

Mapping Point-of-Purchase Influencers of Food Choice in Australian Remote Indigenous Communities: A Review of the Literature

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Abstract

Closing the health gap between Indigenous and non-Indigenous Australians relies, in part, on addressing the poor levels of nutrition in remote Indigenous communities (RIC). This article identifies and maps key influencers of food choice at the point-of-purchase (POP) in Australian RIC and identifies gaps in our knowledge. It is based on a narrative review of the literature pertaining to food in RIC from a range of disciplinary perspectives including nutrition, ethnography, public health, anthropology, and remote health to map POP drivers of food choice. In particular, the role of habit is identified as a key factor that has previously not been discussed in the literature. The conceptual framework can be used as a basis for future POP research in RIC and provides guidance for social marketers, public health, nutrition, and policy workers operating in this field.

Keywords

Aboriginal people, Australia, food, point-of-purchase

Background

A significant health gap exists between Indigenous and non-Indigenous people in Australia. At last census, Aboriginal and Torres Strait Islander people made up around 2% of the 23.5 million population of Australia (Australian Bureau of Statistics [ABS], 2013). Around a third of Aboriginal and Torres Strait Islander people live in major Australian cities and around a fifth (100,000) live in remote or very remote areas defined by their distance to service centers (Australian Institute of Health and Welfare [AIHW], 2004) some literally thousands of kilometers from service centers—defined as urban centers with population clusters over 1,000 people (ABS, 2012). There are around 1,100 remote Indigenous communities (RIC) in Australia. Just under half of these RIC consist of less than 20 people but most people (72%) live in communities of 200 people or more and larger communities consist of several thousand people (ABS, 2003). The facilities available in remote communities vary depending upon size but most include fuel supply, office, school, and health clinic and a basic shop where people can purchase a range of goods including food.

Furthermore, Indigenous Australians living in remote communities carry a significant and disproportionate share of the gap with the 26% of Aboriginal and Torres Strait Islander people living in remote communities accounting for

40% of the health gap (Vos, Barker, Begg, Stanley, & Lopez, 2009). Inadequate or poor nutrition relates to four of the top seven risk factors contributing to this gap: obesity, high blood cholesterol, high blood pressure, and low fruit and vegetable intake (Vos, Barker, Stanley, & Lopez, 2007). Diet is the leading risk of burden of disease for all Australians.

Poor nutrition in RIC relates to several factors. It has previously been argued that Indigenous Australians derive 95% of energy intake from purchased foods (A. J. Lee, Bonson, & Powers, 1996) with the remainder being sourced from traditional foods acquired through hunting and/or gathering. In more recent work, the complexity of food provisioning in remote communities has been acknowledged and whereas once the community store tended to be the only retail source of food in communities, independent takeout shops also exist (Brimblecombe, Mackerras, Clifford, & O'Dea, 2006). Sources of food supply in RIC vary and now include community care programs, school canteens, school breakfast and

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lunch programs, independently managed stores and takeouts, and food sources from hunting and gathering (Brimblecombe et al., 2006; Schouten, Lindeman, & Reid, 2013). Although we acknowledge that the community store is not necessarily the main source of food supply in a remote community, it is likely to be a major source.

Current food consumption in remote communities is a diet dominated by highly processed foods and characterized by high levels of sugar (predominantly from sugar-sweetened beverages [SSB] and table sugar), low intake of fruit and vegetables coupled with excessive sodium intake, and deficiency in a number of micronutrients (Brimblecombe, Ferguson, Liberato, & O'Dea, 2013). Similar high levels of SSB (>250 g/d) have been reported in remote Aboriginal communities, ranging from 298 to 497 g per day according to total community food and drink purchase data (Brimblecombe, Ferguson, Liberato, & O'Dea, 2013), as that reported for Australian children aged 2 to 16 years (436 g/d; Clifton, Chan, Moss, Miller, & Cobiac, 2011). Levels of fruit and vegetable intake of 122 g to 247 g per person reported across three remote Northern Territory communities are around a quarter of the recommended intake of 675 g, 300 g from fruit (two pieces of fruit weighing 150 g each) and 375 g from vegetables (five pieces of vegetables weighing 75 g; National Health and Medical Research Council [NHMRC], 2013).

Inconsistent access to quality fruit and vegetables and high prices are some of the reasons for the low rates of consumption (Council of Australian Governments [COAG], 2009; Meedeniya, Smith, & Carter, 2000). The issue of access is discussed below; however, price as a consumption barrier is currently being investigated by the Menzies School of Health Research in their NHMRC-funded SHOP@RIC project. This study is investigating the link between pricing and healthy food purchasing through assessing the effects of a price subsidy on certain healthy food items or through a combination of the price subsidy and an in-store nutrition education strategy (Brimblecombe, Ferguson, Liberato, Ball, et al., 2013).

Consumers in RIC face many challenges and barriers in relation to healthy food provisioning and consumption. Many of the external and environmental factors accounting for food choice in RIC have been linked to issues of poverty (see, for example, Brimblecombe et al., 2014; Brimblecombe & O'Dea, 2009; Carson, Dunbar, & Chenhall, 2007; Drewnowski & Darmon, 2005; Saethre, 2005), and while not wanting to minimize the profound impact of poverty on healthy food choice and consumption, further research to understand decision making and behavior at the point-of-purchase (POP) will add another perspective to the task of addressing food-related issues in RIC. These challenges to some extent have been explored from different disciplinary perspectives and have included anthropology (for example, Saethre, 2005), nutrition (Brimblecombe et al., 2014; Brimblecombe, Liddle, & O'Dea, 2012), economics (Campbell, 2013) and public

health (Brimblecombe & O'Dea, 2009), and a research method approach—action research (Adams et al., 2012).

An area that could contribute different frameworks for exploring these challenges is social marketing. Through incorporating “other approaches,” social marketers can draw on the broad range of literature rather than just focusing on a silo approach to challenges, as can often be the case in addressing challenges faced by RIC. Any social marketing program that seeks to address the influence of POP on people's food choices in RIC will need to take into account the environmental, social/cultural, store level, and individual factors to develop a strategy which encompasses upstream, midstream, and downstream approaches. Social marketing practice has tended toward a binary approach: upstream or downstream (Russell-Bennett, Wood, & Previte, 2013). Midstream approaches, although not entirely ignored (see, for example, Sacks, Swinburn, & Lawrence, 2009) are not often considered. We would argue that all three approaches need to be used to facilitate long-term change in healthier eating practices in RIC.

A narrative literature review was undertaken to map the influencers of food choice in RIC. This form of literature review is useful “when attempting to link many studies . . . for the purposes of reinterpretation or interconnection” and consequently it is a “valuable theory building technique” (Baumeister & Leary, 1997, p. 312). Scopus, Aboriginal and Torres Strait Islander HealthInfoNet, Web of Knowledge, and Google Scholar databases were searched. No date limits were set but the literature search initially concluded in November 2013 and was updated in August 2015. The following terms were used across all the databases: (*Indigenous or Aborig** or *Torres Strait Islander*) AND (*remote communit**) AND (*food*). A search of the grey literature from government and non-government agencies was also undertaken. In addition, reference lists of selected papers relevant to the topic drivers of food choice at the POP in RIC were used as further sources of information. The search was limited by the dearth of available literature.

