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## A Systematic Review of Physical Activity and Nutritional Social Marketing Campaigns

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## 1. Introduction

The rationale for undertaking this systematic review is to identify literature in relation to social marketing campaigns with specific attention paid to their influence on children and young people. The review aims to identify the key components of social marketing campaigns adopted by programme designers to affect the behaviour of children and young people in terms of their healthy eating and physical activity choices. Contextualising previous published experiences of relevant social marketing campaigns will help to determine the future direction of Activ8 Eatwell and other Sport Northern Ireland campaigns. These considerations and the evaluation itself will inform recommendations for the future development of Activ8 Eatwell.

## 2. Justification for the systematic review

A review of literature is a necessary part of this project to understand existing knowledge in this field. However, the traditional approach has been criticised for a lack of thoroughness (Tranfield, Denyer, & Smart, 2003) and for employing a 'biased sample of the full range of the literature on the subject' (Torgerson, 2003, p. 5). The argument is that the traditional literature review does not adopt a scientific or systematic approach and therefore the selection of papers included or excluded may reflect the biases of the reviewer who collects and interprets the studies. In comparison the systematic review of literature is based on an explicit, rigorous and transparent methodology (Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004). The aim of the review is to minimise bias through literature searching while providing a systematic, transparent and replicable audit trail of decision making, procedures and conclusions through the reviewing process (Tranfield., 2003). To test the procedure, an individual should be able to follow the reported audit trail and end with the same search results.

## 3. Planning the Review

The initial stage in the review planning stage was to form a review panel and hold meetings to discuss the reviewing process and decisions relating to the inclusion and exclusion of literature.

### 3.1. Review panel

The following panel was selected because of their expertise and prior involvement and understanding of the Activ8 Eatwell evaluation.

1. Simon Shibli
2. Richard Coleman
3. Richard Moore

The first meeting to discuss the work was held on the 1st September and subsequent discussions took place both face to face and via email.

### 3.2. Scoping study

An initial scoping study was conducted at this stage to establish a brief overview of the related topics in the field, including theoretical, practical and methodological history and key discussions (Tranfield *et al.*, 2003). This study focused on social marketing studies previously conducted, evaluations of previous campaigns and other literature which describe the theory or processes involved in social marketing.

### 3.3. Review protocol

A review protocol was conducted to describe each step to limit bias and ensure an efficient process. This includes the specific questions considered by the study, the search strategy and the criteria for inclusion or exclusion of literature. The following criteria were identified by the review panel for inclusion and exclusion of literature:

1. Academic relevance;
2. Only studies produced in the English language;
3. The publication date was post 1985; and
4. The publication length was required to be more than 3 pages.

#### 4. Conducting a review

When conducting the review, each stage should be recorded and therefore be traceable, allowing for the study to be replicated by others. Appropriate databases were identified to discover relevant articles. Electronic databases allow for a systematic approach to be adopted although certain book chapters may not be included as journals are the most prominent form of literature. The following list of databases were judged as being suitable for the purposes of the study in relation to social marketing, physical activity and nutrition which are the primary themes of the Activ8 Eatwell programme.

- |  |  |
|--|--|
| 1. Google scholar  | 5. International Bibliography of the Social Sciences |
| 2. SportDiscus   | 6. Web of Science                                    |
| 3. Scopus  |  |
| 4. ASSIA Applied Social Sciences Index and Abstracts (CSA) |  |

Further progress was made by identifying an appropriate list of search terms which would identify relevant literature relevant to the project. These search terms were then used in strings to maximise the opportunity for identifying literature linked to certain keywords. The following search terms were chosen by the review panel.

- |                     |                       |
|---------------------|-----------------------|
| 1. social marketing | 8. nutrition          |
| 2. children         | 9. sport              |
| 3. young people     | 10. physical activity |
| 4. campaigns        | 11. health            |
| 5. impacts          | 12. best practice     |
| 6. interventions    | 13. school            |
| 7. success          |                       |

Search strings were then created from these search terms to reduce the volume of literature searched and to increase relevance. Eight search strings were identified by the review panel.

1. social AND marketing AND (children or young people)
2. social AND marketing AND (children or young people) AND (health or nutrition or physical activity or sport)
3. social AND marketing AND (children or young people) AND (health or nutrition or physical activity or sport) AND (success or best practice or impacts)
4. social AND marketing AND (children or young people) AND (health or nutrition or physical activity or sport) AND (success or best practice or impacts) AND (school)
5. social AND marketing AND (success or best practice or impacts) AND (school)
6. social AND marketing AND (children or young people) AND (campaigns or interventions) AND (success or best practice or impacts)

##### 4.1. Literature search

To identify the literature, keywords were entered into the databases in September 2010. The following table shows the results of these searches for each string. These databases are constantly updated and therefore entering the same keywords into the database on a different date may yield different results.

<b>Keyword Combination 1 - social AND marketing AND (children or young people)</b>		
<b>Databases</b>	<b>Results</b>	<b>Date</b>
Google scholar	49	3rd of September 2010
SPORTDiscus	68	3rd of September 2010
Scopus	265	3rd of September 2010
ASSIA	56	3rd of September 2010
Food Science and Technology Abstract	31	3rd of September 2010
Web of Science	223	3rd of September 2010

**Keyword Combination 2 - social AND marketing AND (children or young people) AND (health or nutrition or physical activity or sport)**

Databases	Results	Date
Google scholar	79	3rd of September
SPORTDiscus	57	3rd of September
Scopus	64	3rd of September
ASSIA	41	3rd of September
Food Science and Technology Abstract	25	4th of September
Web of Science	2	4th of September

**Keyword Combination 3 - social AND marketing AND (children or young people) AND (health or nutrition or physical activity or sport) AND (success or best practice or impacts)**

Databases	Results	Date
Google scholar	114	4th of September
SPORTDiscus	10	4th of September
Scopus	6	4th of September
ASSIA	0	4th of September
Food Science and Technology Abstract	4	4th of September
Web of Science	0	4th of September

**Keyword Combination 4 - social AND marketing AND (children or young people) AND (health or nutrition or physical activity or sport) AND (success or best practice or impacts) AND (school)**

Databases	Results	Date
Google scholar	339	4th of September
SPORTDiscus	0	4th of September
Scopus	2	4th of September
ASSIA	0	4th of September
Food Science and Technology Abstract	1	4th of September
Web of Science	0	4th of September

