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Identifying Appropriate Motivations to Encourage People to Adopt Healthy Nutrition and Physical Activity Behaviours

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ABSTRACT

Many social marketing campaigns use threat (or fear) appeals to promote healthy behaviours, for example, 'Quit smoking. You'll soon stop dying for a cigarette', 'Slip! Slop! Slap! Don't die in the sun this summer', and 'Speed kills'. These messages appeal to the negative motivation of problem avoidance and use fear arousal to persuade. This study explored people's motivations for adopting healthy nutrition and physical activity behaviours. Overall, it appeared that four motivations (two negative and two positive) were particularly salient: a) Problem removal: managing illness and injury; b) Problem avoidance: avoiding illness, injury, premature death, harm to unborn baby; c) Self approval: feeling better about self; and d) Sensory gratification: mood elevation. The results suggest that, while problem avoidance is an appropriate motivation it is not the only one. Social marketing practitioners could use a range of other motivations that may be equally effective. In the same way that consumers assess marketing messages relating to goods and services, consumers of social marketing messages can choose to pay attention to the sorts of messages that work for them, and decide to disregard others that may be less helpful.

ARTICLE

Introduction

Social marketers attempt to persuade people to 'buy' ideas rather than products or services, such as the idea of adopting a healthy behaviour (e.g., quitting smoking). Many social marketing campaigns use threat (or fear) appeals to promote healthy behaviours, for example, 'Quit smoking. You'll soon stop dying for a

cigarette', 'Slip! Slop! Slap! Don't die in the sun this summer', and 'Speed kills'. These messages appeal to the negative motivation of problem avoidance and use fear arousal to persuade.

To be successful, social marketers need to appeal to appropriate motivations. We assume that human behaviour is governed by needs or drives that motivate people either to adopt or reject a behaviour. Inherent in our understanding of human motivations is a commonly-held belief that people generally strive to become better. This concept was fundamental to Maslow's (1970) Hierarchy of Needs theory which proposed that once people have satisfied basic needs for food and shelter, they will strive to satisfy higher order needs, reaching towards self-actualisation. Acton and Malathum's (2000) study on basic need satisfaction and health behaviours found that the need for self-actualisation was the best predictor of health-promoting self-care behaviour. That is, people who had already satisfied more than just their basic needs, who felt fulfilled and happy with their lives and their social connections, were more likely to adopt self-care behaviours that led to improved health.

Rossiter and Percy (1987; 1997) have proposed a model of positive and negative motivations for the development of advertising strategies. This model has been adapted by Donovan and his colleagues (Donovan and Owen 1993; Egger, Donovan and Spark 1993; Donovan and Rossiter 1998) to the health promotion area. We used this model to inform the collection of qualitative data on people's motivations to change their nutrition and physical activity behaviours.

Table 1: Rossiter and Percy's (1987) Motivations

Negative (Informational) Motives	**Emotional Sequence**
1. Problem removal	Annoyance > relief
2. Problem avoidance	Fear > relaxation
3. Incomplete satisfaction	Disappointment > optimism
4. Mixed approach-avoidance	Conflict > peace of mind
5. Normal depletion	Mild annoyance > convenience
Positive (Transformational) Motives	**Emotional Sequence**
6. Sensory gratification	Dull (or neutral) > sensory anticipation
7. Intellectual stimulation/mastery	Bored (or neutral) > excited Naive (or neutral) > competent
8. Social approval	Apprehensive (or neutral) > flattered
9. Conformity*	Indecisive (or neutral) > belonging
10. Self-approval*	Conflict (or neutral) > confident, strong

*Added by Donovan, Henley, Jalleh and Slater (1995).

Rossiter and Percy (1987) proposed that eight motives energise human behaviour, either in response to negative stimuli, which the individual seeks to reduce or remove, or to positive stimuli, which the individual seeks to acquire or experience. Each motivation state is accompanied by a corresponding appropriate emotional state. The Rossiter-Percy approach differs from other approaches in that it specifies appropriate emotion sequences (e.g., from fear to relaxation), for maximum advertising impact.

Negative motivations relate to actions taken to solve current or future problems, for example, when a person is motivated to take an aspirin because they have a headache (Problem Solution) or to quit smoking to avoid getting lung cancer (Problem Avoidance). They may be motivated to try another laundry detergent if their clothes are not sufficiently white (Incomplete Satisfaction) or to switch from normal strength beer to light beer if they want to drink alcohol but stay within the limit for safe driving (Mixed Approach-Avoidance). Another negative motivation would be to eat food when hungry or replace a product when it runs out (Normal Depletion).

Positive motivations refer to actions taken to achieve an enhanced positive emotional state, for example, when a person who is not hungry eats something because it is delicious like icecream (Sensory Gratification), or when someone decides to learn a new language (Intellectual Stimulation/Mastery). A person who adopts recycling habits and puts their garbage out in separate bins might be motivated by Social Approval (if they think their neighbours will be impressed). This same person might be motivated by Conformity (if they're the last people on the block to do so), or by Self Approval (if they have decided that it is important to their sense of self to behave responsibly towards the environment).

