest reach and clicks were 21,638 and 4,332, respectively, in relation to two posts that included direct links to the page website. *Interaction*: The highest number of likes (1.4K) and comments (157) were associated with two posts that included a photo and text narrating real-life stories of women showcasing educational content using social media to benefit others. Overall, the posts that included positive and inspiring social examples encouraged more intensive and positive interactions between users. *Loyalty*: through monitoring the usernames, one user (user 2) interacted with four different posts that were posted across three consecutive days, while another user (user 3) interacted with three different posts (number 11, 23, 25) that were posted across three successive days. *Advocacy*: in the "Women of Egypt" community, the highest and the lowest number of shares where associated with the same posts that caused the highest and lowest number of reach and

clicks (see *Connection*), which emphasises the significance of advocacy in reaching out to other users outside the social marketers' network.

Conclusion

Recent studies into customer engagement have recognised that in a highly networked society, the ubiquity and influence of social media have added complexity to social network interactions and have changed the very composition of the interactions between involved actors (Brodie et al., 2013; Jaakkola & Alexander, 2014). In these networks, customers directly or indirectly influence other actors' behaviours while at the same time being influenced by them (Brodie et al., 2016; Fehrer et al., 2018). The findings emerging from the three studies reported in this paper indicate that there are four main levels of engagement between multiple actors on social media, namely *connection*, *interaction*, *loyalt*y and *advocacy*. Each of the levels can be identified and measured using distinct social media metrics, ensuring that the framework developed in this study can be used to inform and measure social media activities and their effectiveness. Importantly, this research contributes to social marketing literature by closing the knowledge gap about the use of social media for creating customer engagement in social marketing programs. Future research should also explore the proposed framework in other social marketing contexts. Finally, future research could tap into examining the validity of the framework on different social media platforms.

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Building habitat: A place for pollinators and people

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Introduction to the research problem

Birds, bees, and various types of insects within broader ecosystems play an essential role in pollinating crops that provide our food. Food security research shows that increasing numbers and types of bees and insects, which are visiting plants, have a direct impact on crop yields, making their role in biodiversity vitally important (Baldock et al., 2016; Baldock, 2020). Yet scientists observe that pollinator numbers and varieties are declining across Australia. In addition, research is providing evidence to suggest that human interactions with nature through access to community gardens are essential for human health and wellbeing (Guitart et al., 2012; Frumkin et al., 2017). A community garden can be a liminal space in a work environment to build community (Shortt, 2015) and a way of connecting to nature. In a social and sustainability intervention, the aim was to address both the issue of dwindling biodiversity and stakeholders' wellbeing by building a 'pollinator and community garden'.

Literature review

A community garden can be defined in many ways, for example, focusing on the bio-physical context as a habitat for pollinators. For the purpose of this project, it can be explained as a shared space for the needs of a local group. In general, the emphasis of a community garden can be based on both place and interest and can be used to build social capital between people (Coleman, 1988; Firth et al., 2011; Smyth & Vanclay,2017). Historically, community gardens have been shown to provide several benefits including social cohesion, resilience, and positive health effects, as well as environmental benefits, such as increased environmental sustainability and the reclaiming of under-utilised land (Guitart et al., 2012; Egerer et al., 2020). However, there remain gaps in community garden literature including exploring the experiences of the community during the garden design and development stages. To better understand the experiences of the people involved in the community garden, our research question asks: *How do stakeholder groups co-create meaning around our Pollinator and Community Garden*?

Methodology

A collaborative ethnographic methodology with an Assemblage approach (Feely, 2020) was used to explore the experiences of the project team as key stakeholders of the intervention. May and

Pattillo-McCoy (2000) defined collaborative ethnography as a process used by two or more researchers to collate their experiences of a phenomenon. Collaborative research focuses on relations between researchers; providing opportunities for team members to engage in all points of the research project; sharing their 'lived experience' with their colleagues; and bridging the gap between formal research and fieldwork (Given, 2012). In addition, "Assemblage" which is defined as amalgamating written, visual, and auditory artefacts of participants' experiences (Denshire & Lee, 2013, p. 221), was chosen to facilitate multi-modal data. In this way, Assemblage added depth and visual insights into the project by showcasing team members' personalised moments of both delight and adversity, and key stakeholders' perspective on the community project, ultimately expressing the co-created shared meaning-making of the Pollinator and Community Garden. To build convergence within the qualitative process (Prosser, 2008), data were collected from a range of sources including personal milestone journals and multi-media footage. The research design and use of multi-modal data were predicated on ethnographic observational principles (Aktinson & Hammersley, 1998). That is, when the researchers are engaged in the experience, they may not be able to fully interpret the events as they occur. Hence, record keeping utilising various technologies can be used to 'jog' the ethnographer's memory.

This study is based on imagery, in particular, auto-photography, which consists of interpreting images taken by participants as a data source (Glaw et al., 2017). This approach enables participants to communicate their ideas beyond the parameters of language and showcase what is important to them through the images they choose to capture. The data collection process occurred over 10 months and images were taken by participants as part of their lived experience and as a visual timeline. Overall, this study collected multi-modal audio/visual output with the data set including 305 unique images, 15 radio podcasts (and scripts) and 12 video files. There were four key photographers, two key videographers and five speakers (with two radio hosts). However, this paper focuses only on the analysis of the photographs.

Smith et al. (2016) argue that there is a lack of clarity around the techniques being used to analyse qualitative visual data. However, applying a unique and contextualised framework to the project is a common approach. For this project, the following criterion framework abductively (Timmermans, & Tavory, 2012) emerged from the data set and was used to analyse the visual imagery. The analysis focused on sentiments and non-verbal behaviours (see Lange, Heerdink and van Kleef, 2021 for analysing meaning within facial expressions). The criteria included 1) *Gestures and posture,* 2) *Facial expressions,* 3) *Whether the image was staged or candid,* 4) *Contextual events,* and 5) *Changed state (objects).*

Results/Findings

Within each criterion, a range of themes emerged. For *Gestures and posture*, a key theme emerged as 'physical labour' visualised as pausing from the task, while holding gardening tools. For *Facial expressions,* a main theme centred on capturing authentic emotions. As can be seen in Image 1, during a photo session where participants posed while holding a plank position. This session lasted for several minutes, as the photographer focused on getting a perfect pose and Grace's expression of a 'smile' was punctuated by a raised eyebrow- capturing a fleeting moment of frustration at the process. For *Images that were staged,* a key theme was playfulness, such as reliving childhood experiences of rides in a wheelbarrow. For the *Contextual*

Image 1 Facial Expressions- Grace

events, themes of personal significance were dominant, such as 'Roger and his quest' to build the arch. One of the most prominent themes within the *Changed state (objects)* was the evolving garden beds, with a specific focus on flowers as they emerged.

Discussion and implications

What participants chose to capture in a photograph provides insights into their experience in the project. Images can be powerful and multi-layered artefacts that represent a visual narrative of the elements that are most meaningful to participants and can be used to explore the experience of the individual within the project as well as capturing factors that drive the project forward. Reflectively, a better understanding of authentic emotional engagement, as captured in visual data and which showcases the real experience of the stakeholder, can help develop guidelines and templates for future community garden projects.

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Does personal voice assistant technology improve perceived independence and reduce isolation amongst ageing consumers

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Introduction/Background

Older consumers in Australia and globally are becoming an increasingly relevant and prominent consumer group for marketers. They now have the highest net worth of any age group (Euromonitor, 2017), they are spending more, and they are expecting more from brands than ever before (Chen & Shoemaker, 2014; Sikkel, 2013). As part of these increasing expectations, aged consumers are particularly displaying greater desire for remaining independent in their own home for as long as possible but also generally maintaining their independence irrespective of the level of care required (Beswick et al., 2010). However, this is often noted as challenging in light of deteriorating physical and mental health coupled with funding and institutional limitations (Fausset et al., 2011; Lawrence & Murray, 2010). In 2019, Canada's Technology and Ageing Network released a report emphasising again that 'independence' is a challenging area in aged care. Therefore, researchers continue to actively engage in this area, exploring new ways to improve aged consumer's ability to enjoy a sense of independence (Lawrence & Murray, 2010).

Some researchers have suggested that emerging technologies could provide better ways to enable independence and encourage social interaction in care homes (Reis et al., 2018). However, the degree to which technology has the ability to be a viable option for aged care depends on a range of factors including their willingness to accept new technology. Traditionally, elderly consumers have been considered cautious and less open to change (Botwinick 1973). However, Gilly and Zeithaml (1985) argued that elderly consumers are open to change when and if the technology actually meets their needs. Lee and Coughlin (2015) argue low dispersion of technology amongst aged consumers, is due to technology not being produced and marketed to aged consumers. Often technology does not meet the actual needs of older consumers being more focused on the technology itself or stereotypical images

of aged consumers (Essén & Östlund, 2011; Lee & Coughlin, 2015). Nor does the ageing consumer understand how the technologies can fit into their lives with relatively little effort. Therefore, there is a real need to further understand the technology acceptance and adoption process amongst older consumers and the implications of this for producers and marketers. One potential technology that offers functional benefits for aged consumers and is relatively simple to adopt and maintain is the Google Home. The Google Home is a voice first device powered by Google Assistant, and is otherwise known as a personal voice assistant (PVA). According to VoiceLabs: "*A voice-first device is an always-on, intelligent piece of hardware where the primary interface is voice, both input and output*" (Dempsey, 2017). The first such device was released by Amazon (The Amazon Echo) in 2015, after which Google released their first Google Home device in 2017. Such a device is discussed as opening up market and service opportunities in e-commerce, productivity, gaming and home automation (Dempsey, 2017). Despite over 6.5 million 'voice-first' products being sold in 2016, it remains a fairly new market, and there is very little research exploring the perceived value, acceptance or adoption by aged consumers.