**Keyword Combination 5 - social AND marketing AND (success or best practice or impacts) AND (school)**

Databases	Results	Date
Google scholar	49	5th of September
SPORTDiscus	33	5th of September
Scopus	31	5th of September
ASSIA	0	5th of September
Food Science and Technology Abstract	5	5th of September
Web of Science	0	5th of September

**Keyword Combination 6 - social AND marketing AND (children or young people) AND (campaigns or interventions) AND (success or best practice or impacts)**

Databases	Results	Date
Google scholar	154	5th of September
SPORTDiscus	2	5th of September
Scopus	10	5th of September
ASSIA	15	5th of September
Food Science and Technology Abstract	4	5th of September
Web of Science	0	5th of September

## 4.2. Conducting data extraction

The literature review was conducted on 8 databases and 1,739 results were returned. The results were then reduced to 1,696 once 43 duplicates had been removed. Two additional references were identified which did not follow the systematic process but were included to inform the structure and style of the systematic review. These sources were selected for their value to the production of previous systematic reviews conducted by the Sport Industry Research Centre. In all, the title and abstract of 1,698 papers were screened for inclusion by one reviewer (Richard Moore) using a manual process of inclusion and exclusion, according to the review protocol. Sources were then screened for their relevance to A&E with particular consideration to components or experiences of social marketing campaigns. Overall, 48 articles were stored and read electronically as they were deemed relevant to the project and 34 were subsequently included in the review.

Databases	Total	Included
Google scholar	784	23
SPORTDiscus	170	2
Scopus	378	1
ASSIA	112	2
Food Science and Technology Abstract	70	2
Web of Science	225	2
Duplicates	43	
Additional references	2	2
<b>Total</b>	<b>1,698</b>	<b>34</b>

As the purpose of the systematic review of literature is to help inform SNI's development of Activ8 Eatwell, the review panel decided that the structure should be thematic. This approach reviewed key themes or components from other comparable social marketing campaigns which may have contributed to their effectiveness. The literature referred to within each theme may help to develop new practices to be utilised within the Activ8 Eatwell programme or conversely allow for current practices to be reinforced with research evidence. Critical success factors are identified from the literature and summarised after each theme.

## 5. Findings

### 5.1. Social Marketing

Evidence from the literature indicates that social marketing can be used to improve healthy eating and physical activity behaviours of people who are exposed to such an intervention (Foster *et al.*, 2008; Huhman *et al.*, 2007; Johnson *et al.*, 2007; Peterson *et al.*, 2005; Pollard *et al.*, 2008; Webber *et al.*, 2008). In order to identify the effectiveness of such social marketing campaigns it is important to establish what the key components of a social marketing campaign should comprise in order for it to have an optimum chance of success. Various authors (Gordon *et al.*, 2006; Stead *et al.*, 2006; Sensiper 1999) refer to the example of Andreasen (1995) and his 6 theoretical benchmarks (see Figure 1) which provide a fundamental basis for the composition of a social marketing campaign.

Figure 1: Social Marketing Benchmark Criteria - from Andreasen (1995, p. 6)

Benchmark	Explanation
1. Behaviour Change	Intervention seeks to change behaviour and has specific measurable behavioural objectives
2. Consumer Research	Formative research is conducted to identify target consumer characteristics and needs. Intervention elements are pre-tested with the target group.
3. Segmentation & Targeting	Different segmentation variables are considered when selecting the intervention target group.
4. Marketing Mix	Intervention strategy is tailored for the selected segment/s. Intervention consists of promotion (communications) plus at least one other marketing 'P' ('product', 'price', 'place'). Other Ps might include 'policy change' or 'people' (e.g. training is provided to intervention delivery agents).
5. Exchange	Intervention considers what will motivate people to engage voluntarily with the intervention and offers them something beneficial in return. The offered benefit may be intangible (e.g. personal satisfaction) or tangible (e.g. rewards for participating in the programme and making behavioural changes).
6. Competition	Intervention considers the appeal of competing behaviours (including current behaviour). Intervention uses strategies that seek to minimise the competition.

Andreasen's 6 benchmarks are widely acknowledged to be best practice for the creation of a purposeful social marketing campaign. This review follows a linear approach using the 6 benchmarks as the structure of the review themes to identify comparable components of other social marketing campaigns to inform the future development of Activ8 Eatwell. Other areas of relevance in the literature will form sub themes in relation to each of Andreasen's benchmarks.

#### *Critical success factor*

- Establish the key components of social marketing, utilising experiences of previous campaigns in relation to Andreasen's 6 benchmarks to initiate or develop an effective campaign.

#### *5.2. Behaviour change*

The aim of any social marketing campaign is to achieve behaviour change for a select target group. Social marketing therefore utilises other areas of knowledge from psychology, sociology, anthropology and communications theory to understand how behaviour can best be influenced (Kotler & Zaltman, 1971). Andreasen's (2005) definition of social marketing describes the relationship between commercial marketing and its role in improving the welfare of individuals and society as a whole through behaviour change.

*Social marketing is the application of commercial marketing technologies to the analysis, planning, execution and evaluation of programs designed to influence the voluntary behaviour of target audiences in order to improve their personal welfare and that of society (p. 7).*

This definition suggests that any sustained behaviour change must be achieved through voluntary action initiated by the participant involved in the intervention. Stead, Gordon, & Angus (2007) concurs with this notion, adding that a social marketing campaign must not coerce or enforce the message onto the target audience. A campaign which utilises the positive nature of the campaign message communicated in an effective manner should be able to achieve change without having to scare or coerce an individual into change. This aspect of a campaign is vital, especially when considering that such behaviour change can only occur after a sustained long term campaign according to Wong *et al* (2004), especially in relation to physical activity interventions. Programmes implemented over a long term period such as the *North Karelia Project* which achieved a lowering of cardiovascular disease in Finland, should be acknowledged as having increased chances of achieving a positive effect on the target group (Gordon, Mcdermott, Stead, Angus, & Hastings, 2006).