Papers were reviewed for factors that influenced consumer choice at the POP either directly or indirectly. Factors influencing food choice in RIC go beyond the store level and for this reason they are explored to contextualize buying behavior at the POP. Factors were separated into categories adapted from social marketing approaches: upstream, midstream, and downstream. These provide a useful framework for understanding systems which impact individual decision making.

Upstream Context

Upstream social marketing approaches focus on environmental factors including the social determinants of health (Donovan & Henley, 2010), food availability and choice, and food price, as well as advocacy and lobbying to influence policy (Gordon, 2011; Wymer, 2011). It also includes

focusing on a range of actors that have an influence on the environment of the target audience which can potentially include politicians, local government policy-makers, media figures, community activists, corporations, schools, and foundations (Brimblecombe et al., 2015; N. R. Lee & Kotler, 2011, p. 147).

Policy. The Australian Government initiative *Closing the Gap* has influenced and been a feature of health policy in the Northern Territory and was a response to the *Close the Gap* campaign organized by a coalition of Indigenous and non-Indigenous health and community organizations (Oxfam Australia, 2009). The campaign focuses on “closing the gap” between non-Indigenous and Indigenous health outcomes by 2030. Unfortunately, some aspects of single policy efforts have made little impact on improving nutrition at the population level in RIC. For example, the Northern Territory Emergency Response (NTER) income management policy appeared to have no impact in its early stages of implementation on increasing people’s purchasing of fruit and vegetables or decreasing purchasing of SSB (Brimblecombe et al., 2010), both factors that contribute to health. Income management, in combination with the community stores licensing program that addresses store infrastructure, food quality and availability, may have (Australian National Audit Office [ANAO], 2014; Cultural and Indigenous Research Centre Australia [CIRCA], 2011). Rigorous evaluation of these strategies is needed to provide the public and communities with robust evidence on effect. Continued work in influencing policy needs to focus on housing issues that will improve people’s ability to prepare, cook, and store food. Health Habitat has been instrumental in providing data to demonstrate that poor design, construction, and a lack of routine maintenance are central to people’s abilities to store, prepare, and cook food and not, as is currently perceived, damage by residents (Health Habitat, 2013).

Access to healthy food in remote communities was raised as a concern in the *National Strategy for Food Security in Remote Indigenous Communities* (COAG, 2009). If healthy food is unavailable for purchase in a remote store, clearly it cannot be consumed. The Stronger Futures in the Northern Territory Act (2012) addressed concerns raised in the COAG report through the *Food Security* component of the Act. This is aimed at improving access to healthy food in remote communities through the licensing of remote stores (the community stores licensing program) and ensuring these stores stock an appropriate range of healthy food, including a minimum range of fruit and vegetables.

Availability and choice. The impact of policy upon availability was noted in the previous section; however, food shortages resulting from inability of stores to be replenished during the wet season can also have an effect on food availability. A recent study in one RIC found that food scarcity (not just healthy food) had a significant effect on food purchases with

perishables, such as meat and fruit and vegetables, the most affected categories of food—with mean sales dropping by 75% when the store could not be replenished due to wet season conditions (Scelza, 2012).

Some stores have made specific policies about what to stock effectively resulting in choice editing. Choice editing has been defined as “cutting out unnecessarily damaging products and getting real sustainable choices on the shelves” (Sustainable Consumption Roundtable, 2006, p. 2). This process involves removing products from shelves which are not sustainable. In the case of food, we can use the concept of choice editing to support the removal of unhealthy food. An example is the Mai Wiru Regional Stores Policy in the Anangu Pitjantjatjara Yankunytjatjara (APY) Lands, South Australia. This is a community-driven policy developed with extensive community consultation and incorporating all stakeholders. The policy aim was to address access to healthy food in remote communities. Within this policy framework, one community successfully removed the top three selling sugar-sweetened drinks from their store to encourage a transition toward lower sugar or zero sugar based drinks and resulted in an overall reduction in available kilojoules consumed from SSB (Butler, Tapsell, & Lyons-Wall, 2011). Recent research on the broader efforts of the Mai Wiru stores to improve nutrition on the APY Lands found that despite the decreased intake of sugar in this one store, overall diet quality across stores has decreased since 1986 and additional ongoing resources are required to ensure diet quality improves (Lee et al., 2015).

Store managers’ attitudes and beliefs toward food in RIC can influence the range of products stocked and their stock management practices, which affect the choice, quality, and availability of healthy food. For example, A. J. Lee, Bonson, and Powers (1996) found that a perceived lack of consumer “demand” was used to justify not stocking certain healthy food as the manager claimed these foods were “unpopular.” This was in contrast to other communities in the study where the managers focused on ensuring a quality supply of healthy food, which did generate demand. Similarly, a review of nutrition policy of the Arnhem Land Progress Association (a retailing cooperative in the Arnhem Land, Northern Australia) found that store managers’ actions resulted in varying levels of policy implementation across the communities (A. J. Lee, Hobson, & Katariski, 1996). Thus, despite policy and legislation, there is still a degree of influence that store managers have upon the range of products carried in remote stores and this can potentially affect dietary intake as well as influence habit formation.

Price. The price of food in RIC in the Northern Territory is significantly higher than in Darwin or regional centers such as Alice Springs. The annual Northern Territory Department of Health Market Basket Survey found that the average cost of a food basket in remote stores across the Territory was \$824 compared with \$558 in supermarkets in major centers

(e.g., Alice Springs, Darwin, and Katherine; Department of Health [DoH], 2015). This price differential is even greater when actual food purchasing data are used rather than that of a hypothetical basket (60% vs. 53%). This price differential means that people in remote communities on low incomes are paying much more for food than urban living Australians (Ferguson et al., 2015).

Furthermore, research suggests that a healthy diet is more expensive. Diets considered healthy based on lean meat, fish, and seafood; reduced fat dairy foods; whole grain cereals; and fruit and vegetables are more costly in terms of the amount of kilojoules provided per dollar compared with high sugar and processed foods which are nutritionally poor but cheaper in energy value (Andrieu, Darmon, & Drewnowski, 2005; Brimblecombe & O'Dea, 2009; Drewnowski & Darmon, 2005). Brimblecombe, Ferguson, Liberato, O'Dea, and Riley (2013) found that although diet could be improved within current expenditure, it would still not meet Australian dietary guidelines. The energy value of food appears important particularly for families experiencing financial constraints (Andrieu et al., 2005; Brimblecombe & O'Dea, 2009).