The Rossiter-Percy model provides the theoretical basis for developing:
1) *Negative appeals* such as a threat based on the motivation of problem avoidance (e.g., quit smoking to avoid the threat of lung cancer and its consequences), which would appropriately arouse the emotional response of fear, followed by a reassurance of the efficacy of adopting the recommended behaviour which would appropriately lead to the sequential emotional state of relaxation (i.e., fear reduction); and
2) *Positive appeals* such as a promise based on the motivation of athletic mastery (e.g., quit smoking to obtain the reward of improved physical fitness). This appeal could portray a relatively neutral state followed by a reassurance of the efficacy of adopting the recommended behaviour which would appropriately arouse the sequential emotional state of excitement or pleasurable

anticipation. (The suggested emotions outlined in Table 1 above are not exhaustive.)

Many social marketing issues appeal to the negative motivation of problem avoidance, that is, avoiding illness, accident, injury and premature death. Examples of appropriate accompanying negative emotions are fear, guilt, remorse and sadness. Many social marketing campaigns use threat (or fear) appeals and it is generally agreed that *provided the recommended behaviour is under volitional control and is perceived as efficacious*, threat appeals are effective, and that the stronger the threat (or fear response), then the more effective the appeal (Sutton 1992; Pratkanis and Aronson 1991; Strong, Anderson and Dubas 1993). For some issues, for example road safety, it may be quite difficult to propose credible positive motivations.

However, it may well be, that for some health behaviours, positive or incentive appeals may also be effective, at least for some segments for physical activity and nutrition promotion (Donovan and Francas 1990; Corti, Donovan, Castine, Holman and Shilton 1995). In view of the multiplicity of negative social marketing campaigns, and the possibility that eliciting strong negative emotions may induce defensive or maladaptive responses (Job 1988; Stuteville 1970; Henley and Donovan 1999), it may be useful to consider the relative potential persuasiveness of positive appeals. It is suggested that positive appeals are currently underutilised, perhaps because there is some doubt that positive appeals can be as effective as negative appeals.

A qualitative research study was conducted to determine what people said were the main motivators for eating healthy foods and taking up physical activity, and to ascertain what people said had influenced them in the past.

Methodology

Four focus groups of five to eight participants were conducted and taped for later analysis. Each group was asked questions on either nutrition or physical activity, though naturally there was some overlap. Two groups consisted of people who had answered 'yes' to the following question: "Have you at anytime in the last twelve months, deliberately increased the amount of physical activity you do in an attempt to improve your health?" ('PA' groups); and two consisted of people who had answered 'yes' to the following question: "Have you at anytime in the last twelve months, deliberately changed your eating habits in an attempt to improve your health?" ('N' groups). We selected people who had recently made a change to their diet or exercise regime on the basis that

they would be most able to articulate their motivations for taking action. People who had not yet made a change would only be able to guess at what might motivate them, and people who had adopted healthy behaviours some time ago might have forgotten what prompted the change.

Groups were delineated by age, gender and socio-economic status to include points of view that may be related to these factors. (Socio-economic status was determined primarily in terms of their occupation. However, for students or unemployed people, classification was by the occupation of another member of the household, or residential address). The groups were as follows:
· one group of males, aged 18-30, blue collar, physical activity (M, 18-30, bc, PA)
· one group of females, aged 18-30, white collar, nutrition (F, 18-30, wc, N)
· one group of females, aged 31-50, blue collar, physical activity (F, 31-50, bc, PA)
· one group of males, aged 31-50, white collar, nutrition (M, 31-50, wc, N)

Reference will be made to these groups using the abbreviated form shown in parentheses.

Participants were asked to respond to a number of topics to elicit the following decision processes: arousal of need for change; information search; attribute evaluation; decision-making; and motivation to change. Attitudes to health promotion campaigns were also probed. In addition to the free-ranging discussion, participants were presented with a number of reasons people give for trying to eat healthy food or increase physical activity and were asked to rank them in terms of how much each applied to them. The reasons, drawn from previous unpublished qualitative work in the area, were: to have a better life; to avoid illness; to be respected by others; so I can feel better about myself; to live a longer life; to join a group of friends, family or workmates; to feel more in control of my physical self; and because it's the smart thing to do.

Results

The three highest ranked reasons in all groups for trying to do more physical activity/eat healthy foods were: 'To avoid illness' (ranked 1st or 2nd by 13 people), 'So I can feel better about myself' (ranked 1st or 2nd by 10 people) and 'To have a better life' (ranked 1st or 2nd by 13 people) (see Table 2 for the participants' rankings). Some additional reasons were specified, such as 'self-defence'. From the ensuing discussion it emerged that for some

participants one important reason that had not been covered in the list was 'Managing a current illness'.

These rankings have been further analysed by health topic groups (physical activity or nutrition), gender, and age groups (18-30 years and 31-50 years). The results are displayed in Table 3. In addition, where appropriate, reference is made to age and gender characteristics in the analysis of the group discussions. There were no obvious relevant differences between the blue and white collar groups.