This paper describes a study that 1) explores ageing consumers' perceptions of functionally beneficial but simple technology, 2) tests how readily ageing consumers accept such technology, 3) the implications of accepting that technology on perceived independence and isolation. A mixed method approach is undertaken to introduce ageing consumers to Google Home, to firstly demonstrate and highlight selected functional benefits associated with safety, connection with others and community, and entertainment; secondly determine ageing consumer attitudes toward that; and thirdly to test trial and adoption. Results will provide much needed insights into how emerging but relatively commonplace technology can be better integrated into ageing consumer groups to potentially enhance wellbeing, increase independence and reduce isolation.

Conceptual Model

The technology acceptance model from Davis (1989) will be used in this study. However, in the context of aged consumers, researchers have suggested privacy and security are important concepts to consider (McCloskey, 2006; Yusif et al., 2016). To allow for this, other studies have included constructs such as "perceived risk" or "perceived trust" (Chen & Mort, 2007). In this study, perceived risk is additionally included. The proposed conceptual model is shown below.

Figure 1 – Conceptual Model

Methodology

Google Home Mini devices will be used for all phases in this study, and four limited functions will be offered (Renaud & Van Biljon, 2008): turn on the light, play music, listen to the news and call family.

In phase 1, a focus group context will be used to introduce the PVA technology to ageing consumers to assess their perceptions (phenomenological description – individual response followed by group discussion) and likelihood of technology acceptance (TAM); and secondly, the four selected functions will be demonstrated to assess participant perceptions (phenomenological description – group discussion) and likelihood to accept (TAM).

Following phase 1, selected participants will be given the option to use the device for 1 week

in exchange for a small charge (a demonstration of acceptance). If they decide they would like to have the device, this will be considered acceptance behaviour. After 1 week, the consumers phenomenological experience will be explores and the TAM applied again. Lastly, consumers will be offered the opportunity to retain the technology in their home at cost (including service charge). This is considered actual adoption.

The data collection for both phases is planned for April 2020, and will be conducted in a retirement village (RV) context in Perth, Western Australia. Retirement villages are comprised of consumers ranging in age from 60yrs to 95yrs with varying levels of capability and therefore needs. The study will be promoted within the RV to all residents and those attending will be asked about their intention in attending, general likelihood to adopt technology, knowledge of the PVA technology, and current usage. All individual responses will be tracked during the data collection process to match responses during all phases but then deidentified.

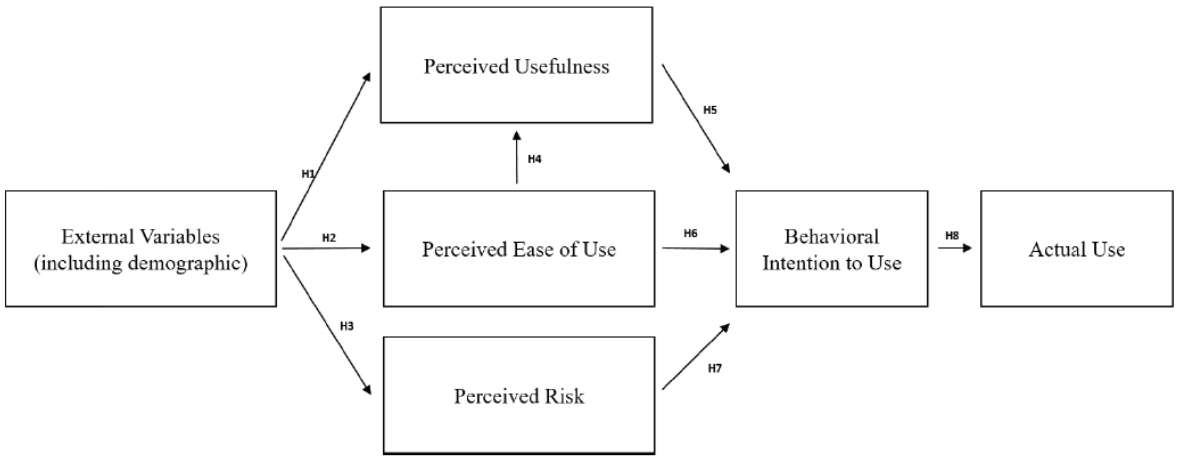
The phenomenological descriptions provide depth of insight into the experience of ageing consumers and how they consider this technology might fit with what they currently do and the perceived benefits. It allows extended understanding of the components of the TAM model without specifically restricting the consumers to talking about those components only. In this way, the study tests the applicability and nuance of the TAM amongst older consumers and allows exploration of the technology's effect on perceived independence and isolation amongst ageing consumers.

Implications for practice

The research offers practitioners, aged care service providers and marketers a better understanding of how aged consumers might view emerging technologies, and the impact on perceived independence and isolation. The study also enables a better understanding of how technology such as PVAs could be used to improve perceived independence, reduce perceived isolation and improve quality of life. The research will also provide insights for PVA app developers who are exploring ways to better service aged consumers. On a theoretical front, the research makes use of the widely known TAM in an ageing consumer context, specifically looking at PVAs, which has not been done previously.

Appendix

Figure 1 – Conceptual Model



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Gamification in the intersection of TSR and social marketing: Towards a Transformative Gamification Framework

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Introduction

We propose that gamification can bring about behaviour change when game immersion creates a 'third place' which is transformational. But how does one create these service systems and how do they affect consumers' well-being? While a number of studies have explored the role of service providers as 'third places' of consumption (Ducheneaut, Moore, & Nickell, 2007; Oldenburg, 1989), this research extends the notion by exploring the role of gamification and game immersion in this. We explore this interaction of third place experiences and gamification by taking a Transformative Services Research (TSR) perspective to not only understand the interrelationship between consumers and gamified services but the impact of these services on consumer well-being (Anderson et al., 2013). The outcome of the paper is a conceptual model explaining the transformation process of gamification.

Amidst different online services, gamification is among the fresh ideas in TSR (Russell-Bennett & Baron, 2015). Although previous studies suggested that online services in general have the potential to be considered as "third places" and affect consumers' well-being (Parkinson, Mulcahy Rory, Schuster, & Taiminen, 2019; Parkinson, Schuster, Mulcahy, & Taiminen Heini, 2017), the findings are

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inconsistent in the case of gamification. There is little research on gamification in the TSR literature (Parkinson et al., 2017), and that which exists is contradictory. For instance, Ducheneaut et al. (2007) suggested that multiplayer games can be considered as “third places” and be categorized among transformational services only if extensive attention is paid to the graphical characteristics of the game world to resemble a real-world setting. In addition, Hammedi, Leclerq, and Van Riel Allard (2017) investigated the transformational potential of gamification in health services and suggested age and disease severity as two salient factors that can determine the transformative nature of gamification.

Altogether, achieving holistic insight about the transformational potential of gamification services entails aggregating the findings from social marketing and TSR literature. Converging TSR and social marketing is highly emphasised to solve complex social problems and achieve a consumer oriented approach in designing transformational services (Russell-Bennett, Fisk Raymond, Rosenbaum Mark, & Zainuddin, 2019). Likewise, Nicholson (2015) emphasised that gamification services should take a user-centric approach and provide meaning for players rather than focusing on operational aspects of the games to be effective in changing behaviours.

The social marketing literature reveals that gamification shares several characteristics with a transformational service. It can facilitate anonymity and non-judgemental user-to-user and user-to-service interactions which can improve well-being through reducing stigma and increasing confidence to disclose (Bakker, Kazantzis, Rickwood, & Rickard, 2016; Parkinson et al., 2019). Moreover, gamification services can be considered transformational since they can tighten the disparities in quality of the service offered in different geographical regions and for underprivileged consumers (Cheek et al., 2014; Rosenbaum et al., 2011). In addition Barab, Gresalfi, and Ingram-Goble (2010) introduced Transformational Play Theory which implies that games can become transformational if they have a strong narrative and are played transformationally.

A recent review of gamification in social marketing also demonstrated that stories are the key to achieving meaningful gamification (Tanouri, Kennedy, & Veer, 2019). Nonetheless, the focus of gamification designers on improving the technology and participatory experience has downplayed the importance of storytelling in gamification services (Morford, Witts, Killingsworth, & Alavosius, 2014; Phillips, 2015). As such, this paper aims to propose a conceptual transformative gamification framework built upon storytelling (see figure 1).

Conceptual Model (FIGURE 1)

Transformation is the result of merging the perspectives of the storyteller and the story receiver and takes place after the story receiver engages in reflection, imagination and, exploring different possibilities (Alterio, 2011). Likewise, reflection is suggested as the main mechanism for changing behaviour in the latest evidence-based theories used in social marketing and psychology (Clark, 2012; Merry et al., 2012). As such, it can be inferred that for a gamification service to be transformational, it needs to create a so called “third place” in which reflection, imagination and exploration are encouraged. Taking a close look to the definition of “third places”, it can be inferred that the experience of being in “third places” comprises engaging with the surface layer of the “third place” (e.g. the restaurant atmosphere), and the content of the “third place” (e.g. social interactions) (Oldenburg, 1989). Therefore, gamification services should incorporate the surface layer and content of the “third place” to be considered transformational.

Transportation is an important mechanism in storytelling literature that can facilitate imagination, in-game interaction, and enhance immersion (Green & Brock, 2000). Transportation is defined as being taken from reality to a fantasy world (Green & Clark, 2013). The consequences of

transportation are persuasion, change in attitudes and beliefs, and affective responses (van Laer, de Ruyter, Visconti, & Wetzels, 2013). According to Ducheneaut et al. (2007) sociability and emotional experiences are the most important attributes of "third places"; likewise, it is believed that transportation can lead to higher levels of perceived realism and closeness, and has direct influence on empathy and social interactions (Kinnebrock & Bilandzic, 2011). Thereby, it can be postulated that the content layer of the "third places" can be attained by providing a transformative game story.