Research into the price elasticity of food in Australia found that some categories of food are inelastic (bread, fresh vegetables, sugar, and jam) whereas for other categories, demand is elastic (meat, rice, margarine, and preserved vegetables), and dairy products, fresh fruits, and some other meat categories (ham, sausage, bacon) are estimated to have unit elastic demand (Ulubasoglu, Mallick, Wadud, Hone, & Haszler, 2010). It is likely that the elastic categories (where people are sensitive to changes in price and stop or reduce buying when price increases) compete with non-food items such as electricity bills and other household items including mobile phones. The mobile phone is a valued commodity and usage continues to increase in remote Australia (Kral, 2012; A. Taylor, 2012).

In contrast to the concept of price elasticity/inelasticity, a paper based on the experience of Arnhem Land Progress Aboriginal Corporation (ALPA) states that "Aboriginal people will pay almost anything for something they want; conversely if they do not want something it is impossible to giveaway" (McMillan, 1991, p. 283). More recent research observed an apparent increase in soft drink sales throughout the Australian Government stimulus payment period (Brimblecombe et al., 2010). This suggests that while price is likely to be an influencing factor, people also need to value the item they are buying. Healthy food may be less valued for some of the reasons outlined in this article and when goods in general cost more, there is less money available to make healthy food choices.

Price subsidies are a tactic being touted as a means of increasing consumption of healthier food. A systematic review examining the effectiveness of price subsidies in promoting healthy food purchase and/or consumption found that, with one exception, subsidies increased purchase and/or

consumption (An, 2012). Subsidies were trialed on a large scale in the Healthy Incentives Pilot which is a United States-based project in which low-income households enrolled in the Supplemental Nutrition Assistance Program (SNAP) received fruit and vegetable subsidies and found that participants consumed almost 26% more fruit and vegetables than non-participants (Bartlett et al., 2014).

Along with independently owned stores, Outback Stores and ALPA are the two main organizations providing management assistance to retail stores in RIC in the Northern Territory. Both these organizations have health and nutrition policies in place which are aimed at increasing and facilitating intake of healthy food in RIC. In relation to price, ALPA subsidizes 100% of freight costs on fresh fruit and vegetables (ALPA, n.d.). Outback Stores are less prescriptive but state that they "employ effective pricing strategies favoring the affordability of healthy food lines" (Outback Stores, n.d.). An evaluation of these strategies could help inform similar policies for independently managed RIC stores.

Midstream Context

Midstream social marketing focuses on the impact of people's more immediate environment on behavior such as workplaces, schools, local communities, and service delivery organizations (Gordon, 2013). This can also include friends, family, and influential others (N. Lee, Rothschild, & Smith, 2011). Thus, social and cultural norms come into play in a midstream approach.

Demand sharing. The distribution of goods and services in RIC Indigenous communities takes many forms. Demand sharing is one such form and relates to the "demanding" rather than sharing of resources such as use of vehicles, alcohol, tobacco, and food (McDonnell & Martin, 2004). It is a complex behavior (Peterson, 1993) and can occur in both verbal and non-verbal forms and can be direct or indirect (Altman, 2011). It is not our aim to discuss the various ways in which demand sharing operates but rather to explain how it can impact upon consumer decision-making and choice at the POP.

The literature suggests that demand sharing can influence choice at the POP in three ways: First, as a practice where people purchasing food are obligated culturally through kinship ties to buy or provide food for others when requested (Smith & Daly, 1996). Saethre (2005) illustrates this with an example of a woman purchasing extra food knowing others (in addition to those in her household) would request a share. Second, through avoiding such requests (or potential "demands") by keeping food purchases to a minimum or by buying takeout to ensure there is no "extra" food which can be requested by others (Saethre, 2005, p. 7) or by being selective in the types of foods purchased to minimize cost in sharing food. Finally, people may also choose times of the day to shop when they believe fewer people will be demanding food

and may therefore purchase and consume more expensive items in these visits (Saethre, 2005). In each instance, the concept of demand sharing influences what food is purchased at the store level.

Indulging children. Similar to the rise of “pester power” in non-Indigenous households throughout Australia (Dixon, Scully, & Parkinson, 2006), children in RIC can have a significant impact upon what is purchased at the store or supermarket. Children’s demands for sweet food and drink are at most times indulged and these demands become a driver of food provisioning and consumption (Hamilton, 1981). Peterson (1993) discussed the upbringing of children as “highly indulgent” (p. 863) compared with typical Anglo-Saxon child-rearing practices. Similarly, Kruske, Belton, Wardaguga, and Narjic (2012) found that Indigenous beliefs around children are markedly different to those of non-Indigenous. This includes the belief that “each child is an independent, autonomous human being, capable of communicating his or her needs from birth” (Kruske et al., 2012, p. 783). Not surprisingly, this impacts upon parental choices in food decision making and provisioning.

A midstream approach could focus on modifying social norms around healthy eating and in feeding children. Current norms include indulging children such as meeting demands for unhealthy food and drinks. Further research needs to be undertaken to better understand these cultural norms and how they specifically influence and impact upon healthier eating practices. Other midstream approaches that are already in practice include the policy work undertaken by some Indigenous organizations to manage the supply of healthy food in their communities (Butler et al., 2011). Having store policies that ensure confectionery is not placed at eye level of children or within easy reach could assist parents in coping with demands of children.

Food literacy. Consumer knowledge of what constitutes healthy food is important if people are to consciously choose food that is nutritionally sound. It has been recognized as a priority in the recent National Aboriginal and Torres Strait Islander Health Plan (Commonwealth of Australia [CoA], 2013). Food literacy can be defined as follows:

A collection of inter-related knowledge, skills and behaviours required to plan, manage, select, prepare and eat foods to meet needs and determine food intake.

Food literacy is the scaffolding that empowers individuals, households, communities or nations to protect diet quality through change and support dietary resilience over time. (Vidgen & Gallegos, 2012, p. 72)

As identified in the above definition, food literacy needs to be considered at more than just an individual level: This reinforces that environmental and individual behaviors are

interdependent. For instance, if a community store in a RIC is stocked with a variety of highly prominent sugar-sweetened breakfast cereals, individuals require knowledge and skills about how to make healthier choices in what is referred to as the “obesogenic environment” (Vidgen & Gallegos, 2012, p. 72).

Recent research into exploring ways of promoting and supporting culturally appropriate healthier food choice in one RIC suggests that community members prefer to gain knowledge through practical means such as observing and participating in food gathering and preparation in a social context either in home, via family role models, or out of home in community-based organizations (Colles, Maypilama, & Brimblecombe, 2014). This approach to food literacy requires further research but is consistent with earlier community-directed programs (Rowley et al., 2000). The findings of two recent studies suggest dietary benefits for Aboriginal participants from “hands-on” programs that aim to enhance food preparation and food literacy skills (Abbott, Davison, Moore and Rubinstein, 2012; Nilson, Kearing-Salmon, Morrison & Fetherston, 2015; Pettigrew, Jongenelis, Moore & Pratt, 2015).