The same three reasons were ranked highest in both physical activity and nutrition groups. In the physical activity groups, it appeared that the reason 'So I can feel better about myself' was somewhat more important than 'To have a better life' and 'To avoid illness' while in the nutrition groups, 'To have a better life' and 'To avoid illness' were somewhat more important than 'So I can feel better about myself'.

Table 2: Participants' 1st, 2nd and 3rd ranking of reasons for trying to do more physical activity/eat healthy foods

	GROUP 1 m, 18-30, bc, phys activity	**GROUP 2 f, 18-30, wc, nutrition**	**GROUP 3 f, 31-50, bc, phys activity**	**GROUP 4 m, 31-50, wc, nutrition**	**Totals**
To avoid illness	1st - 2 2nd - 1 3rd - 0	1st - 4 2nd - 0 3rd - 0	1st - 2 2nd - 1 3rd - 1	1st - 2 2nd - 1 3rd - 1	1st - 10 2nd - 3 3rd - 2
So I can feel better about myself	1st - 2 2nd - 2 3rd - 0	1st - 1 2nd - 0 3rd - 1	1st - 3 2nd - 0 3rd - 3	1st - 0 2nd - 2 3rd - 3	1st - 6 2nd - 4 3rd - 7
To have a better life	1st - 0 2nd - 3 3rd - 1	1st - 0 2nd - 0 3rd - 3	1st - 1 2nd - 4 3rd - 0	1st - 3 2nd - 2 3rd - 1	1st - 4 2nd - 9 3rd - 5
To feel more in control of my physical self	1st - 1 2nd - 0 3rd - 3	1st - 0 2nd - 2 3rd - 1	1st - 1 2nd - 0 3rd - 1	1st - 0 2nd - 3 3rd - 1	1st - 2 2nd - 5 3rd - 6
To live a longer life	1st - 0 2nd - 0 3rd - 2	1st - 0 2nd - 2 3rd - 0	1st - 0 2nd - 2 3rd - 2	1st - 2 2nd - 0 3rd - 2	1st - 2 2nd - 4 3rd - 6
Because it's the smart thing to do	1st - 0 2nd - 0 3rd - 0	1st - 0 2nd - 1 3rd - 0	1st - 0 2nd - 0 3rd - 0	1st - 1 2nd - 0 3rd - 0	1st - 1 2nd - 1 3rd - 0
To join a group of friends, family or workmates	1st - 1 2nd - 0 3rd - 0	1st - 0 2nd - 0 3rd - 0	1st - 0 2nd - 0 3rd - 0	1st - 0 2nd - 0 3rd - 0	1st - 1 2nd - 0 3rd - 0
To be respected by others	1st - 0 2nd - 0 3rd - 0	1st - 0 2nd - 0 3rd - 0	1st - 0 2nd - 0 3rd - 0	1st - 0 2nd - 0 3rd - 0	1st - 0 2nd - 0 3rd - 0

Other reasons specified included to look and feel good, a preference for healthy foods, muscle tone, fat loss, to stop pain in joints, self-defence, athletic endeavour, and weight loss.

Table 3: Participants' 1st, 2nd and 3rd ranking of reasons for trying to do more physical activity/eat healthy foods by demographic characteristics

	Physical Activity Groups	Nutrition Groups	18-30 Age Groups	31 - 50 Age Groups	Male Groups	Female Groups
To avoid illness	1st - 4 2nd - 2 3rd - 1	1st - 6 2nd - 1 3rd - 1	1st - 6 2nd - 1 3rd - 0	1st - 4 2nd - 2 3rd - 2	1st - 4 2nd - 2 3rd - 1	1st - 6 2nd - 1 3rd - 1
So I can feel better about myself	1st - 5 2nd - 2 3rd - 3	1st - 1 2nd - 2 3rd - 4	1st - 3 2nd - 2 3rd - 1	1st - 3 2nd - 2 3rd - 6	1st - 2 2nd - 4 3rd - 3	1st - 4 2nd - 0 3rd - 4
To have a better life	1st - 1 2nd - 7 3rd - 1	1st - 3 2nd - 2 3rd - 4	1st - 0 2nd - 3 3rd - 4	1st - 4 2nd - 6 3rd - 1	1st - 3 2nd - 5 3rd - 2	1st - 1 2nd - 4 3rd - 3
To feel more in control of my physical self	1st - 2 2nd - 0 3rd - 4	1st - 0 2nd - 5 3rd - 2	1st - 1 2nd - 2 3rd - 4	1st - 1 2nd - 3 3rd - 2	1st - 1 2nd - 3 3rd - 4	1st - 1 2nd - 2 3rd - 2
To live a longer life	1st - 0 2nd - 2 3rd - 4	1st - 2 2nd - 2 3rd - 2	1st - 0 2nd - 2 3rd - 2	1st - 2 2nd - 2 3rd - 4	1st - 2 2nd - 0 3rd - 4	1st - 0 2nd - 4 3rd - 2
Because it's the smart thing to do	1st - 0 2nd - 0 3rd - 0	1st - 1 2nd - 1 3rd - 0	1st - 0 2nd - 1 3rd - 0	1st - 1 2nd - 0 3rd - 0	1st - 1 2nd - 0 3rd - 0	1st - 0 2nd - 1 3rd - 0
To join a group of friends, family or workmates	1st - 1 2nd - 0 3rd - 0	1st - 0 2nd - 0 3rd - 0	1st - 1 2nd - 0 3rd - 0	1st - 0 2nd - 0 3rd - 0	1st - 1 2nd - 0 3rd - 0	1st - 0 2nd - 0 3rd - 0
To be respected by others	1st - 0 2nd - 0 3rd - 0	1st - 0 2nd - 0 3rd - 0	1st - 0 2nd - 0 3rd - 0	1st - 0 2nd - 0 3rd - 0	1st - 0 2nd - 0 3rd - 0	1st - 0 2nd - 0 3rd - 0