There are many competing factors which might influence behaviour change in children and young people in terms of increasing their physical activity levels and adopting or maintaining a healthy lifestyle. Therefore, it is important for any social marketing campaign to be explicit in what behavioural change the campaign aims to effect and how this will be measured. Various measures are referred to in the literature to measure behaviour change in terms of the physical activity levels of children (Read, 2009; Stead *et al.*, 2006; Wong, 2008). Three interventions which used different methods to measure the physical activity levels of its target audience include *CATCH*, *VERB* and *M-Span*. The *CATCH* programme, which devised a social marketing plan specifically aimed at parents to improve children's health, used 'time spent', frequency of physical activity behaviour and levels of expended energy (kilocalories) to measure levels of children's physical activity. *M-Span*, a physical activity programme which aimed to implement policy changes to create healthier school environments, used 'time spent' and levels of expended energy to monitor physical activity. The *VERB* campaign, a national campaign which aimed to increase physical activity amongst young people, used frequency of physical activity behaviour to measure the project outcomes.

Evaluations of all these programmes discovered behavioural changes in terms of 'time spent' or frequency of physical activity. These results were mostly self reported and it is important to consider the judgement of Klesges, Eck, Mellon, Fulliton, Somes, & Hanson, (1990) who suggested that self report measures can be problematic as some studies show reported lower fitness levels of participants despite a self-reported increase in physical activity. This suggests that some participants may overestimate such figures. Moreover, Gordon *et al* (2006) suggests that the use of an outcome measure based on a commonly accepted physical activity score would provide better comparative work. Other outcome measures that monitor the physiological outcomes of social marketing campaigns include monitoring people's blood pressure, cholesterol level and Body Mass Index (Read, 2009). Some of these measures require specialist equipment and may be resource intensive and therefore some campaigns have collaborated with universities or health professionals to support this process.

Nutritionists have been sceptical in the past as to whether social marketing campaigns can affect the behaviour of young children especially in relation to food choice behaviour (Young, Anderson, Beckstrom, Bellows, & Johnson, 2004). Conversely, Johnson, Bellows, Beckstrom, & Anderson (2007) suggested that children can in an ecologically valid setting learn to like new foods when given repeated opportunities to 'explore, experience and ingest new foods' (p. 51) in a positive learning environment. Evidence suggests that limited exposure to foods can also lessen food acceptance and may significantly impact a child's health status and eating patterns both for the short and long-term (Johnson *et al.*, 2007). Moreover, 'positively influencing food preferences during childhood may lead to the establishment of lifelong healthy food habits' (Johnson *et al.*, 2007, p. 44).

In terms of impacting on children's eating behaviour, Read (2009) stated that it is important to tackle all barriers which affect children's nutrition choice which according to the literature may include 'limited finances, food pricing, food insecurity, lack of time, availability and accessibility, convenience of fast food and ethnic restaurants, fear of new or different fruits and vegetables, and food advertising' (p.78). An example of a healthy eating programme is *The Food Friends - Making New Foods Fun for Kids* programme, a 12 week health intervention which aims to increase preschool children's willingness to try new foods and establish a strong foundation for children to adopt a healthy lifestyle. To achieve this goal they used a varied methodology which included a thematic approach to introduce food related vocabulary, role modelling and to reinforce the programme message using food tasting (Johnson *et al.*, 2007). Foods were also rated by participant preferences for certain foods during taster sessions. The results showed that the tendency over time was for affective ratings to increase for certain foods in the experimental group compared with a greater amount of foods rated negatively in the control group (Johnson *et al.*, 2007, p. 52). These findings corroborate previous research that children's food preferences are linked to experience and that this may 'overcome attributes (like bitter taste and low energy density) which are considered to be impediments to the acquisition of food preferences' (Johnson *et al.*, 2007, p. 52). Moderate success was also reported for an Australian social marketing programme called *The Go for 2&5*<sup>®</sup> campaign. The methodology used to improve the nutritional choices of children included booklets, posters, recipe cards, special events and food demonstrations of fruit and vegetable recipes, both in school and around the community. The programme achieved a 0.8 increase in the number of servings of fruit and vegetables per day for children involved (Pollard, et al., 2008). More research would help to provide a basis with which a healthy eating and physical activity intervention could be monitored in unison to report on the overall benefits of an intervention similar to *Activ8 Eatwell*.

Other studies reviewed by Read (2009) regarding nutrition behaviour change included "18 studies that determined the impact on fruit and vegetable intake, of which 10 achieved improvements; 18 studies assessed fat intake, of which 8 had a positive effect, and 15 studies looked at other nutrition behaviours like sodium and fibre intake, 6 of which had positive results' (p: 54). Some social marketing campaigns have achieved success by using other measures to demonstrate both the intrinsic and social value to the individual of participating in a particular programme. These methods included psychosocial measures such as self-efficacy for physical activity or social support for physical activity, and physiological outcomes (Stead *et al.*, 2007). Overall it seems that the best approach is to use mixed methods which fit the aims of the campaign, generating results which are evidence based.

The *VERB* campaign also reported a positive effect in terms of psychosocial factors with regards to outcome expectations, social influences and self efficacy (Huhman, Potter, Duke, Judkins, Heitzler, & Wong, 2007). The campaign used two processes to 'downstream' or to change directly individual behaviour through the campaign resource but to also 'upstream' on the structures and processes which bring about societal change (Wong, et al., 2004). The rationale was that to adopt a sustainable approach to behaviour change, society itself needed to take responsibility for removing the barriers which impact on the choices of young people (Wong, et al., 2004). To achieve societal change through community mobilisation, a partnership team was set up to build relationships in the local community and partnerships with organisations who were already involved with young people (Wong, et al., 2004).

#### *Critical success factors*

- Behaviour change must be achieved through voluntary action from the individuals involved in the intervention within a positive non coercive environment.
- The intervention should be delivered over a long term period to increase the opportunity for change to occur through affecting the individual and challenging the barriers within society.



- Various competing factors mean that behaviour change must be explicit within the programme using a variety of methods to monitor the effectiveness of the programme which are not solely reliant on self reporting measures.