Indigenous people probably share a common knowledge of healthy/unhealthy food as the general Australian population, but perceive non-Indigenous people to have a much greater knowledge of non-traditional food products and diet equivalent to their in-depth understanding of traditional foods (Brimblecombe et al., 2014).

Downstream Context

Finally, downstream social marketing focuses on the individual and tends to place responsibility for change with the consumer. As such, it’s often been criticized for ignoring the larger environmental issues and other social determinants of health that are beyond the control of the individual (Donovan, 2011; Lefebvre, 2011). However, it is the category where behavior occurs and such programs clearly have their place in a holistic approach to the issue. It is also the arena where most service providers engage. For example, public health nutritionists providing nutrition services to communities not only provide dietary counseling to patients referred to them through health services but also often carry out cooking demonstrations and other nutrition education and promotional activities. Other examples in the non-government arena include programs such as the Uncle Jimmy Thumbs Up! operated by the Jimmy Little Foundation. This program uses music, education, and store signage to promote healthier food choices among young people in RIC.

The majority of consumer purchase decisions are made at the POP. This includes any decisions made at the store including at the shelf, end of aisle, and check out. Inman, Winer, and Ferraro (2009) found that just under half of consumer buying decisions are made at POP although this can increase to 93% depending upon the context. Other market

research has estimated this figure to be around 90% (Gander, 2005). Intuitively, this would suggest the POP to be an area worth exploring in relation to consumers in RIC. In the context of RIC, research has not identified a clear and cohesive picture of drivers that influence decision making and choice at the POP which could be used to enact social marketing campaigns targeting behavioral change. The remainder of this article explores and maps both store and individual POP influencers of food choice.

POP Store-Level Factors Affecting Consumer Buying Behavior

Packaging. Packaging can play a role in product choice at the POP. McDonnell and Martin (2004, p. 17) identified the impact a change of product packaging played in altering consumer behavior:

During interviews a number of store managers detailed experiences of products no longer selling because companies changed their packaging.

These managers suggested that it was a failure by customers to recognize the new packaging as being the same product. Other research supports this. For example, McMillan (1991) argues that high brand loyalty to packaging is the result of familiarity with packaging: "If tea comes in a blue packet you don't buy it in a yellow one. The fact that one is Bushells and one is Liptons is beside the point" (p. 283). Since this study was undertaken (over two decades ago), there is now increased television and media access in RIC and people are likely to be exposed to brands via advertising and other forms of communication not as easily available at the time of the study. Either way, visual recognition and familiarity is a driver in food purchase behavior: If consumers are unable to recognize a product, they are less likely to purchase it (Dahlen, Lange, & Smith, 2010, p. 90).

In-store cues. In-store stimuli (such as shelf talkers and posters) have been noted to increase the degree of involvement and consequently purchase, even with low involvement purchases (Mitchell & Harris, 2005); however, a review of specific nutritional interventions on POP behavior found that grocery store interventions were less successful than those in workplaces and universities (Seymour et al., 2004) and POP in-store nutritional information had mixed results (Glanz & Yaroch, 2004). In addition, people tend to go to those sections of a retail outlet that they feel are relevant to their shopping needs (Puccinelli et al., 2009). Other in-store cues include physical product placement on shelves and end of aisle gondolas and displays. Chandon, Hutchinson, Young, and Bradlow (2009) used eye-tracking experiments and found that although top- and middle-shelf positions gained more attention than low-shelf positions, it was only products located in top shelf positions that led to brand evaluation, a

precursor to purchase. Hence, it is important to ensure that in-store behavior in RIC is understood so that signage and POP cues are placed in high traffic areas and evaluated.

A recent project by the Menzies School of Health Research aimed at improving nutrition by developing a resource package for using shelf labels that highlight and promote healthier food and drink choices in RIC found there were several nutritional labeling programs used in RIC including Queensland Health Green Label Program; Heart Foundation Tick and Jimmy Little Thumbs Up! This research also tested community developed labels in four pilot sites and found that the data suggested that "shelf label projects could have the potential to increase sales of labeled items within product groups where there is a clear healthier option" such as breakfast cereals (Menzies School of Health Research, 2013, p. 28).

In addition, the appearance of fresh fruit and vegetables can influence purchase. The quality of fresh fruit and vegetables in RIC has been raised as an issue (Leonard, 2003). Factors such as storage, transportation, and poor retail stocking and presentation practices can result in fresh fruit and vegetables appearing less than visually appealing. As appearance is a key measure of quality in the fresh fruit and vegetable category, dried out, shriveled, or limp produce can deter purchase (Grunert, 2002; J. Taylor & Westbury, 2000).

POP Influencers: Individual Factors Affecting Purchase Decisions

Habit. Recent research suggests that most routine purchase decisions are based on habit, constituting as much as 95% of buying behavior (Martin & Morich, 2011). Habits make choice at the POP easy as there is little conscious engagement with the buying process: Consumers act on auto pilot and choice is based on repeat purchase behavior. For example, a study of one remote community in the Northern Territory, Lajamanu, found that despite the store stocking an assortment of food, only a narrow range of food was purchased. In particular, Saethre (2005) observed that only some types of food stuffs were purchased despite there being wider range of food available for purchase (p. 155).

A more recent study of food patterns in a remote community found that there was a high intake of refined carbohydrates and a low intake of fruit and vegetables (Brimblecombe & O'Dea, 2009), and a limited number of food types providing the majority of nutrients. The pattern was strong enough to suggest habitual buying behavior. Some research suggests that this food habit stems from the days of rationing where white bread and sugar were staples (Saethre, 2011), and these staples continue to form the basis of people's diets. This habit results in a failure to purchase new potentially healthier food unless consumers are encouraged to try these foods through marketing or sales promotions. The concept of habit plays an important role in food choice and is well recognized by the food industry in their use of marketing strategies to alter unfavorable brand buying behavior and encourage habitual

behavior aimed at brand loyalty. However, as yet, it has not been explored within the remote Indigenous context.

The role of habit (at the realm of the individual) has been previously ignored in the RIC food context: possibly because the focus is on finding things that are unique to the context rather than seeking similarities or sameness with consumers in the general Australian population. A rarely used theory which may assist in understanding habit is the Theory of Interpersonal Behavior (Bamberg & Schmidt, 2003; Triandis, 1977). This considers behavior to be a function of intention; habit and situational constraints or facilitators. With the exception of “intention,” we have explored in this article the impact of habit and situational factors on the impact of food buying in RIC. Further research is required on habit as is research into situational factors such as in-store cues—we would suggest both are important in directing behavioral change at the POP.