It might be expected that the reason 'to avoid illness' would be more important to the older age groups than to the younger, given that lifestyle illnesses affected by physical activity and nutrition are more likely to develop with age (e.g., heart disease, diabetes, cancer). However, this was not the case. Six of the 18-30 year olds put 'to avoid illness' as their number one reason for trying to be more healthy, compared to four in the older age group. It would seem that more of the older age group participants elected 'to have a better life' as the number one reason (four 1st ranked choices compared to none in the younger group).

Male and female rankings were fairly consistent though it appeared that the reasons 'To have a better life' and 'To be more in control of myself' were somewhat more important to males than to females, and the reason 'To avoid illness' was somewhat more important to females than to males.

The group discussions are reported under relevant topic headings below. Overall, from the general discussion and the above rankings, it appeared that four motivations (two negative and two positive)

were particularly salient:
· Problem removal: that is, managing illness and injury by removing symptoms such as pain, losing weight, reducing stress;
· Problem avoidance: that is, avoiding illness, injury, premature death, harm to unborn baby;
· Self approval: that is, feeling better about self; and
· Sensory gratification: that is, having a better life, feeling better, elevating mood.

The motivation of social approval, though mentioned in the groups, did not appear to be as salient overall as the four motivations listed above. It may be that people are reluctant to acknowledge their need for social approval. Some people specifically denied that they were motivated by the need for social approval, for example, "It's not so much to be accepted by society ... but for my own peace of mind" (M, 18-30, bc, PA). Social benefits stemming from a sense of belonging seemed to be regarded as a positive side-effect rather than as a direct motivator: "I've made some really cool friends ... it probably wasn't one of my reasons when I first started but it's just a side benefit of being in a club" (M, 18-30, bc, PA). There was more acknowledgment of the importance of social approval as a motivator in later discussion when asked what messages they thought would be most effective for them in health promotion campaigns. For example, one person expressed the view that the most persuasive messages in health promotion campaigns would relate to becoming more attractive to the opposite sex.

Need for change arousal

Participants were initially asked to think back to when they first decided to make a change with respect to increasing physical activity or eating more healthily, and to comment on what factors influenced and triggered their decision. They were also asked whether their reasons for starting were the same as their reasons for continuing their healthier behaviour. Participants were also asked "You may have been feeling the need to do something for your health for a while before you took the plunge. Did anything happen that made you decide to exercise/eat right?"

The reasons given for deciding to make a change can be categorised as internal: a response to physical symptoms or a response to internal reflection; and external: a response to comments or advice from other people and a response to external events.

Need arousal triggers relating to 'physical symptoms' included:

▪ *for physical activity groups:*
"getting pregnant" (F, 31-50, bc, PA),
"I had anaemia so I had to start eating red meat" (F, 18-30, wc, N),
"being so far overweight ... I found I just couldn't walk" (F, 31-50, bc, PA),
"my blood pressure was starting to slowly creep up" (F, 31-50, bc, PA),
"I started to put on a bit of weight so I started to think about it" (M, 18-30, bc, PA),
" round about March/April I was just feeling really sick" (M, 18-30, bc, PA),
"losing energy and feeling muscles get sort of sore when I've done the same work before and gotten through it" (M, 18-30, bc, PA);

▪ *for nutrition groups:*
"'I was suffering very badly from migraines" (M, 31-50, wc, N),
"clothes were getting tight around me" (F, 18-30, wc, N),
"'I actually needed to put on weight cos I was always underweight" (F, 18-30, wc, N),
"I have a slight intolerance to dairy products and that's the main reason I've done this" (M, 31-50, wc, N),
" if [I] did have a binge of fried foods, I normally found the next day I didn't feel so good" (M, 31-50, wc, N).

For some people, the trigger was an 'internal reflection':

▪ *for physical activity groups:*
"'basically one day I woke up and thought 'eeek I have got to do something about it' [my weight]" (F, 31-50, bc, PA),
"'I sort of decided that you know I would like to get fitter"' (M, 18-30, bc, PA);

▪ *for nutrition groups:*
"'I suppose my body was basically saying you know cut it out. Or reduce it" (M, 31-50, wc, N),
"I was conscious of getting older and my metabolism getting slower and knowing that as I get older I can be prone to ... diseases such as diabetes or anaemia' (F, 18-30, wc, N).