### *5.3. Parental engagement*

Social marketing campaigns can also help parents influence their children's behaviours (Evans, 2008). Parents are the gatekeepers in terms of what children eat at home and often influence the amount of physical activity in which a child participates, away from school. According to Sensiper (1999): 'The principles of social marketing can help managers and educators develop strong and persuasive parent-involvement programs that can play an important role in the lives of many children' (p. 20). The engagement of parents should be achieved using a customer orientated approach. Programme designers need to understand the needs wants, values and perceptions of parents. The *CATCH* programme, devised a social marketing plan specifically aimed at parents to improve children's health. A planning committee was set up, which included project managers, and other community members who had a stake in the programme (Read, 2009). Other members of the community, school or target population were also invited to support the programme in other ways (Read, 2009). By contrast, the *VERB* campaign used a combination of in-school activity and community-based activities to engage with parents and tweens (i.e 8-14 year olds). The literature points to various examples of programmes which aim to engage children through their parents. Although, Activ8 Eatwell does not currently adopt this approach (apart from letters home and diaries), evidence suggests the expansion of the programme to enable greater parental involvement has the potential to impact positively on children's behaviour both in school and at home.

#### *Critical success factors*

- Use a customer orientated approach to engage parents in the programme to understand the needs, wants and values so they can also influence their children's behaviour in a positive manner.
- Involve parents at every stage of the programme through the initiation of a planning committee and engage them in the delivery of the programme both within school and in the community.

### *5.4. Social diffusion*

Affecting people's behaviour can often be cumulative and help to spread or diffuse the message to others who can then be impacted indirectly via the social marketing campaign. This concept is known as social diffusion which is when 'an idea perceived as new is communicated through certain channels over time among the members of a social system' (Dearing, Maibach, & Buller, 2006, p. S12). This diffusion creates a 'domino effect' which leads to an increase in the amount of people impacted by the intervention over time (Dearing *et al*, 2006). The activation of inter personal networks within social marketing programmes can accelerate the rate of adoption according to Morris and Clarkson (2009) who suggest that 'a social marketing approach would use networks proactively as part of the marketing mix in order to bring about change' (p. 138). They also suggest that social networks can be used to target people with the same demographic variables, attitudes, beliefs and values. It is therefore recommended that this kind of approach should target the most influential members of social networks to create rapid change amongst certain groups. Conversion between social marketing campaigns and diffusion theory can increase effectiveness in physical activity promotion and behaviour change (Dearing *et al*, 2006). This phenomenon represents a powerful process to increase the rate of adoption of the campaign message. Further research would need to be undertaken to understand how this process can be adopted in a practical setting especially when considering the potential utilisation of internet social networks which are a major influence on children and young people.

#### *Critical success factors*

- Adopt the process of social diffusion by targeting social networks or people with similar demographic variables where the message of the programme can be effectively carried from person to person with the aim of influencing a greater proportion of society.
- Attempt to target the most influential members of these networks to increase the rate of behaviour change.

### 5.5. Consumer Research

Gordon, Mcdermott, Stead, Angus, & Hastings, (2006) discovered that interventions in other comparable countries were achieving better results in terms of behaviour change using a dynamic customer focused methodology within social marketing campaigns. This sparked the National Review by the National Consumer Council (now Consumer Focus) to develop efforts in this field within the United Kingdom. Many social marketing programme designers have therefore embedded a customer focussed approach to increase the chances of voluntary behaviour change (Wong *et al*, 2008. Thomas *et al* 2009). Formative research is often the first step in creating a marketing plan for a social marketing campaign. Programme designers often conduct formative research in the form of focus groups or interviews with the target group or others directly involved with the target group (Wong *et al*, 2004. Young *et al*, 2004. Read, 2009). This approach allows for a thorough understanding of the target group's experiences, values and needs, to shape the initial programme.

A difficulty facing programme designers at the pilot stage is being able to widen or grow the programme and make it scalable to affect a larger target group. According to Dearing *et al* (2006) it is important to consider what has gone before in terms of 'prior experience, on the job trial and error, anecdotal evidence, observation of other programs, conference presentations and brochures to modify a Social Marketing programme' (p. 11). The authors also state that many health promotion programmes are modified depending upon 'what makes sense' to the practitioner and in the environment where the intervention exists. The importance of implementing a scalable programme according to Dearing *et al* (2006, p. 11) is that they need to reflect the 'realities of practice under everyday conditions'. It is therefore crucial that each programme is designed according to the target group and the environment and to react accordingly to any changes that exist with both the target group and the environment. Even within a social marketing campaign experiences can differ at different locations with members of the same target group. Therefore even the same programme which has proved effective in one school or area may not achieve the same desired effect in another school or area. Formative research in each location where the campaign exists may have to be undertaken to achieve the desired behaviour change.

Young *et al* (2004) wrote that the target audience should be studied and feedback sought during every 'formative stage' of the programme because if the audience is directing the programme then this should increase the opportunity for behaviour change to occur. A similar approach was used during *The Food Friends - Making New Foods Fun for Kids* programme (Bellows, Anderson, Gould, & Auld, 2008). A process of continuous evaluation was used whereby, if any health related problems were discovered, researchers could question participants 'values, opinions, interests, learning characteristics, occurrence of targeted behaviour and preferred media outlets' to react and refine the programme to maximise the opportunity for successful behaviour change (Bellows *et al*, p.170). Furthermore, 'researchers must understand what drives, facilitates and maintains the behaviour of the target audience, as well as the channels of information distribution and communication preferred by the target audience' (Bellows *et al*, p. 170).

Most social marketing campaigns are underpinned by behavioural science theory and models. Jackson (1997) declared that theory-informed practice provides the best available information about people's behaviour and can therefore support practitioners' aims to change health related behaviour. Due to the complexity and array of social science theories it is important to consider other factors before using a theory to underpin a social marketing plan. Van Ryn and Heaney (1992) suggest that organisations should choose a theory which has been tested in populations and settings which are similar to the planned intervention. In a *Review of the Effectiveness of Social Marketing Physical Activity Interventions*, 22 social marketing campaigns relating to healthy eating and physical activity were analysed (Read, 2009). Seven of these interventions were classroom based, teaching the benefits of physical activity and risks of sedentary lifestyles. All of these interventions aimed to; increase participants' knowledge of physical activity; highlight dangers of inactivity; and advice on methods to increase levels of physical activity for each person. Five of these interventions followed Social Cognitive or Learning Theory while one used the Trans Theoretical Model. Other models used by programme designers included the Relapse Prevention Model, Structural / Ecological Model of Health Behaviour, Social Marketing Framework and Community Participation. Three of these interventions (*CATCH*, *M-Span*, *VERB*) achieved a significant positive effect on participants' behaviour by increasing participant physical activity levels or intensity of participation. *CATCH* followed Social Cognitive or Learning Theory, Organisational Change Theory and Community Participation. *M-Span* followed the Ecological Model of Health Behaviour and *VERB* followed the Social Marketing Framework.