According to the theory of interpersonal behavior, intentions are influenced by four factors including affect toward the behavior (i.e., emotions attached to a behavior), cognitive consequences of the behavior, social norms, and obligation to perform the behavior according to an individual's values (Donovan & Henley, 2010, p. 137; Triandis, 1977). Improving our understanding in this area will assist the development of targeted social marketing strategies using new technologies. For example, the increasing use of social media in RIC suggests this is a tool that can be incorporated into a social marketing strategy. One approach could be to develop a mobile APP to assist people to make healthier food choices at the POP allowing people to seek out the information they needed, when they needed it (Henryks, Brimblecombe, & Bidstrup, 2014).

Who buying for. The recipient of the food can influence what is being purchased. A study in an urban Aboriginal community found that providing filling meals to satiate hungry children was a key concern of research participants (Adams et al., 2012). This resulted in high energy foods, such as white bread spread with margarine, being utilized to “fill up” family members. In one remote community, people referred to “lifelong foods” to be those most commonly purchased (such as bread and sugar) as they filled one up, could be shared, and easily stored (Brimblecombe et al., 2014).

Age. Older Indigenous people will often prefer familiar foods including packaged and soft foods which could be related to poor dental health (K. Schouten, personal communication, August 7, 2013¹). Other preferences relate to early life experiences and current food supply and can include high consumption of tinned corn beef, fatty meat including lamb chops, sausages, and mince which is occasionally flavored with packet soup mix, damper, tea, sugar, white bread, and full cream milk powder (Kouris-Blazos & Wahlqvist, 2000; Wahlqvist, Kouris, Gracey, & Sullivan, 1991). This also relates to habit as a POP driver.

In non-Indigenous communities, adolescents buying for themselves are more likely to choose nutritionally poor food as health and nutrition concerns are not strong drivers of food choice (Story, Neumark-Sztainer, & French, 2002). Anecdotal evidence suggests that children in remote communities are given a lot of autonomy including their own money to shop and thus younger people buying for themselves are often more likely to buy high sugar beverages in preference to water. Similarly in broader Australia, younger people consume more high sugar beverages (ABS).

Marketing and media influence. The impact of mainstream advertising on remote community food choices is a topic that requires further research, with a recent study (Brimblecombe et al., 2014) citing this as a potential factor in the food choices made by younger people in the community. Older people in this community expressed concern for the influence they felt advertising was having on young people's food choices. Research from the early 1990s suggested that media campaigns and the mobility of Aboriginal people influenced demands for branded sugar-sweetened products just as in non-Indigenous Australia (McMillan, 1991). A recent systematic review of food marketing to children found that “food marketing influences children's food behavior and diet-related health” (Cairns, Angus, Hastings, & Caraher, 2013, p. 214) and although not explored in the RIC context, there is no evidence to suggest that children in RIC respond differently to marketing as children in other contexts.

Income. A characteristic of food purchasing in low-income and disadvantaged communities is the cycle of “feast and famine” linked to the fortnightly income payment cycle (Saethre, 2005). Food is purchased when the payment is received and then as the fortnight progresses and money dwindles, food items considered staples and cheaper are purchased (which are often those with low nutritional value) until the money runs out or money is obtained from others. In the feast part of the cycle, a larger range of foods (including fruit, vegetables, and meat) is purchased (Cutter, 1978, cited in NHMRC, 2000). Food insecurity is experienced at a much higher rate in the Indigenous population than the non-Indigenous. One in five Aboriginal and Torres Strait Islander people live in a household where someone goes without food when the household runs out compared with less than one in 20 non-Indigenous people (ABS, 2015).

Convenience and the practicality of cooking. Convenience in relation to food in RIC does not only refer to the motivation to save time (as it often does in consumer behavior literature) but carries other implications such as issues around the practicality of storage and food preparation. It is not uncommon to find houses without adequate cold food storage or working cooking facilities (McDonnell & Martin, 2004; Saethre, 2005). A study of all houses found that 62% of houses were not considered functional in relation to infrastructure required

for the storage and preparation of food (Baillie & Runcie, 2001). This included basic components such as a kitchen bench (missing in 26% of houses) stove top and oven (missing or not functional in 41% and 42% of homes respectively). Furthermore, only 42% of houses were identified as having a functioning refrigerator. Indicators suggest that not much has improved. Health Habitat, working with Indigenous Australians, found that only 6% of 7,800 houses tested between 1999 and 2013 have the entire functioning infrastructure required to being able to store, prepare, and cook food (Health Habitat, 2013). The data are sourced from over 190 projects across Australia (and not just remote communities) that have tested items in more than 7,500 houses and represents the living conditions of over 50,000 Australians.

Some forms of food preparation rely on access to stoves or microwaves and potentially refrigeration to store ingredients or prepared food that is not immediately consumed. Outdoor cooking is also an option; however, cooking on open fires is complicated by the potential for demand sharing. The process of cooking food outside may draw people who can see the food and either directly or indirectly demand a share (Saethre, 2011). In addition, cooking outside involves additional effort and like non-Indigenous Australians, people in RIC do not always have energy or time to collect wood when they want to eat. However, it should be noted that these are observations and, to our knowledge, have not been explored from the perspective of Indigenous people.

The lack of basic cooking and storage equipment influences buying behavior at the POP as people are more likely to purchase either prepared meals (e.g., takeout), food that can be reheated in store (e.g., using store microwaves), or food that requires minimal preparation (e.g., tinned meat and bread). If healthier convenience type foods are not available, the purchase and consumption of less healthy options cannot be prevented. These behaviors are a way of getting around having to cook and can also be viewed as a strategy to circumvent the lack of cooking facilities; however, it also means that children of these households have limited exposure to and opportunity to learn food preparation skills.

Implications and Further Research

POP drivers and influencers provide guidance for developing a social marketing strategy to address the challenge of nutrition in RIC. These factors individually or in tandem drive decision making at the POP. The results of colonization including the transition from a traditional food diet to a non-traditional diet that is high in refined carbohydrates and sodium and low in fiber and several micronutrients has resulted in entrenched poor health issues and thus long-term plans are critical: change will not happen in the short term. However, with many stores now being owned by the community in which they operate, opportunities exist to research effective POP strategies that would not only support but also facilitate healthier eating in RIC.

The role of habit (the realm of the individual) has been previously ignored in the RIC food context: possibly because the focus is on finding things that are unique to the context rather than seeking similarities or sameness with consumers in the general Australian population. As previously stated, further research is required on habit as is research into situational factors such as in-store cues—we would suggest both are important in directing behavioral change at the POP.

Conclusion

A significant health gap exists between Indigenous and non-Indigenous people in Australia where Indigenous Australians living in remote communities carry a significant and disproportionate share of this gap. Inadequate or poor nutrition is a key contributor to this health disparity and burden of disease for Indigenous Australians (Vos et al., 2007). The challenge of poor nutrition in RIC has been researched from a variety of disciplines and perspectives. This article adds a new perspective on the issue by discussing the extant literature through the lens of social marketing. Specifically, drivers of food choice at the POP have been mapped and although they have been drawn from existing literature, our article suggests that in addition to upstream and midstream approaches, habit and intention should be a key focus for future research.