On the other hand, Ducheneaut et al. (2007) showed that individuals who spent more time in games and were more experienced and engaged, were more likely to consider games as "third places". By framing those factors as hedonic factors, it can be postulated that perceived hedonic value is the other contributor to perception of "third places" in gamification services. Holbrook (1994) proposed *play* and *aesthetics* as two dimensions of hedonic value. With regard to the play dimension, several gamification studies have shown a positive association between flow state (Csikszentmihalyi, Abuhamdeh, & Nakamura, 2014) and play (Chang, 2013). Therefore, unlike previous studies that proposed aesthetics (i.e. graphical features) as the main mechanism that can turn gamification services to "third places", we propose more dimensions to contribute to the perception of gamification as "third places". In addition, it is also believed that delivery method of online services can affect perceived realism and user experience. Recent studies have suggested that transmedia environments when coupled with gamification, can consolidate both the participatory experience and the transformation process (Jenkins, 2006; Moloney, 2011).

In conclusion, gamification services can be transformational through creating a "third place" and encouraging reflection. That the "third place" has two layers (i.e. the surface and the content) which can be operationalized by a transportive story, flow and an appropriate graphical experience in a transmedia gameplay. Thus, we propose Figure 1 as the transformative gamification framework.

Contribution to theory and practice

This research has several contributions to social marketing, TSR, and gamification. First, it is the first study that introduces a practical framework for design and implementation of transformative gamification services. Second, this is the first study that suggests a model for creating gamified "third places". Thirdly, this framework is a guideline to design user-centric gamification interventions to improve well-being and can be adopted to different scopes and subjects.

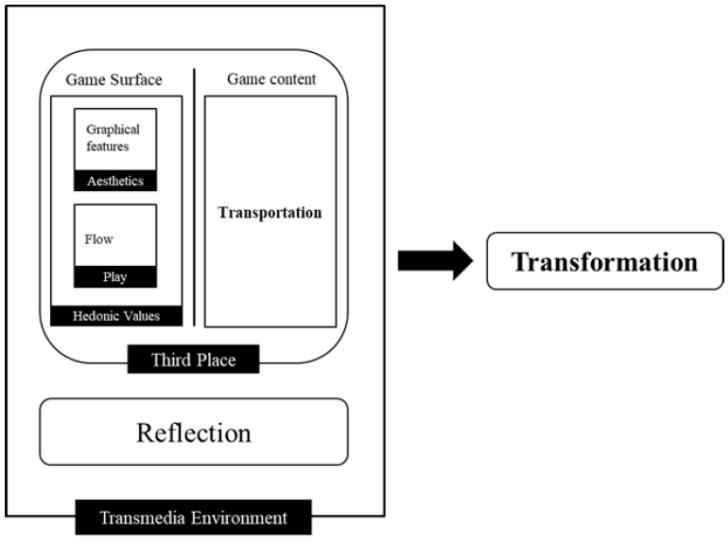

Figure 1: Transformative gamification framework

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Developing a resource-advantage theory for social change: Insights from *The National Day of Action Against Bullying and Violence*

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Introduction

Research about bullying has established an extensive evidence base on the risk and protective factors that operate in school environments to explain the nature, behaviours and experiences of childhood bullying. Recently, researchers have argued that the complexity of these individual-level findings on bullying in schools could be more coherently understood through a sociocultural lens as it guides understanding of bullying based on peoples' engagement in various sociocultural contexts - family, school, social/community groups - whilst also treating those contexts as dynamic and contested spaces (Maunder & Crafter, 2018; de Abreu, 2000). In this paper, we incorporate ecological theorising to discuss the impact of a school-based anti-bullying campaign involving multiple actors (e.g., key stakeholders including children, parents, teachers and the school community); and draw from campaign insights to demonstrate the significance of meso-level change agents in shaping and sustaining social change toward school bullying. Our contribution focuses on providing further theoretical insight into social change at the meso and macro level of the ecological system, and the presentation of a resource-centered perspective that demonstrates their rich value-creative competencies.

Background: *The social problem of bullying in schools*

Estimates of bullying prevalence in Australian schools is reported to impact around 20% of young adults under the age of 17 (Spears et al. 2014). Bullying actions involve an individual or a group of people misusing perceived social power over one or multiple victims, who are perceivably unable to prevent the bullying perpetrated against them (Guerra, Williams & Sadek 2011). Bullying behaviour commonly involves verbal and covert behaviours (Rigby & Johnson, 2016). Online bullying

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behaviours (or cyber bullying), including derogatory comments, exclusion, identity fraud or the repeated sharing and forwarding of an embarrassing photo, are likewise prevalent in students self-reported experiences of bullying in schools (Rigby & Johnson, 2016). The behaviours and norms that shape bullying are known to form at an early developmental stage, through learned social experiences and interactions during early childhood (Hong & Espelage 2012; Rigby 2003).
Existing empirical precedent has ascertained that bullying possesses substantial economic and social liability to Australian society, including multiple high-profile cases involving youth suicide (Spears et al. 2017; Rigby 2001). Continuation of bullying behaviours from school into workplace contexts is estimated to cost the Australian economy between six to 13 billion AUD each year in opportunity and hidden costs (Hoel et al. 2011). The significance of the problem has warranted the development of government legislation and policy, and the launch of *The National Day of Action Against Bullying and Violence* (NDA) which has run from 2010 - 2020. Specifically, the NDA is a national campaign intended to support and encourage schools to work with their school communities to find practical and lasting solutions for bullying and violence prevention. The campaign's primary focus is on engaging schools in meaningful local activities with a positive, educative and practical approach. This assists schools to engage the broader community in creating lasting change related to bullying prevention. As of 2019, over 60% of all Australian schools participate in the campaign (NDA 2020; Prime Minister Of Australia 2019).

The NDA translates policy frameworks into campaign activities that facilitate pro-social behaviour change toward bullying prevention. Multiple campaign resources have been designed for different target audiences – students, teachers, parents, the community – to engage and promotion understanding and behaviour change around bullying. Key campaign resources and respective functionalities include: wristbands (pro-social behavioural stimulus and social signaling); ribbons (campaign values affiliation/virtue signaling); activities (curriculum templates, social cognition development) and information (pocket information cards, static behaviour stimulus). For the purpose of this study, we undertook to closely examine the target audiences reported feedback on the NDA interventions to demonstrate how different campaign materials leverage operand (those on which an act or operation is performed) and operant (those that act on other resources) resources to build knowledge, skills and capabilities that can prevent bullying (Madhavaram & Hunt, 2007). Through our resource-based analysis, we further aim to demonstrate the significance of meso and macro system levels in creating social contexts that support behaviour change at the micro, individual level in school communities.

Knowledge and Resources at the Midstream

Empirical discussion of the midstream, or meso-level theorising, is relatively scarce in the social marketing literature (Luca et al., 2016). Midstream social marketing distinguishes interventions focused on the community (meso) level, and draws distinction from the prevailing downstream (micro) focused behaviour change analysis in social marketing. Whilst the individual, micro-behaviours of bullying are central to the problem of bullying in schools, in this study we take a different focus to more closely explore the meso and macro levels of influence to be able to explain how resources can be deployed to effect system level change. Therefore, in this study we are concerned with demonstrating the resources – knowledge, skills and capabilities – within the immediate social environment of the target populations of children, which extends to their personal networks of parents, other family members and friends, and local institutions such as education services through schools. We are specifically interested in examining the role of teachers as agents to facilitate change. We thus take a novel approach to examining a school-based campaign, to look beyond an evaluation that reports the simple use and assessment of campaign materials, to examining the intangible, dynamic resource-based view of the NDA.

Applying a resource-based view, thus frames our analysis of campaign resources to explore for four types of resources. These are *operand resources* (includes physical materials distributed throughout the campaign in schools); *operant resources* (including human resources – the skills and capabilities of employees in the education system); *informational resources* (e.g., knowledge about children's experiences); and *relational resources* (relationships with key campaign actors, such as students) (Hunt, 2004). The relational foundation to both understanding bullying behaviour and the resource-based focus of this study are a further interesting aspect we undertake to theorize in the presentation of our findings. The conceptualization of *relational resources* are significant to forming common understandings of bullying behaviours, and to understanding how the NDA resources intervene to create change based on the interactions between different types of resources – human and material – to achieve concrete social change amongst campaign actors.

Method

This research initiative utilized existing campaign telemetry and feedback data from the National Day of Action Against Bullying and Violence (NDA) campaign (2016 to 2020). Utilizing existing social campaign data allowed for examination of concrete campaign interactions between separate stakeholder groups; to inform new theoretical insights into a resources-based view of social change (Freeman et al. 2015). The data analyzed in this study consists of post-campaign performance data extracted from existing consumer research following the 2019 NDA campaign. We used the open-ended responses, containing the perceived observable behaviours of target consumers following interaction with the 2019 NDA. Within the survey data, these target consumers were segmented into parents, students and teachers respectively. Observations of these perceived post-campaign behaviour changes were provided by NDA school coordinators. School coordinators were nominated teachers and/or school principals who administrated NDA activities in their respective schools.