Need arousal triggers relating to external social influences included:

▪ *for physical activity groups:*
"when your husband sort of says well you can be dead before you're fifty" (F, 31-50, bc, PA),
"in my situation where the two of us got together and we exercise like mad and changed our diet and so far there is a group that started off with two of us and now there's twelve of us" (F, 31-50, bc, PA);

▪ *for nutrition groups:*
"'I went to see a naturopath and he said I was allergic to wheat and milk and sugar' (F, 18-30, wc, N),
"'my specialist said I should eat more fish. I hate fish, I just hate it and he said I had to eat it" (F, 18-30, wc, N),
"a colleague said well do away with the butter ... and I said oh I can try it" (M, 31-50, wc, N),
"my sister, she is vegetarian and she said soy is better for you than dairy so I thought that's what I should be doing" (F, 18-30, wc, N).

Specific need arousal triggers relating to 'external events' included:

▪ *for physical activity groups:*
"'cigarette ads made me think ... if I am going to be smoking, I have to balance it with exercise" (M, 18-30, bc, PA);

▪ *for nutrition groups:*
"I wanted to lose some weight cos I was actually going away [on holiday]" (F, 18-30, wc, N),
"I was going to be a bridesmaid" (F, 18-30, wc, N).

With respect to continuing motivations, there was general agreement that the reasons were largely the same, although in some cases unexpected benefits had occurred, prolonging motivation, such as the unanticipated social benefits of belonging to a club.

Participants were asked "Think of when you feel really motivated to exercise/eat right. What are the thoughts and feelings that make you want to act in a healthy way?" The participants tended to repeat many of the cognitions given earlier relating to feeling better about oneself and having a better life. However, there was some new discussion on different feelings associated with being motivated:

▪ *for physical activity groups:*
"once you start doing any exercise you get a buzz out of it" (M, 18-30, bc, PA),
"this is fun" (M, 18-30, bc, PA),
"'when I feel good, I walk stronger" (F, 31-50, bc, PA);

▪ *for nutrition groups:*
"makes you feel a lot more positive" (F, 18-30, wc, N),
"feel better about yourself" (F, 18-30, wc, N),
"feel happier within yourself" (F, 18-30, wc, N),
"if I feel guilty, then the next day I try harder" (F, 18-30, wc, N),
"satisfied" (M, 31-50, wc, N),
"general feeling of wellbeing" (M, 31-50, wc, N),

"smugness" (M, 31-50, wc, N),
"achievement" (M, 31-50, wc, N),
"enjoying my food more" (M, 31-50, wc, N).

Depression was associated by some people with being demotivated in the nutrition groups:

"I got depressed so I just thought to hell with it" (F, 18-30, wc, N),
"when you eat the wrong things, don't exercise, you feel like you have let yourself down a little bit" (F, 18-30, wc, N),
"when I get depressed I just eat" (F, 18-30, wc, N).

However, one person used the feeling of depression to inform more healthy nutrition choices:

"if I'm feeling depressed or feeling really heavy or lethargic, I tend to remember what kind of foods I have been eating and try and stay away from them" (F, 18-30, wc, N).

Information search

Participants were asked 'How did you arrive at the decision that more physical activity/healthier foods would be the right choice for you? Did you seek out information from books, other people?' There was a noticeable difference between male and female groups in the extent of information search reported. The males were more likely to say that the information was common knowledge. Females appeared to be more active in information gathering and more likely to refer to magazines. Males felt that this sort of information might be found in women's magazines but not in magazines intended for men. One male later referred to "'reading women's magazines that women leave in the tearoom at work. Because they are jam-packed of how to lose weight from this and that diet. They really are. Women's magazines are jam-packed full of nutritional information" (M, 31-50, wc, N).

Although television was mentioned, there were no unprompted references to health promotion campaigns.

Behavioural choice decisions

Participants were asked "Why do you prefer to ..." (e.g., walk rather than swim? or eat less fat rather than fewer calories overall?). Overall, it appeared that people in the nutrition groups tried to adhere to all healthy nutritional choices rather than choosing to adopt one behaviour while neglecting others. That is, if they were choosing to eat less fat, they were also choosing to eat more fruit and vegetables. There was little discussion of alternative nutritional

choices although some discussion did occur relating the effect of nutritional choices to levels of physical activity, that is, the 'calories in; calories out' equation. Nutritional choices were sometimes made on the basis of what worked in the past; one woman who had been successful previously commented, "'I really knew what was healthy and what I should be doing and just tried very hard to do it" (F, 18-30, wc, N).