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References

- Abbott, P. A., Davison, J. E., Moore, L. F., & Rubinstein, R. (2012). Effective nutrition education for Aboriginal Australians: Lessons from a diabetes cooking course. *Journal of Nutrition Education and Behavior, 44*(1), 55-59.
- Adams, K., Burns, C., Liebzeit, A., Ryschka, J., Thorpe, S., & Browne, J. (2012). Use of participatory research and photovoice to support urban Aboriginal healthy eating. *Health and Social Care in the Community, 20*, 497-505.
- Altman, J. (2011). A genealogy of “demand sharing”: From pure anthropology to public policy. In Y. Musharbash & M. Barber (Eds.), *Ethnography and the production of anthropological knowledge* (pp. 187-195). Canberra: The Australian National University E Press.

- An, R. (2012). Effectiveness of subsidies in promoting healthy food purchases and consumption: A review of field experiments. *Public Health Nutrition, 1*, 1-14.
- Andrieu, E., Darmon, N., & Drewnowski, A. (2005). Low-cost diets: More energy, fewer nutrients. *European Journal of Clinical Nutrition, 60*, 434-436.
- Arnhem Land Progress Aboriginal Corporation. (n.d.). *Health and nutrition strategy*. Retrieved from <http://www.alpa.asn.au/pages/Health-%26amp%3B-Nutrition-Strategy.html>
- Australian Bureau of Statistics (ABS). (2003). *Australian social trends, 2003*. Report No. 4102.0, Canberra. Retrieved from <http://www.abs.gov.au/Ausstats/abs@.nsf/7d12b0f6763c78ca257061001cc588/2e1d3b9176cc05b6ca2570eb00835394!OpenDocument>
- Australian Bureau of Statistics. (2012). *Australian statistical geography standard volume 4 - Significant urban areas, urban centres and localities, July 2011* [Catalogue 1270.0.55.004]. Canberra, Australia: ABS.
- Australian Bureau of Statistics. (2013). *Estimates of Australian aboriginal and Torres strait Islander Australians, June 2011* [Catalogue 3238.0.55.001]. Canberra, Australia: ABS.
- Australian Bureau of Statistics. (2015). *Australian Aboriginal and Torres Strait Islander Health Survey: Nutrition results—Food and nutrients, 2012-13* (Catalogue No. 4727.0.55.005). Canberra: Author.
- Australian Institute of Health and Welfare. (2004). *Rural, regional and remote health: A guide to remoteness classifications* (AIHW Cat. No. PHE 53). Canberra: Author.
- Australian National Audit Office. (2014). *Food Security in remote Indigenous communities: Department of the Prime Minister and Cabinet* (The Auditor General ANAO Report No. 2 2014-15 Performance Audit). Canberra: Author.
- Bailie, R. S., & Runcie, M. J. (2001). Household infrastructure in Aboriginal communities and the implications for health improvement. *The Medical Journal of Australia, 175*, 363-366.
- Bamberg, S., & Schmidt, P. (2003). Incentives, morality, or habit? Predicting students' car use for university routes with the models of Ajzen, Schwartz, and Triandis. *Environment & Behavior, 35*, 264-285.
- Bartlett, S., Klerman, J., Olsho, L., Logan, C., Blocklin, M., Beauregard, M., . . . Melhem, M. (2014, September). *Evaluation of the Healthy Incentives Pilot (HIP): Final report*. Prepared by Abt Associates for the U.S. Department of Agriculture, Food and Nutrition Service. Retrieved from <http://www.fns.usda.gov/sites/default/files/HIP-Final.pdf>
- Baumeister, R., & Leary, M. (1997). Writing narrative literature reviews. *Review of General Psychology, 1*, 311-320.
- Brimblecombe, J., Ferguson, M., Liberato, S., Ball, K., Moodie, M. L., Magnus, A., . . . Mhurchu, C. N. (2013). Stores Healthy Options Project in remote Indigenous communities (SHOP@RIC): A protocol of a randomised trial promoting healthy food and beverage purchases through price discounts and in-store nutrition education. *BMC Public Health, 13*, 1-11.
- Brimblecombe, J., Ferguson, M., Liberato, S., & O'Dea, K. (2013). Characteristics of the community-level diet of Aboriginal people in remote Northern Australia. *The Medical Journal of Australia, 198*, 380-384.
- Brimblecombe, J., Ferguson, M., Liberato, S., O'Dea, K., & Riley, M. (2013). Optimisation modelling to assess cost of dietary improvement in remote Aboriginal Australia. *PLoS ONE, 8*, e83587.
- Brimblecombe, J., Liddle, R., & O'Dea, K. (2012). Use of point-of-sale data to assess food and nutrient quality in remote stores. *Public Health Nutrition, 16*, 1159-1167.
- Brimblecombe, J., Mackerras, D., Clifford, P., & O'Dea, K. (2006). Does the store-turnover method still provide a useful guide to food intakes in Aboriginal communities? *Australian and New Zealand Journal of Public Health, 30*, 444-447.
- Brimblecombe, J., Maypilama, E., Colles, S., Scarlett, M., Garnrgulkpuy Dhurrkay, J., Ritchie, J., & O'Dea, K. (2014). Factors influencing food choice in an Australian Aboriginal community. *Qualitative Health Research, 24*, 387-400.
- Brimblecombe, J., McDonnell, J., Barnes, A., Garnrgulkpuy Dhurrkay, J., Thomas, D., & Bailie, R. (2010). Impact of income management on store sales in the Northern Territory. *The Medical Journal of Australia, 192*, 549-554.
- Brimblecombe, J., & O'Dea, K. (2009). The role of energy cost in food choices for an Aboriginal population in Northern Australia. *The Medical Journal of Australia, 190*, 549-551.
- Brimblecombe, J., van den Boogard, C., Wood, B., Liberato, S. C., Brown, J., Barnes, A., . . . Bailie, R. (2015). Development of the good food planning tool: A food system approach to food security in Indigenous Australian remote communities. *Health & Place, 34*, 54-62.
- Butler, R., Tapsell, L., & Lyons-Wall, P. (2011). Trends in purchasing patterns of sugar-sweetened water-based beverages in a remote Aboriginal community store following the implementation of a community-developed store nutrition policy. *Nutrition & Dietetics, 68*, 115-119.
- Cairns, G., Angus, K., Hastings, G., & Caraher, M. (2013). Systematic reviews of the evidence on the nature, extent and effects of food marketing to children: A retrospective summary. *Appetite, 62*, 209-215.
- Campbell, D. (2013). Economic rationality in choosing between short-term bad-health choices and longer-term good-health choices. *International Journal of Environmental Research and Public Health, 10*, 5971-5988.
- Carson, B., Dunbar, T., & Chenhall, R. (2007). *Social determinants of Indigenous health*. Crows Nest, Australia: Allen & Unwin.
- Chandon, P., Hutchinson, J., Young, S., & Bradlow, E. (2009). Does in-store marketing work? Effects of the number and position of shelf facings on brand attention and evaluation at the point of purchase. *Journal of Marketing, 73*, 1-17.
- Clifton, P. M., Chan, L., Moss, C. L., Miller, M. D., & Cobiac, L. (2011). Beverage intake and obesity in Australian children. *Journal of Nutrition & Metabolism, 8*, Article 87.
- Colles, S. L., Maypilama, E., & Brimblecombe, J. (2014). Food, food choice and nutrition promotion in a remote Australian Aboriginal community. *Australian Journal of Primary Health, 20*, 365-372.
- Commonwealth of Australia. (2013). *National Aboriginal and Torres Strait Islander Health Plan—Companion document on Commonwealth Government strategies and reforms*. Retrieved from <http://www.health.gov.au/internet/publications/publishing.nsf/content/natsihp-companion-toc>
- Council of Australian Governments. (2009). *National strategy for food security in remote Indigenous communities*. Retrieved from <https://www.coag.gov.au/node/92>