NDA school coordinators were recruited for the annual survey via email, through a survey link broadcasted in the campaign's Vision6 school coordinator email communication registry. This invitation-only link invited NDA school coordinators to complete a 32-item a survey hosted on the SurveyManager online survey platform. A sample of n=297 school coordinators from all Australian states and territories were surveyed from a total population of N=12 309 (2.41% total sample population). School coordinators represent primary and secondary schools; from state, independent and Catholic education jurisdictions. The survey contained 25 quantitative and 7 qualitative items. 22 questions were classified as top-level and visible to all respondents; 10 were visible through survey response logic activation. In the following analysis we present analysis of the open-ended responses that were extracted from the survey results from the following survey measures:

Item: Q 18: Within your school, what were the observable impacts of the NDA on attitudes and behaviours of (*Select all that apply*):	Respondents
18.1 Parents	60
18.2 Students	150
18.3 Staff	109
18.4 School climate	89

Table 1: Measures and responses utilized from 2019 NDA Annual Survey

Leximancer text mining software was utilized to manage the extracted data, and objectively explore the campaign feedback and comments. Leximancer is a QDAS program designed to produced insights from grounded theory through learned and unlearned algorithmic text mining processes (Bazeley 2013). While Leximancer software also provides statistical counts and information to inform a quantitative analysis approach, in our study the software assisted us in a qualitative, interpretive

inquiry to identify related themes and concepts that guide our interpretation of operand and operant resources based on how campaign materials impacted the key audiences of – students, parents, teachers, and the community.

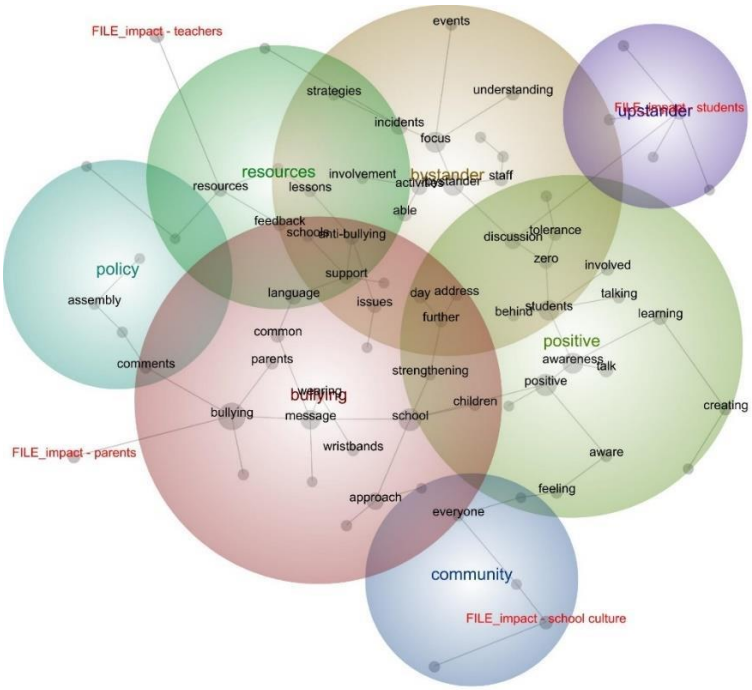

Figure 1: Leximancer Concept map

Discussion

Seven key themes, informed from the feedback and comments of key stakeholders, are presented Figure 1. Based on our analysis, a *meso-resource-advantage theory* for social change is outlined. The following discussion is selective, rather than comprehensive in explaining the key resources, as page restrictions limits discussion to summative insights and the outline key implications for addressing bullying in schools.

First, as would be expected, the feedback and comments focus on bullying. The focus ***bullying theme*** reveals the value created from operand resource such as **wristbands** that demonstrate "Students and staff wearing the wristbands as a symbol of standing against bullying" (NDA comments). The bullying theme further reveals a range of more operant resources – where talk created through campaign **messages** engaged **parents** and create a positive environment to distribute anti-bullying strategies. For example, in reporting the impact on **parents** and their role in the strategy, it was noted: "the 'Stop/Walk/Talk' strategy as a whole school approach" … "have common language to use" and "parents have noted that the children are able to explain this to them clearly" (NDA comments). Critically, helpful environments are being shaped – "the school is active in this area as it is so visible" (NDA comments). Thus the strategy builds relational resources created through connections – students, parents, teachers – in the school environment. The outcome is a reciprocal impact on students and building capabilities such as "being an **upstander**".
Key capabilities are achieved through the campaign, which is illustrated by the themes ***upstander*** and ***bystander***. The campaign resources are reported to give students skills in "being an upstander" and "an active bystander … understanding what it is to be a bystander and how they can become

part of the problem" (NDA comments). Specifically, teachers feedback noted "more upstander involvement in the yard" and "new strategies to deal with various situations". Feedback defined the theme ***positive***, which explained the positive talk and learning created through NDA activities and resources. The outcome being "a more positive change in [students] interactions" and "a zero tolerance understanding" "to address bullying issues" (NDA comments). Intersecting these theme of ***bullying*** and ***positive*** talk, is the school **community**. This theme, highlights the positive change to school culture and reports note that "students get passionate" … "work harmoniously" and offer "support for each other".

Macro-structural factors, such as ***policy*** and ***resources*** are the social infrastructure around which new behaviours are being developed and reinforced. The **school** is the environment through which educational services (i.e, **lessons**, **resources**) have educated and trained students, teachers and parents about anti-bullying strategies. Specifically, key excerpts include "lesson plans and resources create common language" and "motivate ... talk about this topic". Talk also facilitates "understanding policy" and "using restorative practices in classrooms" (NDA comments).

Implications for Theory & Practice

Meso-level theorization is limited in the social marketing literature. This papers draws on stakeholder feedback and experiences to initiate theorization of influential, relational factors that shape the value derived by stakeholders who engage with a range of operant and operant resources. Further analysis is needed to strengthen our theorization, as we seek to explore more closely if there are any hierarchical arrangement to resources deployed for social change. As Madhavaram and Hunt (2008) have demonstrated in the commercial marketing context, we believe the interconnected – relational operant resources – are key to creating and sustaining change. Existing literature has questioned the measurable longitudinal impact of annual day-style campaigns (French & Gordon 2019). Further inquiry with the obtained NDA campaign data could provide an applied basis to challenge the notion of 'just another action day' among scholars and uninformed campaign actors. Our theorization also has implication for social marketing practice. Specifically, investing in relational resources or more practically, investing in building collaborative communities is central to achieving social change goals. Whilst collaborators are invited into schools as participants to creating social change around bullying, this might not be case for many other social problems. For other social problems, additional risks or problems could evolve from a collaborative value model. However, further research is needed to investigate value creation and resource implications in these other social change contexts.

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An empirical study on music events as a way of promoting dialogue with families on organ donation

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Abstract

The rate of declaration of intent to donate organs is extremely low at 12.7% in Japan , in spite of an explicit consent system being adopted. In this system, the donation of organs is determined based on the individual's consent. Therefore, more Japanese people need to be made aware of organ donation and be able to talk to their families about it. An effective method of promoting this is holding music events in populated places. The purpose of this study is to examine the elements of music events which can promote behavioural changes to promote organ donation and dialogue with families.

In order to attract people, a music event featuring multiple artists was held on the grand staircase in front of Kyoto Station, which has high foot traffic. The event consisted of several elements: a talk from patients waiting for heart transplant to shed light on their situation, quizzes to help the audience learn, a talk by an artist about prosocial behaviour, a grand chorale, and photos were taken of everyone to increase exposure.

Of the 867 participants in the event, 50 (5.8%) replied to the web questionnaire surveys immediately on the day of the event, all of which were analysed. In addition, 35 out of the 50 people replied to a follow-up web questionnaire survey one month after the event. Although the sample size was very small, the mean value of the extent to which they were willing to participate in organ donation significantly increased from 2.62 before the event to 2.88 after the GPF intervention. In addition, 89% talked to their family about organ donation after the event. This suggests that music events held in areas with high foot traffic that educate, shed light on certain issues, and increase commitment may be effective in promoting interest in organ donation and drive decision-making and dialogue with families.

EMPIRICAL PAPERS

1. Introduction/Background

Every day, we use insurance cards, driver's licenses, and My Number cards (similar to social security cards), but not many Japanese people have noticed that there is a column in these cards to indicate their "intent to donate organs." In Japan, an explicit consent system has been adopted in which the donation of organs is determined based on the individual's consent. Thus, in the absence of clear consent of the person upon their death, the decision to donate is left to the person's surviving family. It is very difficult for grieving families to make decisions in a limited amount of time.

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Therefore, clearly stating intent (YES/NO) for organ donation and informing the family can reduce the mental burden on the remaining family in the event of a person's death. Expressing intent to donate organs is considered a socially desirable behaviour.

In Japan, the rate of declaration of intent to donate organs is extremely low at 12.7%. Therefore, it is necessary to increase the interest of people who have not made a decision for organ donation through events that have been reported to be effective in raising awareness. It has also been reported that "dialogue with family on organ donation" is effective for decision making (Uryuhara, 2016).

The purpose of this study is to examine the elements of events that promote behavioural changes in declaring intent for organ donation and dialogue with the family.

2. Method

2.1. Intervention

On Saturday, October 13, 2018, a music event called "Green Pride Festival - Let's feel Closer to Transplantation Medicine-" (GPF) was held for the general public. The program contents (intervention) for promoting each behaviour change are as follows (Fig. 1). Green is the symbolic colour of transplantation medicine. We chose to hold the GPF at the Kyoto Station Grand Staircase because of the high foot traffic here, especially on holidays.

Following the Stages-of-Change model (Prochaska and Veliver, 1997), we confirmed five stages of declaring intent for organ donation in previous studies: stage 1 (not interested), stage 2 (interested and considering making a decision), stage 3 (intension to engage n dontion), stage 4 (declared intent), and stage 5 (shared the decision with one's family). This time, we suggested four stages of stage 1 (not interested), stage 2 (interested and considering about organ donation), stage 3 (made a decision regarding organ donatio), and stage 4 (declared intent).