Choosing how to be more active was more complex than choosing how to eat more healthily. There were some general comments such as: "depending on the weather - that has a lot to do with it" (F, 31-50, bc, PA) but choice evaluation focussed primarily on the merits of specific activities:

▪ *walking:*
"walking is a good thing for me because I can do it any time" (F, 31-50, bc, PA),
"I tried lots of things [aqua aerobics, bike riding, thinking about the gym] ... and basically I have found that walking is the easiest all over"' (F, 31-50, bc, PA),
"when I first started my walking, I actually started in the swimming pool ... it took the pressure off it"' (F, 31-50, bc, PA),
"walking also makes you feel really good especially on a beautiful sunny day ... people are smiling, you just sort of can't be angry. It's a lovely feeling" (F, 31-50, bc, PA);

▪ *aerobics/gym:*
"you can't do aerobics when you have a knee problem so they are out" (F, 31-50, bc, PA),
"I have just started to get back to the gym and try to get a little bit stronger so to prevent all the injuries that I was getting and that during playing sport" (M, 18-30, bc, PA);

▪ *cycling:*
"cycling is also really good. To cycle round the river ... on a beautiful summer's day makes you feel good" (F, 31-50, bc, PA),
"'when I do something for health, I want to sweat more ... prefer to do cycling or jogging than walking for fitness and health" (F, 31-50, bc, PA);

▪ *playing sport:*
"I chose Aussie Rules ... I played it for ages as a junior and ... I wanted to play with my brother. The club is pretty good" (M, 18-30, bc, PA);

▪ *yoga:*
"I started doing yoga because that exercises your brain ... and you can build really strong muscles but they don't show ... your

flexibility is incredible. You know I'm resilient to most injuries ... it just feels good you know and you know you don't have to go anywhere to do it" (M, 18-30, bc, PA);

▪ *other activities:*
"wall climbing, abseiling, that's a good one for fitness, good fun' (F, 31-50, bc, PA),
"I've always been susceptible to martial arts. When I was growing up ... as any young bloke, you think you are Rocky after the first time you see it" (M, 18-30, bc, PA).

Motivational analysis

Appeals to positive motivations appeared to be as appropriate as appeals to negative motivations for nutrition and physical activity social marketing messages. One person spontaneously offered the following analysis of positive vs negative appeals: "I don't respond well to health campaigns that say, like, you are going to die. Well, I'm going to die anyway, so whatever. But if a campaign were to say: if you were to do this then you will improve your quality of life in this field, then I will think, well, if I want to do that, then this is what I will do. And that may suit me" (M, 31-50, wc, N).

The reasons participants gave for adopting healthy behaviours were largely common to both nutrition and physical activity groups. Participants' reasons are categorised in Table 4 according to Rossiter and Percy's (1987) motivations.

Table 4: Participants' Reasons for Adopting Healthy Behaviours Categorised by Rossiter and Percy's (1987) Motivations

Negative (Informational) Motives	**Participants' Reasons**
1. Problem removal	Manage illness, eg arthritis, migraine Manage injury or pain, eg knee surgery, joint pain Manage weight (gain or loss) Stress relief(1)
2. Problem avoidance	Avoid illness, eg heart attack, diabetes Avoid injury, eg at work, sport(1) Avoid premature death Avoid harming unborn baby
3. Incomplete satisfaction	Food no longer as appetising(2)
4. Mixed approach-avoidance	Counter other behaviours, eg smoking, eating
5. Normal depletion	Counter effects of aging Break up routine of sedentary or repetitive work(1)
Positive (Transformational) Motives	Participants' reasons
6. Sensory gratification	Effect on mood, eg feel good, positive, have a better life Intrinsic enjoyment, eg liking healthy foods, enjoying exercise
7. Intellectual stimulation/ mastery	Physical mastery, eg fitness, being in control, athletic performance Sense of achievement

8. Social approval	Respect, admiration of others, eg attracting opposite sex, able to take off shirt at the beach, children being proud of mother
9. Conformity*	Belonging, eg to club, team or group of friends
10. Self-approval*	Self respect, eg to feel better about self, be more confident, increase self-worth

(1) In Physical Activity groups only
(2) In Nutrition groups only
*Added by Donovan et al (1995).

Health campaigns

None of the groups spontaneously discussed health promotion campaigns relating to nutrition or physical activity, though some mention was made of Quit! campaigns and commercial ads for exercise equipment. When prompted to talk about health promotion campaigns relating to nutrition or physical activity, participants referred to a number of relevant campaigns, but also health promotion campaigns on other topics, and a range of other commercial campaigns and television programs. It would appear that nutrition or physical activity campaigns were not clearly differentiated in the respondents' minds from other communications relating to health. There was some scepticism about commercial campaigns using health messages: "I think some companies are using it [health] to sell their products as well. So the product may not be totally healthy but they are putting the image across that it is very healthy.... The best one would be the promotion of milk" (M, 31-50, wc, N).

Participants were asked "What messages (relating to nutrition or physical activity) do you think would be most effective for you?". Their responses can be categorised as: relating to self efficacy (being able to perform the recommended behaviour); giving information; appealing to positive motivations of mastery, self approval or social approval; and appealing to negative motivations of fear of death, or fear of the effect of one's death on loved ones.