- Cultural and Indigenous Research Centre Australia. (2011). *Department of families, housing, community services and Indigenous affairs—Evaluation of the community stores licensing program: Final report*. Sydney: Author.
- Cutter, T. (1978). Nutrition and food habits of the central Australian Aboriginals. In B. S. Hetzel & H. J. Frith (Eds.), *The nutrition of Aborigines in relation to the ecosystem of central Australia* (pp. 63-72). Melbourne, Australia: Commonwealth Scientific and Industrial Research Organisation.
- Dahlen, F., Lange, F., & Smith, T. (2010). *Marketing communications: A brand narrative approach*. West Sussex, UK: John Wiley.
- Department of Health. (2015). *Northern Territory market basket survey 2014*. Retrieved from <http://digitallibrary.health.nt.gov.au/prodjspsui/bitstream/10137/616/2/Northern%20Territory%20%20Market%20Basket%20Survey%20report%202014.pdf>
- Dixon, H., Scully, M., & Parkinson, K. (2006). Pester power: Snackfoods displayed at supermarket checkouts in Melbourne, Australia. *Health Promotion Journal of Australia, 17*, 124-127.
- Donovan, R. (2011). Social marketing's mythunderstandings. *Journal of Social Marketing, 1*, 8-16.
- Donovan, R., & Henley, N. (2010). *Principles and practice of social marketing: An international perspective*. Cambridge, UK: Cambridge University Press.
- Drewnowski, A., & Darmon, N. (2005). Food choices and diet costs: An economic analysis. *The Journal of Nutrition, 135*, 900-904.
- Ferguson, M., O'Dea, K., Chatfield, M., Moodie, M., Altman, J., & Brimblecombe, J. (2015). The comparative cost of food and beverages at remote Indigenous communities, Northern Territory, Australia. *Australian and New Zealand Journal of Public Health*. Advance online publication. doi:10.1111/1753-6405.12370
- Gander, P. (2005, November 10). See me, feel me, touch me... *Marketing Week*, pp. 39-40.
- Glanz, K., & Yaroch, A. L. (2004). Strategies for increasing fruit and vegetable intake in grocery stores and communities: Policy, pricing, and environmental change. *Preventive Medicine, 39*, 75-80.
- Gordon, R. (2011). Critical social marketing: Definition, application and domain. *Journal of Social Marketing, 1*, 82-99.
- Gordon, R. (2013). New ideas—fresh thinking: Towards a broadening of the social marketing concept? *Journal of Social Marketing, 3*, 200-205.
- Grunert, K. G. (2002). Current issues in the understanding of consumer food choice. *Trends in Food Science & Technology, 13*, 275-285.
- Hamilton, A. (1981). *Nature and nurture: Aboriginal child-rearing in north-central Arnhem Land*. Canberra: Australian Institute of Aboriginal Studies.
- Health Habitat. (2013). *Housing for health—The guide*. Retrieved from <http://www.housingforhealth.com/the-guide/improving-nutrition-the-ability-to-store-prepare-and-cook-food/>
- Henryks, J., Brimblecombe, J., & Bidstrup, G. (2014). *Supporting healthier food choices in remote Indigenous communities: Developing a food choice app*. Proceedings of the 2014 International Food Marketing Conference. Retrieved from <http://instituteofpm.com/wp/proceedings/>
- Inman, J. J., Winer, R. S., & Ferraro, R. (2009). The interplay among category characteristics, customer characteristics, and customer activities on in-store decision making. *Journal of Marketing, 73*, 19-29.
- Kouris-Blazos, A., & Wahlqvist, M. (2000). Indigenous Australian food culture on cattle stations prior to the 1960s and food intake of older Aborigines in a community studied in 1988. *Asia Pacific Journal of Clinical Nutrition, 9*, 224-231.
- Kral, I. (2012). *Talk, text and technology*. Bristol, UK: Multilingual Matters.
- Kruske, S., Belton, S., Wardaguga, M., & Narjic, C. (2012). Growing up our way: The first year of life in remote Aboriginal Australia. *Qualitative Health Research, 22*, 777-787.
- Lee, A., Rainow, S., Tregenza, J., Tregenza, L., Balmer, L., Bryce, S., . . . Schomburgk, D. (2015). Nutrition in remote Aboriginal Communities: Lessons from Mai Wiru and the Anangu Pitjantjatjara Yankunytjatjara Lands. *Australian and New Zealand Journal of Public Health*. Advance online publication. doi:10.1111/1753-6405.12419
- Lee, A. J., Bonson, A. P., & Powers, J. R. (1996). The effect of retail store managers on Aboriginal diet in remote communities. *Australian and New Zealand Journal of Public Health, 20*, 212-214.
- Lee, A. J., Hobson, V., & Katarski, L. (1996). Review of the nutrition policy of the Arnhem Land Progress Association. *Australian and New Zealand Journal of Public Health, 20*, 538-544.
- Lee, N., Rothschild, M., & Smith, W. (2011). *Social marketing defined*. Retrieved from <http://socialmarketingquarterly.com/learn>
- Lee, N. R., & Kotler, P. (2011). *Social marketing: Influencing behaviors for good*. Thousand Oaks, CA: SAGE.
- Lefebvre, R. C. (2011). An integrative model for social marketing. *Journal of Social Marketing, 1*, 54-72.
- Leonard, D. (2003). *FoodNorth: Food for health in north Australia*. Retrieved from www.healthinfonet.ecu.edu.au/uploads/resources/4053_foodnorth.pdf
- Martin, N., & Morich, K. (2011). Unconscious mental processes in consumer choice: Toward a new model of consumer behavior. *Journal of Brand Management, 18*, 483-505.
- McDonnell, S., & Martin, D. F. (2004). *Indigenous community stores in the "frontier economy": Some competition and consumer issues* (Discussion Paper No. 234/2002). Canberra: Centre for Aboriginal Economic Policy Research, The Australian National University.
- McMillan, S. J. (1991). Food and nutrition policy issues in remote Aboriginal communities: Lessons from Arnhem Land. *Australian Journal of Public Health, 15*, 281-285.
- Meedeniya, J., Smith, A., & Carter, P. (2000). *Food supply in rural South Australia: A survey on food cost, quality and variety*. Adelaide, Australia: Eat Well SA.
- Menzies School of Health Research. (2013). *Shelf talker report: Developing a resource package for promoting nutrition in remote Indigenous community stores using shelf labels*. Retrieved from http://www.menzies.edu.au/page/Resources/Talking_about_shelf_labels/
- Mitchell, V. W., & Harris, G. (2005). The importance of consumers' perceived risk in retail strategy. *European Journal of Marketing, 39*, 821-837.
- National Health and Medical Research Council. (2000). *Nutrition in Aboriginal and Torres Strait Islander peoples: An information paper*. Retrieved from www.nhmrc.gov.au/_files_nhmrc/publications/attachments/n26.pdf