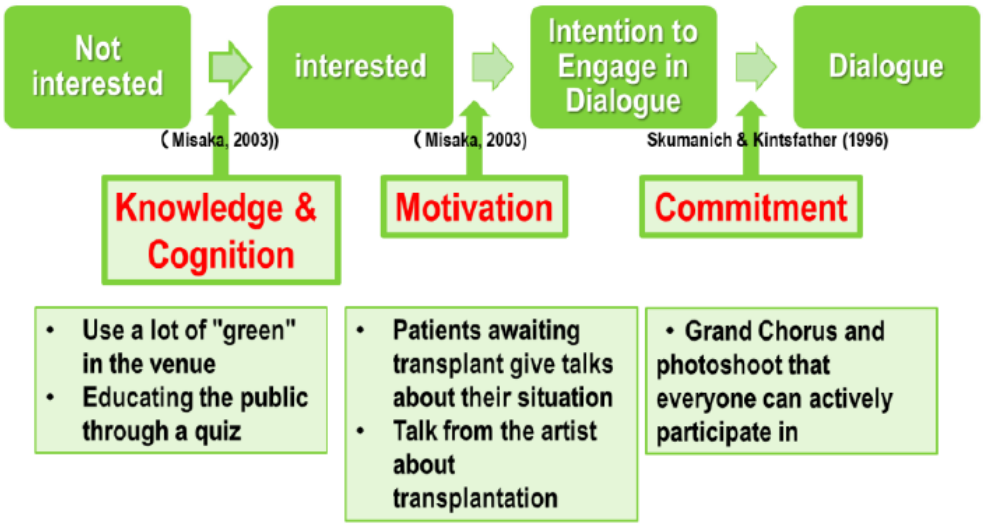

Figure 1. Program Contents to Promote Behavioural Change

The first stage focused on cognitive elements and education. In order to promote awareness for transplantation medicine and organ donation, we used green, the colour of transplantation medicine, in the distributed pamphlets, hall decoration, and on the staff t-shirt worn during the

event. This was done based on the findings of a report by Morohara (1995) that states that seeing certain colours gives almost the same impression as looking at a design.

In addition, we educated the public on transplantation medicine and intent of organ donation through a quiz conducted by university students. This is because quizzes have the effect of motivating learners to learn and encourage them to continue learning (Sato, 2015). The items included in the quiz were narrowed down to four questions with a low correct answer rate in past surveys.

Next, in order to motivate and encourage the intention to donate and promote dialogue with the family, we asked the participating artists to talk about their intention for organ donation to the participants. This was done based on the report of Makino (2007), which shows that there is a positive correlation between the approval of products by talented people and public interest in products being advertised. A talk was also given by patients waiting for heart transplantation. Social norms are related to the motivation of behavior (Misaka, 2003), and listening to people about certain topics serves as a good opportunity to understand these issues (Tokunaga et al., 2011). By listening to these talks, the social norms of the visitors were raised, and they were more motivated to talk to their families.

At the last stage which focuses on promoting dialogue (action), all visitors sang along to the theme song of transplantation medicine “Life is Colorful” with the performing artists and staff and took photos along the stairs wearing the colour green. Skumanich and Kintsfather (1996) report that "degree of engagement" is an important factor in taking action.

2.2. Survey items / methods and analysis methods

In order to confirm whether the aforementioned intervention contributed to the change in intent for organ donation and encouraged dialogues about organ donation, a quantitative survey was conducted using a web questionnaire before, immediately after, and about one month after the GPF.

The pre- and post-event survey items consisted of the subject's personal characteristics (gender and age), stage of intent to donate, presence or absence of dialogue with family members regarding donation, factors affecting their intent to initiate in dialogues (each program in Fes), knowledge, etc. The survey could be accessed via a QR code shown in the program, which led to a web questionnaire. An incentive was offered to increase the number of respondents to the questionnaire. The follow-up survey items consisted of the subject's personal characteristics (gender, age), the presence or absence of dialogue with family, the stage of intent to donate, the content of their dialogue (each program in Fes), and knowledge. The results were anonymized to keep in line with ethical considerations.

3. Results/Findings

Of the 867 participants in GPF, 50 (5.8%) replied to web questionnaire surveys immediately after the event, and these were analysed. In addition, 35 out of the 50 people replied to a follow-up web questionnaire survey 2 weeks after the event. All responses to the surveys were analysed.

3.1. Changes in the stage of declaration behaviour for organ donation

Changes in the stage of declaration behaviour for organ donation before and after intervention are shown in Table 1.

Table 1 Changes in the stage of declaration behaviour for organ donation

stage	before	after
1 (not interested)	3 (6%)	1 (2%)
2 (interested and considering making a decision)	31 (62%)	24 (48%)
3 (made a decision regarding organ donation; Y/N, but has not yet declared intent)	3 (6%)	12 (24%)
4 (declared intent)	8 (16%)	6 (12%)
5 (shared the decision with one's family)	5 (10%)	7 (14%)

Each of the five stages were scored, and the averages before and after the intervention were compared. The mean before GPF intervention was 2.62, and the mean after the intervention was 2.88. The two-sided t-test on the difference between the mean values before and after the intervention calculated through SPSS (IBM Statistics ver25) showed that the difference was statistically significant ($p < 0.001$).

3.2. Factors that influence dialogue intent

People who answered "I decided to talk to my family" after the intervention were also asked about which factor made them talk to their family. The results were as follows: 33 answered that the quiz motivated them, 33 answered that they were motivated by the talks given by the artists, 34 answered that they were motivated by the talk given by patients awaiting heart transplantation, 34 were motivated when they took part in the grand chorus of the transplant theme song, and 32 people were motivated by the photoshoot.

3.3. Dialogue behaviour

Of the 35 responses collected during the follow-up survey, 31 (89%) had engaged in dialogue with their families about organ donation.

Discussion and conclusion

A limitation of this research was that in the venue people were free to enter or exit the venue as they pleased, resulting in a low response rate to the questionnaire. In the future, it is necessary to develop a measurement method to ensure the collection of the required number of samples, even in such an environment.

Although the sample size was very small, the mean value of the stage of declaration behaviour for organ donation before and after GPF intervention significantly increased. In addition, 89% of participants talked to their family about organ donation after the event. This suggests that music events consisting of hypothesis-based programs in places with high foot traffic may be effective in promoting people's interest in organ donation and drive decision-making.

Regarding the parts of the program that positively affected their intent to donate organs and engage in dialogue, the quiz, talks from the artists, talk from the patients awaiting organ donation, and singing and taking pictures together all had the same frequency of responses. We were not able to properly evaluate each factor because we asked for answers after the completion of the event. However, the results suggest that a music event that includes these factors was successful in increasing interest and encourage dialogue with family members and decision-making.

Stepwise Process to Map Theory to a Social Marketing Program

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Enhancing Sport with Immersive Alcohol Brand Experiences: Implications for Social Marketers

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Introduction/Background

Sport offers a powerful platform for the marketing of alcohol brands. Increasingly alcohol marketers are extending beyond traditional sponsorship-related advertising and stadium signage to embrace more sophisticated and interactive approaches designed to drive consumer engagement. This research explores the emerging phenomenon of immersive or experiential alcohol marketing through sport. These strategies seek to engage the sport consumer with an experience around the brand using a range of tactics and technologies to stimulate an emotional connection with the brand.

In a marketing context, immersion is the act of being deeply focused, engrossed and invested in a brand interaction (Hollebeek, 2011). Immersive marketing strategies through sport capitalize on the psychological concept of 'flow' (Csikszentmihalyi, 1997) which is the positive mental state of being completely absorbed in an activity at a certain point of time and deriving enjoyment from that activity. While previous research has examined the prevalence and impact of traditional alcohol sponsorship and advertising in sport (e.g., Carr et al., 2016; Kelly et al., 2015), and research on the use of social media by alcohol sponsors in sport is increasing (e.g., Carah et al., 2018; Westberg et al.,

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[2] Constantino is an Associate Professor in Marketing at RMIT University whose research interests sit at the crossroads of contemporary marketing communication and the business of (and through) sport. Constantino has published extensively in the marketing and branding domains, and is Editor-in-Chief of an international journal, Sport, Business & Management. He also has a long history of advocacy for the responsible promotion of alcohol through an involvement with the Alcohol and Drug Foundation and their Community Alcohol Action Network.

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2018), limited knowledge exists regarding the potential impact of newer experiential approaches used to promote alcohol brands through sport. This is an important deficiency in knowledge given that there is an increasing commercial imperative for sporting bodies to deliver enhanced entertainment. Such pressures, in turn, foster circumstances where sporting bodies freely allow sponsors to become key contributors to the atmosphere surrounding a sporting event. Indeed, alcohol brands seek to integrate immersive activities into the overall sport event with the aim of building a symbiotic brand-sport relationship, thus capitalizing on, and contributing to, the excitement and atmosphere of sporting events (Gee et al., 2016).

The aim of this research is to explore consumer awareness of, and attitudes toward immersive, experiential alcohol marketing in sport and to identify the potential implications of these activities not only for sport consumers but also community wellbeing more broadly.

Method

Thirty six semi-structured in-depth interviews were conducted with adult sport consumers in Australia from various age groups, 18-25 (10), 26-49 (13) and 50+ (13), with a balance of males and females, to gain deep insight into their awareness of, and attitudes toward, a number of immersive alcohol marketing activities and to probe for any concerns or issues associated with this form of marketing. Examples of these activities will be provided in the presentation. An iterative process was used throughout the data collection, allowing the research team to meet regularly, gain updates and to modify the discussion guide to sharpen insights and pursue new avenues of inquiry. Transcripts were examined using thematic analysis to identify patterned meanings emerging from the data that would provide insight into the research question. The researchers followed a rigorous six stage process of data familiarization, data coding, and theme development and revision to identify key themes (Braun and Clarke, 2013).

Results/Findings

Given the limitations of space, only some of the findings will be discussed, specifically those relating to the appeal of immersive alcohol marketing and conversely the concerns expressed about this emerging form of marketing. While participants were quite critical of traditional alcohol marketing, such as television advertisements during sport or stadium signage, and many acknowledged the hypocrisy inherent in the alcohol/sport nexus, the response to immersive and experiential marketing activities delivered by alcohol brands in the sport context was more favourable.