▪ *Self efficacy:*
"like the good parenting ads - they show parents just having fun with their kids and it's like you don't have to have a college degree to be able to successfully do it. Just do this" (M, 18-30, bc, PA),
"they had the campaign ... where they were saying just go for a walk ... when you sit there and see these real people, not these super duper trimmed athletic sort of people, you just think, hang on a minute, that's my next door neighbour. I can do just that" (M, 18-30, bc, PA),
"you think yes I can do that and then you go out and do it" (M, 18-30, bc, PA);

▪ *Information only:*
"I'd go for things to replace junk food if they showed you ways of using healthy foods that were quick and easy and economical - that would be more of a selling point to me" (F, 18-30, wc, N),
"something that is honest and truthful, pretty much straight down the line ... facts make sense, just stating the obvious" (M, 18-30, bc, PA);

▪ *Positive motivations: mastery:*
"if you can say, here's a goal. If I stop smoking, if I lose ten kilos, if I this, if I that, that's what I'm going for. It's a target and a drive. Going for the positives" (M, 31-50, wc, N),
"I prefer someone to give me the facts, to appeal to my intelligence... rather than say you will eat this or you won't eat that" (M, 31-50, wc, N);

▪ *Positive motivations: self approval:*
"Try to make them [think about] how they feel about themselves. And would they like to feel better. You know live longer and live a better life. Get more out of life" (F, 31-50, bc, PA),
"people get more self-esteem out of doing it" (F, 31-50, bc, PA),
"just try and be realistic ... it's more a case of feeling better. I mean you are not going to be like the person on tv, but just feel better, feel healthier" (M, 18-30, bc, PA);

▪ *Positive motivations: sensory gratification:*
"get out there and have ten minutes of fun... just doing a little bit" (M, 18-30, bc, PA),
"I think you have to make it look as if it's fun" (M, 18-30, bc, PA);

▪ *Positive motivations: social approval:*
"'you can boil it all down to sexual drives ... as far as males are concerned ... saying, this makes me more attractive to the opposite sex" (M, 31-50, wc, N),
"you know the Coke ads how they have wonderfully happy healthy people, well, why can't you just do that with healthy food. Seems to work for Coke" (F, 18-30, wc, N),
"definitely the ones where you see a happy family" (M, 18-30, bc, PA),
"if they have call this number for a group in your area so you could maybe have like a power walking on a Saturday morning" (M, 18-30, bc, PA);

▪ *Negative motivations: death per se:*
"use scare tactics...we have one big fear and that is dying" (F, 31-50, bc, PA);

▪ *Negative motivations: effect of death on loved ones:*
"what constitutes doing the right thing by people who you purport to value ... here's a scenario. What about some guy dying, right. Forget about why he's dying and don't deal with how sad it is that he is dying for him, but turn it around and really get seriously into the impact that it is going to have on his family. And then bring it back to whatever it was that was stupid, you know eating peanuts every day" (M, 31-50, wc, N);

▪ *Negative motivations: other:*
"[jokingly] pain, that usually works quite well I find. You could just hurt them if they didn't eat better" (M, 31-50, wc, N),
"they make you feel guilty about yourself which makes you want to go out and do it" (M, 18-30, bc, PA);

Some participants offered unprompted analysis of the relative merits of positive vs negative campaigns, showing a preference for positive appeals.
· "I think I respond better to advertising campaigns that explain why it's better to do whatever it is to do, a positive thing rather than a negative thing" (M, 31-50, wc, N);
· "so much of Australian advertising ... does indeed go for the negative. Don't do this. Don't do this. Instead of having positives: If you do this then look what's there for you. Go for that. It's not that. It's don't do this, don't do this, bad boy, smack, smack, stuff" (M, 31-50, wc, N);
· "I don't think I'd do the shock sort of thing. Just showing how to eat healthy and that and showing a nice lady who's healthy looking, not totally skinny" (F, 18-30, wc, N);
· referring to negative campaigns using shock tactics "that if you don't look after yourself you will get heart disease or whatever, that for me is just way down the track. Sort of thing I don't think about" (F, 18-30, wc, N).

One participant wondered whether there had already been a deliberate decision taken to highlight positives rather than negatives:
· "I've seen the smoking ads, with the people who say 'I can sing', 'I can make love to my wife longer' ... and they are highlighting the positives. And I think that someone has decided that we have had a lot of these shock campaigns ... perhaps we are being a bit blase as a nation now so they are trying a different thing" (M, 31-50, wc, N).

Discussion

Most of the research to date in the area of social marketing appeals has been in the area of fear-arousal, appealing to the negative motivation of problem avoidance. The underlying assumption for

the widespread use of fear-arousal is that people are primarily motivated to adopt healthy behaviours to protect themselves from negative consequences (Henley 2002). Several models have been proposed to understand human behaviour in a health context, including the Health Belief Model (Janz and Becker 1984), the Fear Drive paradigm (Janis 1967; McGuire 1968), the Parallel Response Model (Leventhal 1970), Thayer's Arousal Model (1978), Roger's Protection Motivation Theory (1975, Maddux and Rogers 1983), Ordered Protection Motivation Theory (Tanner, Hunt and Eppright 1991) and the Extended Parallel Process Model (Witte 1992). All these models make the assumption that the more severe the consequence is perceived to be and the more likely it is to occur, the greater the person's motivation to avoid it. In social marketing appeals, this motivation is generated by arousing fear.