Read (2009) highlights the importance of using behaviour change theory when targeting parents during a social marketing campaign. For instance, children are often averse to eating healthy foods, but parents with a high

perceived behavioural control are more likely to keep presenting healthy foods, which may positively influence preferences (Hart *et al.*, 2003; Hewitt & Stephens, 2007). Young children tend to copy the eating habits of their parents and 'may also mimic overeating if they see parents engaging in this behaviour' (Lindsay, Sussner, Kim, & Gortmaker, 2006, p. 171). Further research should be undertaken to determine the right theory or mix of theories to determine the campaign direction and overall evaluation.

#### *Critical success factors*

- Conduct formative research at the beginning of the programme with the target group and other members directly involved with this group, to shape the programme.
- Use a mix of previous experience and continuous evaluation to develop or increase the scale of the programme, utilising feedback from stakeholders in the environment where the intervention will take place.
- Underpin the intervention by using a relevant behavioural science theory which has been tested in populations and settings similar to the planned intervention.

#### *5.6. Implementing a programme*

The literature highlights the importance of theoretical principles underpinning an intervention. Conversely, an intervention which is meticulously planned will not achieve its aims unless the programme is delivered effectively. A review of social marketing by Stead *et al* (2007), discovered that some interventions were poorly implemented which could provide evidence that delivery rather than programme theory or design could be to blame for a failed intervention (e.g. Flora *et al*, 1993; Nutbeam *et al*, 1993). Stead *et al* (2007) concluded that if an intervention is based on a sound theoretical framework and incorporates extensive formative research there is a greater likelihood of effectiveness. This needs to be properly implemented on the ground and often problems with support on the frontline can cause a well designed intervention to fail (Stead *et al*, 2007). Continuous feedback of the programme delivery should be sought to ensure that the programme is able to react and improve constantly. Many interventions used a variety of specialists to deliver campaigns which lessened the need for training and ensured that delivery was professionally implemented. Further research would help to determine how additional specialist support could help to both improve and grow the programme through a community based partnership approach.

#### *Critical success factors*

- Ensure that the intervention is delivered effectively as support and delivery can inhabit a well intentioned and meticulously planned intervention.
- Ensure that there is enough support to deliver the programme using specialist or well trained deliverers.

#### *5.7. Segmenting and targeting*

During the formative stages of social marketing planning, designers must consider who the campaign is going to affect in terms of the desired target group and the resources available to the programme. To ensure that resources are used strategically, Sensiper (1999) acknowledges that 'program managers should use resources wisely, necessitating strategic decisions about which specific market to target and which to ignore' (p. 20). Segmentation is defined as 'the process of dividing a population into homogeneous subgroups ("target audiences") to better describe and understand their current behaviors in order to develop messages and to tailor programs to the specific needs of a particular subgroup' (Black, Blue, Kosmoski, & Coster, 2000, p. 323). Moreover, programme designers should 'start their programs by targeting those people or groups most ready to change and then phasing in people who are more difficult to reach' according to Sensiper (1999, p.20).

A programme named *Parents as Teachers* in Missouri, USA was designed to enhance children's behaviour through home visits. A sample population was created and balanced by race, ethnicity, income and educational status. Due to cost, this population was then segmented to only include first time parents and eliminated children at risk of physical or emotional abuse and severely disabled children. As the programme progressed, these additional segments were also included. Read (2009), referred to the *Trial of Activity for Adolescent Girls (TAAG)* initiative which incorporated physical activity messages based upon six segments identified through focus groups. These segments were 1) athletic, 2) preppy, 3) quiet, 4) rebel, 5) smart, and 6) tough (Read, 2009). Researchers noted that participants discussed these social characters rather more than race or ethnicity which further highlights the importance of formative research (Read, 2009). Furthermore, 'the more closely a program is tailored to the needs

and wants of the customer, the more likely the customer will respond in the desired ways' (Sensiper, 1999, p. 17). Within a school environment the segments may include different year groups or adaptations of the programme based around specific segments within a class or year to suit the needs of each individual. Different approaches are therefore required for children who want to achieve certain behaviour changes (healthier lifestyle, more physical activity) than others who may need to maintain such behaviour.

#### *Critical success factors*

- Use resources wisely by segmenting and targeting individuals who fit the target group of the programme or others who are more likely to be influenced by the intervention.
- Design the intervention according to the target group fitting the needs and wants of individuals, to create a situation where the customer is more likely to respond in a desired way to the programme message.

#### *5.8. Marketing Mix*

The literature evidences the importance of adopting the marketing mix or the '4Ps' (price, product, place and promotion) to determine the marketing strategy of a social marketing campaign (Gordon *et al*, 2006; Morris and Clarkson, 2009; Neiger *et al*, 2003). Conversely, Stead *et al* (2007) defined the mix as comprising of '6Ps' which includes product, price, place, promotion/communication, person and policy. This is because a school-based intervention may include a curriculum element, teacher training, materials and home activities (place, promotion/communication, person), whereas an access intervention may include media advocacy, policy development and community activities (place, promotion/communication, policy) (Stead *et al*, 2007). The marketing mix aims to make sense of a mixture of variables involving the target group, to package and present the programme message optimally in order to affect behaviour.