Four key themes were identified in relation to consumer attitudes toward these activities and these themes related to the perceived value generated by alcohol brands for the sport consumer: (a) augmenting the sport experience; (b) creating connections; (c) facilitating fandom; and (d) providing social capital. Immersive marketing activities were seen by some as contributing to the sport experience by enhancing the enjoyment of the event and by providing something novel. Some of these activities also provided a welcome distraction while waiting for the game to begin or during game breaks. Certain types of activities also helped to create connections between spectators participating in these experiences and added to a sense of camaraderie. Further, activities closely linked to the sport itself were a means for highly identified fans to express their commitment to the team. Finally, these brand experiences were seen to provide ready content for eager participants to upload to their social networks, enhancing their self-esteem through the admiration of their followers. Illustrative quotes are provided in Table 1.

While initial reactions to these novel forms of alcohol marketing were primarily positive, deeper discussion of these activities led to some concerns being expressed. In examining this data, three key

themes were identified: (a) the potential appeal to children; (b) the perceived use of covert tactics; and, (c) the impact on consumption. The most frequently articulated concern was that the nature of many of these marketing activities involved an element of 'brand play' which would be attractive to children. Alcohol brand exposure to underage drinkers could also be amplified through the depiction of these brands and activities through social media. Further, the covert nature of this form of promotion, compared to traditional advertising, and the potential to extend brand reach through spectators' social media networks was noted. Finally, brand-related activities that appeared to encourage consumption, as opposed to simply generating brand awareness, were regarded less favourably. Illustrative quotes are in Table 2.

Discussion and conclusion

These findings contribute to the limited literature on an evolving form of alcohol marketing by identifying the ways in which these activities create a type of interaction that provides value for sport consumers and in doing so, more effectively engages with them compared to more traditional sponsorship approaches. It was noted that for some participants, these benefits imbued a feeling of reciprocity. That is, because consumers receive value from the brand, they may be more likely to reciprocate in some way, such as through product trial or brand advocacy. Newer technologies used by alcohol brands to facilitate immersive marketing, such as augmented and virtual reality, can be particularly effective in reaching young consumers (Van den Bergh, 2018). Further, this more subtle method of brand promotion can lower consumers' psychological defenses to persuasion (Wei et al., 2008) and can not only enhance brand affinity (e.g., Sahin et al., 2011) but also sales (Toepper, 2014). As such, these findings have implications for social marketers seeking to address potential harms arising from this type of alcohol marketing. Strategies that only address individual behaviour are unlikely to be effective without considering the broader sport ecosystem, including sponsors, the increasingly commercially-focused sport organizations, and government funding bodies and regulatory agencies. Adopting a holistic systems approach is needed to tackle the complexity of the historic cultural embeddedness of alcohol in sport as well as the increasing degree to which alcohol is becoming further embedded in the sport experience through newer experiential and immersive marketing activities.

Table 1: Perceived value from immersive and experiential alcohol marketing activities in sport – illustrative quotes

Augmenting the sport experience	*Even though I love watching sport and that is supposed to be the main experience, all those added extras make it almost from a game to an event...or an experience. (Melanie, 26-49)*
Creating connections	*A moment in a game and all of a sudden you see [Bud Light] glasses lighting up, basically. If you can get a whole stadium doing that, it's a fantastic moment. You see the event happening on the pitch, but you're also high-fiving the next person, then your glasses are lighting up. (Peter, 18-25)*
Facilitating fandom	*The way that it's kind of... it [Budweiser virtual face-painting app] uses the face paint. You can take a picture without actually having to paint your face. It kind of makes it easier to show your support for your team (Henry, 18-25)*
Providing social capital	*For some reason we're obsessed with experiences because now you can share it on social media and everything, so now I've gone from just sharing me having a drink to me with this flashy cup that lights up now, and get a lot better exposure on social media as well (Michael, 18-25)*

Table 2: Concerns relating to immersive alcohol marketing in sport – illustrative quotes

The potential appeal to children	*If you're an adult fan spectator, I think it's pretty cool, and as a parent, I kind of… again, I think there's a bit of a danger if the kids see them and be like, "Well, I want the Budweiser cup." And I don't want my daughter to want a Budweiser cup! (Liz, 26-49)* *There can be no doubt when these companies came up with these ideas that they were thinking about how they could surreptitiously promote their products to underagers. (Greg, 26-49)*
Perceived use of covert tactics	*Oh, I think it's fairly exploitative on the part of the companies. If that makes sense. I think they're using the fan's loyalty and their willingness just to share the social experience as a mechanism to share the brand. (Roger, 50+)* *…that [Bud Light face painting app in the NFL] to me is the sneakiest of them all, because what you're saying is, "We've created an app where you can have your face painted in your team's colours. The only way you can share that is there's this Bud Light [logo]in the corner always." (Rachel, 26-49)*
Impact on consumption	*I think people would be... even if they weren't going to drink at that game, they would drink to get one of the cups, to be part of it, so that everyone could have one you know… The fear of missing out, of being excluded, not really being a team player would come into effect... you know it is going to, I think, push people more to drink. (Paula, 50+)*

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Towards an equal gender distribution in the household: System social marketing approach

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Introduction/Background

The UN have identified the gendered division of labour as a global concern, allocating a specific Sustainable Development Goal (SDG) to the issue (i.e. SDG 5) (UN, 2016). Specifically, women are reported to spend three times more hours than men in unpaid domestic labour (UN, 2019). The struggle of balancing work and family drives women to take time off work, work less hours or put their careers on hold till children are older, while men remain employed full-time until retirement (Cooke, 2011). An equal gender distribution of domestic and child-rearing responsibilities not only enrich women's careers (Cooke, 2011) but also enable a stronger bond between fathers and children (Tamm, 2019) benefiting both genders alike. To achieve this equality however, change is needed on multiple levels including the way men are perceived in the family, in their workplace, and a change at the government level in the type of policy support for fathers and how to execute it.

One policy that plays a crucial role in fathers' contribution to child rearing responsibilities is parental leave policies. Parental leave is job protected leave offered to working parents by the government or one's employer to enable them to take time off work following the birth of a child while maintaining their job and at least partial income (Heymann et al., 2017). Due to persisting parenting related gender norms combined with the gender pay gap, parental leave is prominently taken by mothers

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of fairness, quality of life and environmental sustainability for the stakeholders involved. I am currently researching issues of gender in the uptake of institutional supports for parents.

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(Lundquist, Misra, apos, & Meara, 2012). The low uptake of parental leave by fathers increases the gendered division, with mothers spending more time in childrearing and domestic activities. This complex issue involves social, economic, and historical factors, making it difficult for contemporary societies to address by means of individualistic social marketing approaches (Truong, Saunders, & Dong, 2019). To find a solution, the UN suggests the need for a systematic approach including governments, policies, infrastructure and individuals (UN, 2019). Hence, a systems social marketing (SSM) approach can be effective in tackling such complex issues (Domegan et al., 2016). SSM is able to deal with the issue of low parental leave uptake by fathers, since it considers the need for change at the micro level (individuals), the meso level (organisations), and the macro level (policy makers) (Levy & Zaltman, 1975; Truong et al., 2019).

Macro Level

Policies have the ability to reduce gender division and support the equal distribution of caring responsibilities between mothers and fathers. Father's quota policy in Denmark and Finland for example have resulted in the closest amount of time spent caring for children between mother and fathers. The policy aims to encourage fathers to be involved in childcare by reserving a part of parental leave periods that must be taken by fathers (Craig et al., 2019; Craig & Mullan, 2010). Hence, at the government level, we recommend the implementation of a father's quota, as this has been a successful lever in multiple policy domains.

Meso Level

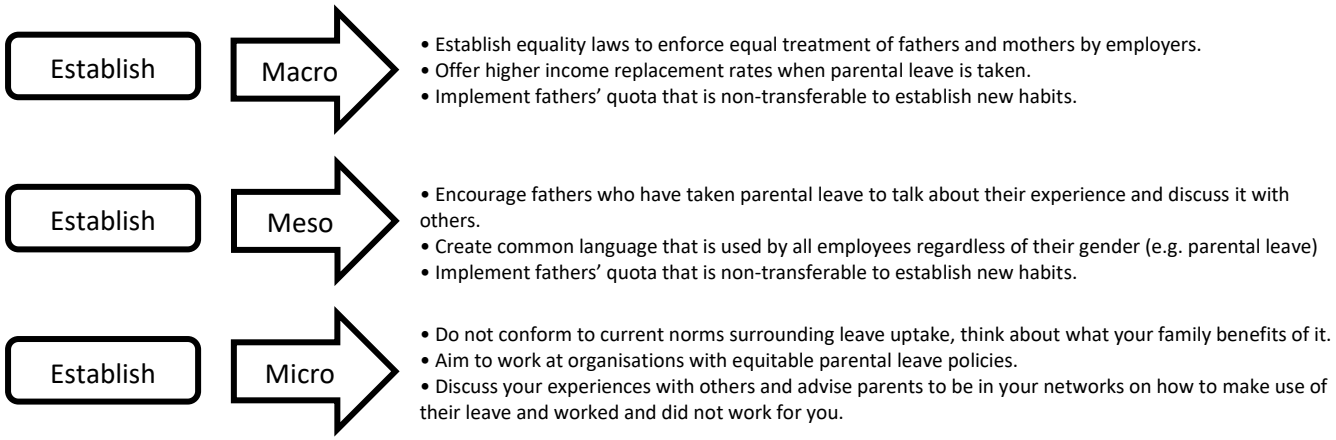
Although parental leave policies are in place to ensure fathers are able to take some time off work when their children are born, the uptake is still very limited, highlighting a clear gap between policy and practice (Kassinis & Stavrou, 2013). Social norms established by work cultures have associated fathers' taking of parental leave to unproductivity, lack of commitment, and reduced masculinity (Haas & Hwang, 2019). Empirical evidence shows that fathers taking leave is not the norm in organisations, even when policies allow for generous amounts of leave (Goodman et al., 2019). At the meso level, an SSM must focus on training managers, employers, and colleagues to accept fathers' parental leave, to raise employees' awareness of the benefits of parental leave uptake for them and their children, and to normalise leave uptake for fathers (Huff et al., 2017; Kemper & Ballantine, 2017; Truong et al., 2019)