One problem with this emphasis on fear-arousal is that several researchers have warned that arousing strong fear in health promotion contexts may be counter-productive, inducing maladaptive coping responses (Stuteville 1970; Webb 1974; Job 1988). Arousing fear may be particularly counterproductive when attempting to persuade people to abandon anxiety-soothing, addictive behaviours, such as smoking, drug and alcohol use (Firestone 1994). Another problem is that threat-appraisal (of the severity of the threat and one's vulnerability to it) may be less useful in predicting behaviour than the coping-appraisal component, that is, whether the person feels able to perform the behaviour (self-efficacy) and whether they think the behaviour will avert the threat (solution efficacy) (Milne, Sheeran and Orbell 2000).

At the same time, there is evidence that arousing positive affect can lead to positive feelings towards products, and a greater intention to buy the product or comply with the advocated behaviour (Monahan 1995). However, there are few studies on the relative effectiveness of negative vs positive appeals. Using Shaver, Schwartz, Kirson and O'Connor's (1987) categorisation of love, joy and surprise as positive basic emotions and fear, anger and sadness as negative basic emotions, and all the sub-categories of emotions within each of these, it would be possible to test many comparisons of positive versus negative emotion-based appeals. One fear-arousal study of health issues which attempts to make such a test is Brooker's (1981) comparison of mild humour versus mild fear appeals in recommending a toothbrush and a flu vaccination. The mild humour appeal was no more persuasive than an information-only message but the fear appeal had negative effects, even at the mild level. Evans, Rozelle, Lasater, Dembroski and Allen's (1970) study on dental hygiene used physical threats (high and low fear arousal) and a third condition, a positive communication in which

popularity was associated with good dental hygiene. Evans et al (1970) found that the threat messages were more effective when measuring intention to comply and self-reported behaviour but that the positive communication was more effective when measuring actual behaviour. Wheatley and Oshikawa (1970) tested positive and negative appeals used to sell insurance, recommending the appropriate use of negative emotional tension for commercial advertising. Reviewing the literature on positive and negative appeals, Donovan et al (1995) concluded that there was insufficient research on which to base conclusions regarding the relative effectiveness of such appeals.

The relative effectiveness of positive vs negative appeals is an issue of significant importance for social marketing practitioners wishing to maximise the effectiveness of social marketing campaigns. This is a complex issue; different segments of the target market will respond differently to appeals according to a multiplicity of needs. These needs may not all involve avoiding illness (Cooper and Shapiro 1997). While there is evidence that fear-arousing campaigns are effective, further research is needed into the effectiveness of other possible stimulus factors.

We explored what people said had motivated them to adopt healthy behaviours in the areas of nutrition and physical activity to identify appropriate motivations for social marketing appeals. Two key results emerged from this qualitative study.
1) Generally people believed that they respond better to positive rather than negative appeals. The most salient positive motivations were self approval, that is, feeling better about oneself, raising self-esteem, and sensory gratification, that is, feeling better generally, improving mood. It appeared that people may not readily acknowledge the motivation of social approval as an influence. We do not doubt that people are motivated by social approval and look to their peers for 'social proof' that what they are doing is acceptable (Cialdini 1983). From the first parental 'good boy' or 'good girl', most people are motivated to fulfil the expectations of their immediate and larger social groups (Kohlberg 1991). However it is worth recognising as social marketers that if people are reluctant to admit this motivation in a focus group, they may reject an appeal that is based on it.
2) The negative motivation that is most frequently used in social marketing health campaigns is problem avoidance. This was acknowledged as an important motivator. However, another negative motivation that is less frequently used also appeared to be salient: problem removal (managing pain, illness). People reported using healthy behaviours to improve existing conditions. Perhaps marketers have intuitively felt that physical symptoms such as pain

or feeling ill would act as a persistent reminder for people with an existing condition and there would be no need of a campaign appealing to the motivation of problem removal. However, we know that some conditions such as obesity affect people, sometimes quite severely, but they still engage in unhealthy behaviours that contribute to the condition. It might be worth considering a problem removal appeal for campaigns where a significant number of people are diagnosed with a condition that requires a change in behaviour.

In summary, people in our focus groups who had made healthy behaviour decisions said they were motivated by more than just fear. Problem avoidance is an appropriate motivation but it is not the only one. Social marketing practitioners could use a range of other motivations that may be equally effective. First, appealing to positive motivations of self approval and sensory gratification may be effective. Second, the negative motivation of problem removal could be considered for some campaigns. We suggest that there may be three benefits in using a range of stimulus factors where it is appropriate to do so. First, we increase the opportunity for innovative and creative campaigns based on alternative appeals that can more easily cut through clutter. Second, we reserve maximising the effective use of fear in other contexts, such as road safety, where it is difficult to see how to use positive appeals. Third, we may avoid reaching a cumulative saturation effect with so many fear appeals on so many diverse topics.

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