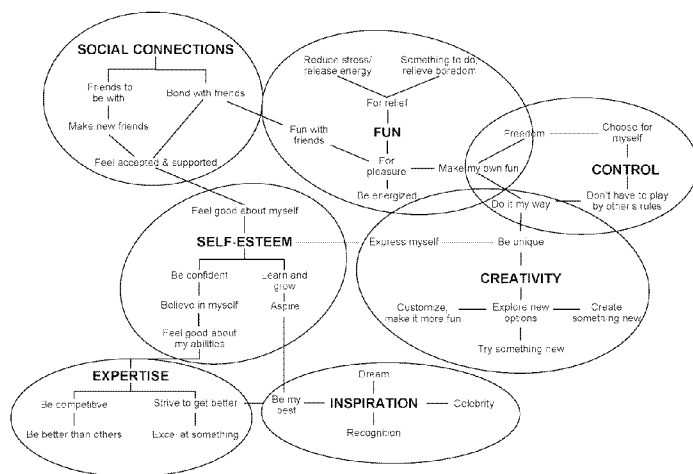
One component of the '4Ps' includes 'price' which refers to 'money costs, opportunity costs, incidental costs, cost to wellbeing and time cost which is the length of time it can take to learn a new skill' (Morris & Clarkson, 2009, p. 138). Teachers involved in *Mighty Moves*, a health initiative aimed at pre-school children, identified cost, a lack of time and available space for physical activity in the classroom as barriers to increased participation (Bellows *et al*, 2009). Comprehensive lessons were therefore developed to include Head Start Child Outcomes requiring little preparation while physical activity lessons were designed for small classroom spaces so that gymnasiums and playgrounds were not required, saving much needed resources (Bellows *et al*, 2009). The programme used various methodologies with a variety of audiences and crucially the '4Ps' were determined for each of these target groups prior to the programme commencing.

Wong (2004) describes 'place' as the situation where the product is made available to the audience. Place is where the 'target audience either performs the behaviour or accesses programs or services and therefore place must be readily available to enable the desired action' (Wong, et al., 2004, p. 3) With regards to the *VERB* campaign, place is where 'tweens' can be physically active in a safe environment, either in a community-based organisation, church, park or recreation department, school, public or private sports organization etc (Wong, et al., 2004). As demand for a programme increases then supply in terms of facilities may also need to increase with the need for greater public or private sector involvement to facilitate such activities.

In terms of promotion, Read (2009) reviewed 6 social marketing campaigns including *VERB* and *Food Friends*. He discovered that 50% of these interventions used paid and unpaid advertising (TV, print, radio), 5 out of 6 used special events and PR. All six programmes used printed materials (posters, newsletters, flyers, cookbooks, brochures, and recipe cards), while some used promotional items, signage and displays, personal encounters with college athletes and also programme websites to promote the campaign (Read, 2009). The *Food Friends* programme used a variety of promotional activities including tasting parties (opportunities for children to try new foods) and print materials, reinforcing the Food Friends characters displayed on posters, food-related storybooks, and newsletters for parents. Other promotional items including magnets, placemats, a memory card game and a puzzle to promote the programme while a theme song was used to promote the campaign message to young people (Read, 2009). The literature also provides some evidence of working with commercial partners to promote a campaign via discounted media formats such as press, television and radio created through motivation to partner a worthy campaign.

'Product' in social marketing is defined as the 'desired behaviour for the targeted audience' (Wong, et al., 2004, p. 2). The overall promotion of the *VERB* campaign was to surround 'tweens' with relevant messages at home, in school and in the community (Heizler, Asbury, & Kusner, 2008). The campaign product was sold 'as can-do, not negative and *don't do*' to empower children to make their own choices in terms of adopting a healthier lifestyle. It also aimed to sell the benefits to young people allied to an increase in physical activity, including making social connections, increasing self esteem, acquiring expertise, being inspired, having fun, being creative and being in control (Wong, Greenwell, Gates, & Berkowitz, 2008). *VERB* campaign planners discovered that there is unlikely to be 'one communication channel in particular that is adequate to exclusively communicate with the target audience, but rather a combination of marketing tactics are needed' (Read, 2009, p. 50). The many dimensions inspired through the *VERB* campaign are displayed in Figure 2.

Figure 2: The many dimensions of physical activity for Tweens. Cited in Wong *et al.* (2008, p 179)



#### Critical success factor

- The principles of the marketing mix should be used to determine the marketing strategy for the social marketing campaign and to tailor the intervention for each target group.

#### 5.9. Exchange Theory

A sub element of the marketing mix is exchange theory, which can improve the opportunity for voluntary behaviour change to occur for people exposed to an intervention. The principle of exchange derives from marketing theory and refers to the transfer of goods between parties (Morris & Clarkson, 2009). Exchange is more complex in social marketing and can involve third parties, intangible benefits and the transfer of values and beliefs. Morris *et al* (2009) suggest that the aim of any social marketing campaign is to create attractive and motivational exchanges with the target audiences. Tangible rewards are one of the most popular methods used by social marketers to enhance the opportunity for voluntary behaviour change to occur. The *Want Strength, Eat Healthy Foods* campaign rewarded students who purchased or brought healthy snacks into school with raffle tickets to win prizes such as bicycles, indoor basketball hoops, jump ropes and calculators (Foster, Sherman, Borradaile, Grundy, Vander Veur, & Nachmani, 2008). Other incentives included t-shirts, financial rewards and team / individual points which can be exchanged for tangible rewards depending upon the amount of participation in a programme (Gordon *et al*, 2006).

Other aspects of a programme which can contribute to the rate of exchange also relate to the intangible benefits that participants may receive during a programme. For instance teachers involved in the *Food Friends Get Movin'* preschool programme suggested that physical activity sessions in the classroom should be 15–20 minutes long and easy to incorporate into the school curriculum (Bellows *et al*, 2008). According to Bellows *et al* (2008) activities should also include "large motor (skills)" and must "keep kids' imaginations engaged" (Bellows *et al*, 2008). Materials should include a variety of theme-driven activities which help to support other areas of the school curriculum. The message of the programme was presented in a colourful programme format with the campaign logo and slogan (Read, 2009). Providing participants with what they want in order to increase their personal satisfaction can therefore help to encourage the process of exchange. Further research may lead to a fusion

between the theory of exchange and the 4th 'p' of promotion to identify suitable materials to both promote the programme and provide tangible or intangible benefits for participants. Comparisons with other programmes may create a menu of options which would be suitable for usage with certain social marketing campaign messages targeting specific groups.

#### *Critical success factor*

- Consider the principle of exchange to increase the opportunity for voluntary behaviour change to occur through the provision of either tangible or intangible benefits, rewards or incentives to participants.

### *5.10. Competition*

Morris and Clarkson (2009) refer to competition as an important consideration when implementing a programme which may include 'factors that compete for people's attention, willingness, or ability to change' (p. 137). The effects of 'the complexity of choice' are not wholly referred to in the literature but are an important consideration in terms of the success or otherwise of a social marketing intervention (Dearing *et al.*, 2006). For instance, Sensiper (1999) states 'each time a customer makes a choice about taking action, she/he must give up an alternative' (p. 20). In terms of physical activity this may include other deliverers whereas for nutrition various food marketers compete to sell their products which may be targeted at the same group as the social marketing programme. In either case it is important to understand what is available in the local community to attempt to affect policy at a local or national level and to work in unison with others to develop a programme's aims. There is a need to adopt strategies which try to minimise competition but also to understand opportunities where competitors may become collaborators to both decrease competition and increase the strength of the campaign promotion and delivery.