- National Health and Medical Research Council. (2013). *Australian dietary guidelines summary*. Retrieved from https://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/n55a_australian_dietary_guidelines_summary_131014.pdf
- Nilson, C., Kearing-Salmon, K. A., Morrison, P., & Fetherston, C. (2015). An ethnographic action research study to investigate the experiences of Bindjareb women participating in the cooking and nutrition component of an Aboriginal health promotion programme in regional Western Australia. *Public Health Nutrition, 18*(18), 3394-3405.
- Outback Stores. (n.d.). *Health and nutrition*. Available from <http://outbackstores.com.au/>
- Oxfam Australia. (2009). *Close the gap: Indigenous health in crisis*. Melbourne: Author.
- Peterson, N. (1993). Demand sharing: Reciprocity and the pressure for generosity among foragers. *American Anthropologist, 95*, 860-874.
- Pettigrew, S., Jongenelis, M. I., Moore, S., & Pratt, I. S. (2015). A comparison of the effectiveness of an adult nutrition education program for Aboriginal and non-Aboriginal Australians. *Social Science & Medicine, 145*, 120-124.
- Puccinelli, N. M., Goodstein, R. C., Grewal, D., Price, R., Raghurip, P., & Stewart, D. (2009). Customer experience management in retailing: Understanding the buying process. *Journal of Retailing, 85*, 15-30.
- Rowley, K. G., Daniel, M., Skinner, K., Skinner, M., White, G. A., & O'Dea, K. (2000). Effectiveness of a community-directed "healthy lifestyle" program in a remote Australian Aboriginal community. *Australian and New Zealand Journal of Public Health, 23*, 136-144.
- Russell-Bennett, R., Wood, M., & Previte, J. (2013). Fresh ideas: Services thinking for social marketing. *Journal of Social Marketing, 3*, 223-238.
- Sacks, G., Swinburn, B., & Lawrence, M. (2009). Obesity policy action framework and analysis grids for a comprehensive policy approach to reducing obesity. *Obesity Reviews, 10*, 76-86.
- Saethre, E. (2005). Nutrition, economics and food distribution in an Australian Aboriginal community. *Anthropological Forum, 15*, 151-169.
- Saethre, E. (2011). Demand sharing, nutrition and Warlpiri health: The social and economic strategies of food choice. In Y. Musharbash & M. Barber (Eds.), *Ethnography and the production of anthropological knowledge* (pp. 175-186). Canberra: The Australian National University E Press.
- Scelza, B. A. (2012). Food scarcity, not economic constraint limits consumption in a rural Aboriginal community. *Australian Journal of Rural Health, 20*, 108-112.
- Schouten, K., Lindeman, M. A., & Reid, J. B. (2013). Nutrition and older indigenous Australians: Service delivery implications in remote communities. A narrative review. *Australasian Journal on Ageing, 32*, 204-210.
- Seymour, J. D., Lazarus Yaroch, A., Serdula, M., Blanck, H. M., & Khan, L. K. (2004). Impact of nutrition environmental interventions on point-of-purchase behavior in adults: A review. *Preventive Medicine, 39*, 108-136.
- Smith, D. E., & Daly, A. (1996). *The economic status of Indigenous Australian households: A statistical and ethnographic analysis*. Canberra: Centre for Aboriginal Economic Policy Research, Australian National University.
- Story, M., Neumark-Sztainer, D., & French, S. (2002). Individual and environmental influences on adolescent eating behaviors. *Journal of the American Dietetic Association, 102*, S40-S51.
- Stronger Futures in the Northern Territory Act. (2012). Retrieved from <http://www.comlaw.gov.au/Details/C2012A00100>
- Sustainable Consumption Roundtable. (2006). *Looking back, looking forward: Lessons in choice editing for sustainability. 19 case studies into drivers and barriers to mainstreaming more sustainable products*. Retrieved from www.sd-commission.org.uk/publications.php?id=1046
- Taylor, A. (2012). Information communication technologies and new Indigenous mobilities? Insights from remote Northern Territory communities. *Journal of Rural and Community Development, 7*, 59-73.
- Taylor, J., & Westbury, N. (2000). *Aboriginal nutrition and the Nyirranggulgung health strategy in Jawoyn country* (Research Monograph No. 19). Canberra: Centre for Aboriginal Economic Policy Research, The Australian National University.
- Triandis, H. C. (1977). *Interpersonal behavior*. Monterey, CA: Brooks/Cole.
- Ulubasoglu, M., Mallick, D., Wadud, M., Hone, P., & Haszler, H. (2010). *Food demand elasticities in Australia* (Economics Series SWP 2012/17). Victoria, Australia: Faculty of Business and Law, Deakin University.
- Vidgen, H. A., & Gallegos, D. (2012). *Defining food literacy, its components, development and relationship to food intake: A case study of young people and disadvantage*. Retrieved from <http://eprints.qut.edu.au/53786/>
- Vos, D. T., Barker, B., Begg, S., Stanley, L., & Lopez, A. D. (2009). Burden of disease and injury in Aboriginal and Torres Strait Islander peoples: The Indigenous health gap. *International Journal of Epidemiology, 38*, 470-477.
- Vos, D. T., Barker, B., Stanley, L., & Lopez, A. D. (2007). *The burden of disease and injury in Aboriginal and Torres Strait Islander peoples 2003*. Centre for Burden of Disease and Cost-Effectiveness, School of Population Health, University of Queensland. Retrieved from <http://www.crcah.org.au/sites/default/files/docs/Indigenous-BoD-Report.pdf>
- Wahlqvist, M. L., Kouris, A., Gracey, M., & Sullivan, H. (1991). An anthropological approach to the study of food and health in an indigenous population. *Food and Nutrition Bulletin, 13*, 145-149.
- Wymer, W. (2011). Developing more effective social marketing strategies. *Journal of Social Marketing, 1*, 17-31.

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