Micro Level

At the micro level, the literature highlights two main factors that affect fathers' parental leave uptake. First, the education levels of fathers and their partners can influence the uptake of parental leave. Evidence suggest the more educated parents are, the more likely fathers are to take parental leave (Geisler & Kreyenfeld, 2019; Sundstrom & Duvander, 2002). This can be due to the correlation between higher education and liberal attitudes to gender roles, which commit fathers to more childcare and family responsibilities than in less educated families (Geisler & Kreyenfeld, 2019). Second, family's income also influences fathers taking parental leave (Ndzi, 2018). In Australia, fathers get two weeks of paid parental leave at the rate of the national minimum wage (about $740 per week before tax). This may negatively impact the financial situation of new parents, encouraging fathers to reduce the duration of their leave and go back to work early to fulfil the accepted role of breadwinner (Reich, 2011). Hence, education programs along reform to paid leave income may increase fathers' uptake of parental leave, and therefore reduce the gendered division in child rearing and domestic responsibilities.

Conceptual Model/Proposal

There is a need for an approach that reduces the gendered division of by changing social norms, work cultures, and government-level policy. We suggest that social marketing is able to changing behaviours and inform policy when it comes to fathers' parental leave uptake (Bryant et al., 2014). This study proposes the following framework that incorporates macro, meso and micro levels to help policy makers, organisations, and families think about and deal with the influencing factors in fathers' uptake of parental leave.



Implications for theory

While the literature has many examples of SSM applied to issues such as obesity, environmental behaviour, and climate change, it appears that applying SSM framework to the issue of fathers' uptake of parental leave or gender equality more generally is scarce, thus warranting future research into its efficiency and effectiveness.

Implications for practice

Our study recommends a government-mandated father's quota that makes parental leave adequate and accessible for all working parents. Furthermore, awareness campaigns should complement policy to communicate the benefits of fathers involvement in early childcare including forming a stronger bond between fathers and children, creating an equal distribution of caring responsibilities, increasing marriage stability, and enabling career growth for both men and women (Heilman & Caleo, 2018). Finally, organisations should encourage more fathers to take parental leave by targeting line managers first, then colleagues, to ensure that men feel entitled to take parental leave or to adopt flexible working arrangements increasing their work–life harmony. This will enable a change in the organisation's internal workplace cultures to allow for a more inclusive image of parenting and a more nuanced image of the ideal male worker.

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A systematic review of advertising appeals effectiveness

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Introduction/Background

Advertising appeals have long attracted research interest and scholarly attention to ascertain which appeal types are more effective and the evidence base remains contested. An advertising appeal refers to the use of persuasion strategies to attract attention, raise awareness and induce action (Armstrong, 2010). An advertising message can appeal to one's cognition (i.e. rational appeals), emotions (i.e. emotional appeals) or both. Emotional appeals can be classified as positive, negative or coactive based on the valance of emotion employed. Each emotional valence exerts different effects on judgment and therefore affects perceptions and behaviours differently (Lerner & Keltner, 2000).

Studies have investigated appeal effectiveness (e.g. Jordan et al., 2015; Lee, 2018) and meta-analytical reviews have attempted to synthesize results (Hornik, Ofir, & Rachamim, 2016; Jenkin, Madhvani, Signal, & Bowers, 2014; O'Keefe & Jensen, 2009). A review of the evidence base indicates mixed and inconsistent results on appeal effectiveness (Tay, 2011; Witte & Allen, 2000). These studies advance understanding by highlighting the effectiveness and limitation of each appeal type but remain limited in context (e.g. safe driving), media type (e.g. mass media) or to a focus on specific emotional appeals (e.g. fear appeal). To date, systematic or meta-analytic studies have

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overlooked the effectiveness of coactive advertising appeals (Alhabash et al., 2013) and emotions other than fear and humour (Hornik, Ofir, & Rachamim, 2016). In response to these gaps, the current study aims to synthesise studies examining positive versus negatively framed advertising appeal effectiveness. Evidence considered in the present review is context free, not media specific, includes rational as well as emotional studies of different emotional valances (positive, negative and coactive), and extends the range of emotions examined beyond fear and humour, which is heavily investigated in the literature. The following research question guides the present review: which advertising appeal is most effective in changing behaviour? The aims of this systematic review study are twofold. First, to highlight the most effective advertising appeal based on empirical research findings utilising behavioural (e.g. driving speed) or behavioural proxy measures (e.g. intentions to speed). Second, to analyse the quality of published studies in the advertising field using and identify strengths and weaknesses (Effective Public Health Practice Project, 2019).

Method

Following PRISMA protocols (Moher, Liberati, Tetzlaff, & Altman, 2009) this systematic literature review sought to identify studies that compared negative and positive appeals that were published in peer-reviewed journal articles as at August 2019. Due to the heterogeneity of the identified studies in terms of study design, populations and methods a meta-analysis was not possible (Khan, Ter Riet, Glanville, Sowden, & Kleijnen, 2001). Seven databases were searched in August 2019, using the following terms: *emotional appeals or emotion* based advertis* AND appeal* AND advertis* or public short announcement or psa or message or communication or strategy or promot* or campaign or experiment.* In total, 2,384 records were initially identified. The downloaded records were collated using Endnote. After application of the exclusion criteria, a total of 25 articles undertaking a direct comparative evaluation of the effectiveness of positive and negative appeals were identified. Next, backward and forward searching using authors' names, Google Scholar, and reference lists were completed. A further six articles were identified, and a total 31 articles were analysed (see Appendix A).

The following factors were considered for the 31 identified studies: sample size, sample characteristics, data collection methods, data collection time points and guiding theory (if any). Advertising appeals were categorised as follows (a) positive, (b) negative, (c) coactive (d) no difference or (e) mixed. The quality of the included studies was assessed using the Effective Public Health Practice Project (EPHPP) quality assessment tool for quantitative studies (Effective Public Health Practice Project, 2019). The EPHPP tool is suitable for evaluating multiple study designs (Deeks et al., 2003) and has been used to assess the quality of advertising studies in previous reviews (Becker & Midoun, 2016). All studies rated by two researchers and inter-reliability scores exceeded the 80% threshold. Discrepancies were discussed and resolved with all three authors.

Results/Findings

Majority of the included studies (n=28) focused on social advertising (e.g. anti speeding ads) while only three studies examined commercial advertising messages (e.g. insurance ads). Across both commercial and social advertisements, study results indicate that positive advertising appeals are more effective than negative and coactive advertising appeals. It is important to note there is evidence of effectiveness for all appeal types. Thirty-nine percent (n=12) of studies reported positive appeals to be more effective (Eckler & Bolls, 2011) while 26% (n=8) reported negative appeals to have a stronger persuasion effect than positive appeals (e.g. Bleakley et al., 2015; Noble, Pomering, & Johnson, 2014). Over one-third of the included studies (23%; n=7) showed mixed results. Where mixed results were reported the mixed outcomes occurred as a result of a range of factors including

gender (Kemp, Kennett-Hensel, & Kees, 2013), prior attitudes (Jäger & Eisend, 2013), time of assessment after exposure (Lewis, Watson, & White, 2008) and involvement (Yoon & Tinkham, 2013). Four papers (13%) did not find any significant differences in effectiveness between positive and negative appeals (e.g. Passyn & Sujan, 2006). Two papers studied coactive appeal effectiveness compared to single appeals. Their findings suggest coactive appeals are less effective than positive appeals and more effective than negative appeals (Alhabash et al., 2013; Eckler & Bolls, 2011). Only 35% of papers utilised a theoretical framework (n=11; e.g. Lewis et al., 2008) while the rest did not use any theories to guide their experiments (see Appendix A). A quality assessment of the identified papers was conducted using the EPHPP tool (see Appendix A). Of the 31 included studies, 26 were assessed as weak in the global rating, five were assessed as moderate and none were assessed as strong.

Discussion and conclusion

This systematic review sought to examine advertising appeals across contexts (e.g. social and commercial behaviour). This is the first systematic review that examines studies beyond specific emotions, appeal types, contexts or media. Our findings support previous meta-analytic reviews (Hornik et al., 2016; Hornik, Ofir, & Rachamim, 2017) with positive appeals showing a stronger persuasion effect when compared to negative appeals. It is interesting to note that in social change settings, negative appeals are used more than positive appeals (Tay, 2005), yet based on the results, both positive and coactive appeals were reported to be more effective than negative appeals. A potential explanation to this finding is that positive appeals require less cognitive processing, generate a general sense of pleasantness, are more likable and facilitate positive attitudes towards the advertisement. Hence, the advertised behaviour becomes more appealing and taking action more tempting. On the contrary, the more negative an ad is, the less likable it is, and the less likely viewers are to take action (i.e. share on social media). Therefore, coactive emotional appeals are more effective than negative appeals but less effective than positive appeals (Alhabash et al., 2013). This research has contributed to understanding of most effective advertising appeals and extended on previous systematic and meta analytic reviews in the field. Theoretically, this review highlights the limited use of theoretical frameworks in the advertising and communication literature. It is argued that the advertising research have formulated theories with “a high level of generality” which makes them difficult to apply in practice (Cornelissen & Lock, 2002). This study is restricted by the search parameters (e.g. inclusion of peer reviewed English papers only). Hence studies that are out of these parameters were excluded. Grey literature may contribute important information and future studies may benefit from examining these sources. Future research is needed to empirically examine the applicability of theories previously identified and/or formulate theories that can be applied. Finally, this review identified low study quality. A greater focus on study quality is needed. Moving forward valid data collection methods, representative samples and strong study designs (Plant, Reza, & Irwin, 2011) are recommended and frameworks such as EPHPP can be followed in research design. Practically, our study contributes to advertisements and campaign designers by showing the persuasion advantage of positive appeals and highlighting their effectiveness in behaviour change campaigns.