#### *Critical success factor*

- Social marketing campaigns have to compete on a number of different levels in order to have any chance of the programme message being adopted. Consideration of these competitors in relation to what is available in the community may help to create various partnerships with different stakeholders to increase an intervention's impact on the community.

### *5.11. Stakeholder involvement*

Evidence from the literature suggests that long term programmes have a greater chance of achieving behaviour change. Furthermore, it can take a long time to establish a social marketing brand which can also help to establish community involvement according to the insight of Wong *et al* (2008) concerning the *VERB* campaign. This programme was recognised nationally and became well established with its target audience. The *VERB* creative team were therefore more willing to accept the use of the *VERB* logo on other products or with other community partners to support local initiatives Wong *et al* (2008). This led to community leaders being enthusiastic about using *VERB* in their locality (Wong *et al*, 2008). In turn, not only was the campaign inspiring children to become more physically active, but local communities were more intent on providing children with places to play (Wong *et al*, 2008) The *VERB* campaign also communicated the need to form community partnerships and coalitions to 'reinforce the media component and initiate community events' (Bauman A., 2004, p. 2) although it acknowledges that community commitment did pose the greatest challenge to the programme's continued success. The *CATCH* programme formed a planning committee including current project members, researchers and other members of the community to increase involvement in the programme (Bartholomew, Parcel, Kok, & Gottlieb, 2006). Member of youth sports leagues, teams, clubs, as well as local church and community leaders' who target similar groups were also invited to join the group Bartholomew *et al*, 2006). The literature also provides examples of collaborations between commercial organisations to promote the brand positioning the campaign closer to a large proportion of the public. Other partners have even created their own sub brands from the main campaign to promote the message tailored towards their own specialist approach.

There is limited evidence relating to social marketing campaigns affecting local or national policy (Stead *et al*, 2007). Policy is often referred to as the '5th P' within the marketing mix because a social marketing campaign may need to change local or national policy to be able to achieve its overall aims (Morris & Clarkson, 2009). Positive examples of campaigns affecting policy, but it is unclear how this can be attributed to an intervention's success. Thomas, Sayers, Godon, & Reilly (2009) noted that using multiple strategies can help to 'leverage policy successes' which can lead to the creation of new policies which may lead to further funding. It is therefore important to be

flexible so that new or unexpected opportunities or influential partners with certain interests can be involved (Thomas *et al*, 2009). The *Bike, Walk and Wheel* programme in Columbia, Missouri aimed to increase physical activity and community awareness of the programme message (Thomas *et al*, 2009). The campaign increased public support and advocacy including a \$3.5 million voter-approved city sales tax to improve pavements around schools and multi modal street design standards. A new network called HHH-W was formed organising a variety of community events. Overall, it is important for social marketing to consider involvement across both the public and private sector to engage stakeholders to develop the programme and increase the potential for effective behavioural change. As the research suggests societal change is important in helping to affect individual behaviour. Even within a school based intervention a change in policy may help to embed an intervention into the school system while other policy changes may help to reinforce the need for such a programme. It is important that policy makers are influenced to ensure that the intervention is high on the agenda and supported throughout its lifespan even if policy change is not a prerequisite to campaign success.

#### *Critical success factors*

- Aim to engage the community and other stakeholders in the programme; to raise awareness of the campaign message; increase support to deliver the campaign; and to grow the programme to increase opportunities to affect peoples behaviour.
- Greater community engagement is the main way to attempt to change policy to enhance the social marketing's position further.

## **6. Conclusion**

The literature presented in this document, provides evidence of the various components which should be considered when creating and developing a social marketing campaign. These components will interact to formulate a campaign with the principal aim of affecting behaviour. The literature suggests that the creation of any social marketing campaign has to focus on affecting behaviour using a varied methodology. Any change in behaviour must be voluntary (i.e achieved within a positive, non-coercive environment) in order for it to be sustained in the long-term. The literature also highlights that an intervention programme should be explicit about the type of behaviour change it aims to influence. Once this is clear, a systematic process using a mixed methods approach to monitor the effectiveness of the programme, should be employed. Measuring physical activity and nutritional changes can often be complex and resource intensive, therefore careful consideration must be paid to ensure that the desired outcomes are measurable. Self reported outcome measures are the most popular form of evaluative technique, although they can be unreliable. Measures for physical activity based upon physiological outcomes or physical activity scores will add more credence to an outcome based evaluation. A plethora of different measures exist for nutritional interventions, however A&E may be a vehicle to develop a combined 'healthy child' framework utilising both physical activity and nutritional measures.

For behaviour change to occur, it is important to understand the target group in the environment in which the intervention is taking place, to define clearly the benefits of the programme relative to the wants, needs and values of participants. Segmentation can provide direction when identifying the target group, especially when considering the resources available to programme developers; while the four Ps provide the basis with which to form an overall marketing plan. Formative research (perhaps using focus groups or interviews) with the target group (or others directly involved with this group) is the first stage in directing the programme both during the initiation phase and subsequently when it expands into different environments. Throughout an intervention, a process of continuous evaluation and reflection on previous experiences will allow the programme to evolve in relation to its target group, and in scale to target other groups. The literature suggests the use of behavioural science theory to help underpin the programme with a theoretical perspective. Using the experiences from previous social marketing campaigns may help to identify an appropriate behavioural science theory which has been tested in a similar environment to that of the intervention. However, such an approach should not inhibit a programme designer's focus on delivery and implementation, which have been suggested as reasons for the failure of some interventions. Moreover, embedding the programme evaluation at the outset will ensure the best chance of longitudinal monitoring, which will help to demonstrate any sustained behavioural change.