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Appendix - Appendix A. 31 studies included in the analysis.

	Author	Theory	Outcome **(most effective appeal)**	EPHPP Quality Assessment
1	Alhabash et al., 2013	None stated	Positive	Weak
2	Bleakley et al., 2015	None stated	Negative	Weak
3	Faseur & Geuens, 2010	None stated	Mixed results	Weak
4	Hendriks, van den Putte, & de Bruijn, 2014	Theory of Planned Behaviour	Negative	Weak
5	Jäger & Eisend, 2013	None stated	Mixed results	Weak
6	Jordan et al., 2015	None stated	Positive	Moderate
7	Kaye, Lewis, Algie, & White, 2016	None stated	Negative	Moderate
8	Kemp, Kennett-Hensel, & Kees, 2013	Attachment Theory	Mixed results	Weak
9	Lee, 2018	None stated	Positive	Weak
10	Lee & Ferguson, 2002	None stated	No difference	Weak
11	Lewis, Watson, & White, 2008	Extended Parallel Process Model and Elaboration Likelihood Model	Mixed results	Weak
12	Noble et al., 2014	None stated	Negative	weak
13	Plant, Irwin, & Chekaluk, 2017	None stated	Positive	Weak
14	Rodrigue, Fleishman, Vishnevsky, Fitzpatrick, & Boger, 2014	None stated	Positive	Weak
15	Skurka, Niederdeppe, Romero-Canyas, & Acup, 2018	None stated	No difference	Weak
16	Small & Verrochi, 2009	Emotional Contagion	Negative	Weak
17	Struckman-Johnson, Struckman-Johnson, Gilliland, & Ausman, 1994	None stated	Negative	Weak
18	Sun, 2015	None stated	Negative	Moderate
19	Taute, McQuitty, & Sautter, 2011	Affect as Information Theory	Mixed results	Weak
20	Tay, 2011	Extended Parallel Process Model, Elaboration Likelihood Model and Health Belief Model	Negative	Weak
21	Thainiyom & Elder, 2017	None stated	No difference	Weak
22	Vaala, Bleakley, Hennessy, & Jordan, 2016	Weight-based identity threat theory	Positive	Moderate
23	Wang, Bao, Wang, & Wu, 2017	None stated	Positive	Weak
24	Wu, Sundiman, Kao, & Chen, 2018	None stated	Positive	Weak
25	Yoon & Tinkham, 2013	None stated	Mixed results	Weak
26	Passyn & Sujan, 2006	Protection Motivation Theory	No difference	Weak
27	Brooker, 1981	Hierarchy of effects	Positive	Weak
28	Eckler & Bolls, 2011	The Limited Capacity Model of Motivated Mediated Message Processing	Positive	Weak
29	Previte, Russell-Bennett, & Parkinson, 2015	Theory of Planned Behaviour and Emotions Theory	Positive	Moderate
30	Cao & Jia, 2017	None stated	Mixed results	Weak
31	Zemack-Rugar & Klucarova-Travani, 2018	None stated	Positive	Weak

Supporting people aged 65+ transition to driving retirement: Exploring value re-creation for maintaining wellbeing and quality of life

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Introduction

People aged 65+ is one of the fastest growing segments of the Australian population (ABS 2016). However, with age comes reduced ability to drive. Driving retirement is often difficult for older people because of the tension between declining physical capabilities and emotional dependence on driving (Dickerson et al. 2007; Donorfio et al. 2008; Sollner and Florach 2018). To achieve successful behaviour change in terms of positive physical and emotional adjustments, driving retirement should be gradual and involve the adoption of alternative transport options (Bauer et al. 2003). Evidence regarding how alternative transport can re-create the same type of value obtained from driving is required to support people aged 65+ adopt new behaviours and reduce the negative impact of driving retirement on quality of life.

Educational campaigns are essential to raise awareness and educate older people about the importance of driving retirement. Social marketing can also be used to support driving retirement amongst people aged 65+ however, the structural and environmental factors necessary to facilitate driving retirement and maintain quality of life are areas less explored in social marketing. There is also limited understanding of the types of value older people obtain from driving, how this is destroyed when they stop driving, and how this value can be re-created through social, structural, and environmental means once they cease driving.

The present study aims to answer the following research questions - *RQ1: What value is created from driving?*; *RQ2: What value is destroyed from diving retirement?*; *and RQ3: How can value be re-created after driving retirement?* Guided by consumer value theory, this paper explores how value is destroyed when people cease driving, and how value can be re-created through well-designed driving retirement programmes at the micro-level, as well as broader social marketing programmes inclusive of meso and macro-level considerations that can be developed that help to maintain the wellbeing and quality of life of older people.

Method

Qualitative interviews were utilised in this study. People aged 65+ were selected as this is the age where most Australians are approaching the next phase of their lives including the age pension, and retirement from work. Purposeful sampling, using the researchers' personal networks to contact participants was utilised. The sample comprised of 15 participants; nine drivers and six driving retirees, six males and nine females. With participants' permission, interviews were recorded, then transcribed verbatim. Data were analysed by two researchers using the analytic qualitative research method (Rossiter, 2011). First-order data were classified in terms of higher-order themes that emerged for each of the research questions.

Results/Findings

In answering *RQ1: What value is created from driving?*, participants identified emotional value and functional value as the most dominant value dimensions derived from driving. Emotional value is associated with various positive (e.g. confidence, pleasure) and negative (e.g. worry, fear) affective states (Sánchez-Fernández and Iniesta-Bonillo, 2006) that are sought or avoided through people's actions or inactions. In relation to driving, participants specifically identified freedom, enjoyment, and a sense of autonomy derived from being able to drive: *"It's the freedom to get out and go and drive without anybody telling me I couldn't"* Emma, 93, retired driver. "*I get a lot of enjoyment out of my toy"* David, 82, driver. *"I want my independence. I want the ability to drive to Melbourne if I want tomorrow"* Francis, 66, driver. Functional value refers to the utility, performance, and functionality of an act or experience (Russell-Bennett *et al*., 2009). The participants specifically identified convenience as the greatest benefit of being able to drive, being able to go wherever they needed: *"The convenience of the car was the best aspect of driving"* Matt, 91, retired driver.

In answering *RQ2: What value is destroyed from driving retirement?*, participants identified emotional and functional value as the most dominant value dimensions destroyed from driving retirement. Participants who were still driving reported the anticipated destruction of these value dimensions, while those who had already stopped driving confirmed that it was the loss of these two value dimensions that were the most significant for them. For instance, driver Sally, 80 explains: *"I shall miss the freedom just getting in the car and going where I want to go"*. Richard, 95, a retired driver reported a similar experience: *"I can't do anything myself. So, I've lost my independence"*. Similarly functional value destruction was described by driver, Ben, 69 who explains: *"Once you do stop driving it's a completely different way of life, what you can do"*, and retired driver Michelle, 84: *"I am rather stuck and isolated"*.

In addressing *RQ3: How can value be re-created after driving retirement?*, the results suggest that value re-creation can occur. However, it appears that it is not possible to re-create some value dimensions once destroyed. Instead, a **replacement** of value is more feasible. For instance, it was not possible to re-create the sense of freedom, independence, and enjoyment from driving that was lost upon after driving retirement. Therefore, it was not possible to re-create emotional value in the same form after it had been destroyed. However, the participants' experiences suggested that there are opportunities for the creation of new value types and dimensions that can **substitute** the value lost from driving retirement. For example, Aaron, 93 highlights that taking public transport, especially in the city, offers greater peace of mind as he no longer has to contend with inner-city traffic and the associated stresses of finding limited parking in the city: *"I've got to sit there and look out the window, which is more quiet on my nerves"*. This suggests that freedom, a type of emotional value lost from driving retirement, can be replaced by peace of mind, created by good public transport systems, and which reflects different emotional value type. Similarly, David mentions the benefit of not having to pay high prices for parking. This reflects the creation of economic value, a

new value dimension which can replace the emotional and functional value destroyed from no longer being able to drive: *"It's a damn sight cheaper and the cost is $1.50"*.

Discussion and conclusion

The findings lend support to existing research in social marketing which suggests that value re-creation is possible (see Leo and Zainuddin, 2017). It also extends our understanding of value re-creation by offering insights for how this can occur. Specifically, we find that some value dimensions cannot fully be re-created, but instead, replaced by other value dimensions or forms of the same dimensions. This supports for the notion that value re-creation is non-linear (Leo and Zainuddin, 2017) and offers further theoretical contributions towards our understanding of how value re-creation is likely to occur. Practically, social change managers can develop programmes targeted at the individual level that acknowledge the downsides of driving retirement, but highlight some of the benefits of this (beyond safety). The findings also suggest that value creation and destruction are not limited to the domains of consumer and service provider, as is the dominant approach in the extant research in this area. Rather, value creation, destruction, and re-creation can and does involve multiple stakeholders, such as transport authorities responsible for public transport systems, government bodies responsible for urban planning, and marketing professionals responsible for communications programmes. Therefore, the results suggest that practically, a coordinated effort amongst relevant stakeholders at the meso and macro levels of society is required, in order to ensure that wellbeing and quality of life for older citizens are maintained after driving retirement.

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