The literature points to principles of exchange and social diffusion to improve the rate and opportunity for behaviour change to occur. Both tangible and intangible rewards have been utilised in social marketing campaigns, there is a lack of evidence in terms of what works for different target groups. Largely, a mixed approach of both tangible and intangible rewards have been adopted in the hope of appealing to different individuals to spark their

engagement in a particular programme. Social diffusion is proven to improve the rate of people affected by the programme although controlling this from within is unclear and largely based on the challenging approach of influencing the most powerful members of social networks. In terms of Activ8 Eatwell, a focused approach within schools considering the influence of social networks may prove an interesting next step in developing the programme. There are also a variety of methods used to promote campaigns and provide tangible and intangible rewards to participants according to the literature and this may be something to consider in stimulating and refining the ongoing development of A8E.

Discussions in the review focus on the need for an intervention to stimulate community support in order to change social norms and attempt to change policy. Parents have been identified as important facilitators of change in their children's behaviour. A customer orientated approach should be used to encourage parents which understands their needs, wants and values in order that they adapt the intervention accordingly. Literature suggests that parents should then be involved at every stage of the programme and even guide the programme through involvement in a planning committee to support the delivery of the campaign within schools or the local community. Competition too in terms of physical activity can be a major factor in sustainability. The literature highlights the need to work with, not against, competitors in the hope that organisations can work in partnership with a shared common aim. This may also provide greater support to both deliver and promote the programme within the community.

Overall, the review has considered previous interventions similar to A8E in order to develop and refine the programme. Despite the evaluation of various programmes in the review, there is no definitive step by step guide to developing a social marketing campaign because each differs according to, for example: the target group, environment and competition, and consequently they take on a variety of forms. Notwithstanding this comment, the literature has provided examples of social marketing good practice which SNI and the FSA should consider using in the event of A8E being rolled out across Northern Ireland.



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## Appendix I

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Huhman et al 2005 VERB Wong et al 2004 Bauman 2004	Targeted at children aged 9-13. National campaign in the USA with 9 communities selected for intervention, 6 of which received high dose activities: Los Angeles, Houston, Miami, Greenville, Columbus and Green Bay.	A Multiethnic media campaign combining paid advertisements with school and community promotions and internet activities to encourage children aged 9-13 to be physically active every day. Schools based, underpinned by a social marketing framework. Quasi-experimental, longitudinal design was used.	<ol style="list-style-type: none"> <li>1. Behaviour change goal: To encourage children aged 9-13 to be physically active every day.</li> <li>2. Consumer research: Extensive formative research carried out on target group and parents including focus groups, interviews and ethnographic inquiries.</li> <li>3. Segmentation and targeting: Children aged 9 to 13.</li> <li>4. Marketing mix: Media, community events, promotions, educational materials in schools.</li> <li>5. Exchange: VERB sales package included benefits of physical activity such as enjoyment, spending time with friends and gaining recognition. Various events offering competitions and prizes for participation.</li> <li>6. Competition: VERB campaign's goal was to win or gain a greater market share of time tweens spend on sedentary activities by creating an effective brand and utilizing a design acknowledging competing behaviours such as watching TV, lack of transportation, cost and perceived lack of time.</li> </ol>	<p>Positive effect.</p> <p>Positive effects on physical activity levels of children who were aware of and took part in interventions. Measure: frequency.</p> <p>Knowledge: Positive effect on knowledge outcomes.</p>

Name & Authors	Setting	Intervention	SM Characteristics	Results
Luepker 1996 (CATCH) The Child And Adolescent Trial For Cardiovascular Health Luepker et al 1996 Nader et al 1999 Stone et al 1996	A total of 5106 third grade students from 56 intervention and 40 control elementary schools located in California, Louisiana, Minnesota and Texas, USA.	Intervention to improve diet and physical activity among school students. Multi centre field trial with cluster units, randomised controlled trial design. The 2 year intervention included both school based and family based components, including class curricula, physical activity classes, home activities programme, family fun night. Based on organisational change and social cognitive theory.	<ol style="list-style-type: none"> <li>1. Behaviour change goal: To increase daily vigorous physical activity.</li> <li>2. Consumer research: The overall programme was developed from a body of research that tested theory based methods. Limited empirical data informed the development of the intervention.</li> <li>3. Segmentation and targeting: Multi-ethnic: Caucasian, African American and Hispanic school children of all ages.</li> <li>4. Marketing mix: School environment and classroom curricula components. Teachers provided with training.</li> <li>5. Exchange: Rewards, prizes and incentives formed a part of intervention activities. The programme included motivation by targeting anticipated outcomes of behaviour.</li> <li>6. Competition: Children received training in perceptions of threats and coping procedures. The intervention addressed self regulatory processes including self monitoring as part of the education programme.</li> </ol>	<p>Positive effect.</p> <p>Intensity of physical activity in PE classes increased significantly in intervention compared to control. Intervention students reported significantly more daily vigorous activity than controls (58.6 vs. 46.5 minutes) Measure: Time.</p> <p>Psychosocial: Positive social support for physical activity did not differ significantly between groups.</p> <p>Physiological: No significant differences in BMI, blood pressure and cholesterol.</p>

Intervention Name & Authors	Participants & Setting	Intervention	SM Characteristics	Results
Sallis 2003 (M-SPAN) The Middle School Physical Activity And Nutrition Study	Pupils of 24 public middle schools in San Diego County, California, USA.	School based physical activity interventions over 2 years, designed to increase physical activity in physical education classes and throughout the school day. Randomised control trial design. Based on a structural, ecologic model of health behaviour.	<ol style="list-style-type: none"> <li>1. Behaviour change goal: Increase the total energy expenditure from physical activity by the student population at school.</li> <li>2. Consumer research: Baseline data was used to inform the development of the intervention.</li> <li>3. Segmentation and targeting: Middle school children.</li> <li>4. Marketing mix: The intervention comprised monthly peer led educational sessions, reminder telephone calls and pamphlets, policy change.</li> <li>5. Exchange: Behaviour reinforcing incentives were used. Key reasons to attend sessions were emphasised in mail outs. Activity equipment was made available to students.</li> <li>6. Competition: Intervention components were designed to increase physical activity during leisure periods throughout the school day giving pupils choices. Policy changes were made to make more activity areas accessible.</li> </ol>	<p>Positive effect.</p> <p>Physical activity levels: Randomised regression models revealed a significant intervention effect for physical activity for the total group and boys but not girls. Measure: time, kcal.</p> <p>Physiological: Survey data indicated that the interventions reduced reported body mass index for boys.</p>

Source: Gordon *et al.* (2006)