Introduction

Despite concern for the environment, Canadian youth still fail to regularly engage in sustainable behaviours. Social marketing, which draws from such theories as the theory of reasoned action and social learning, attempts to influence behaviours that benefit society using commercial marketing principles. This approach has proved successful in changing adolescents’ health-related behaviours; however, documentation of its applicability to sustainable behaviours is lacking.

In social marketing, a message can be framed to emphasize the costs (loss framing) or benefits (gain framing) of engaging in a behaviour (Tversky & Kahneman, 1981). These gains and losses can emphasize the impacts on the environment (physical threat) or on peer perceptions (social threat). Interactions between frame and threat in environmental communications has not been sufficiently explored in the literature. Indeed, the ineffectiveness of current approaches targeting youth, which focus on positive messaging, requires that message strategies be re-examined.

Objectives

The objectives of this study are to evaluate the interaction between framing and threat in social marketing messages aimed at influencing sustainable behaviour change among adolescents, so as to address gaps in existing literature and to strengthen social marketing theory.

Methods

The study employed a 2 x 2 between-subjects factorial design comparing the effect of frame (gain vs. loss) with type of threat (social vs. physical) on the case behaviour of driving. Youth participants (N = 250) aged 14-18 were recruited from Markham and Waterloo and randomly assigned to one of four conditions: physical loss, physical gain, social loss, and social gain. Print advertisements encouraging the reduction of driving behaviour were created and used as stimulus materials (Figures 1 and 2).

Each participant viewed one advertisement and completed a 27-item questionnaire. Baseline measures, such as driving norm, driving behaviours, and environmental attitudes, were taken. Dependent variables included advertisement appeal, affective arousal, persuasion, driving intentions, driving attitudes, and environmental attitudes. Items were measured on 5-point Likert scales, anchored by "1 - strongly disagree" and "5 - strongly agree".

Results

Ad Appeal

Overall, the ads were perceived to be appealing (M = 3.41) and a one-way ANOVA found no significant differences on ratings of ad appeal among experimental conditions (all F-values p > .05).

Attitudes

Two-way ANOVAs found a main effect of gender (all p < .05). Males scored higher than females on the attitudes good, cool, fun, relaxing, and thrilling. This pattern was reversed for the attitude boring (Figure 3).

Affective Arousal

Significant differences were found among the four conditions using one-way ANOVAs (Tables 1 and 2). In the loss framing condition, those in the social threat conditions scored lower than those in gain framing conditions. In the gain framing condition, those in the social threat conditions scored higher than those in social marketing conditions.

Discussion and Conclusions

Overall, loss-framed messages appear to be more persuasive than gain-framed messages in reducing driving behaviour among adolescents. Loss frames generate more negative emotions, such as fear and anger, which have been shown to trigger avoidance behaviours. For adolescent non-drivers and those with a low level of engagement in environmental behaviours, loss-framed messages were more effective in lowering intentions to drive. The effect of threat type was inconclusive; however, physical threat produces more negative emotions, such as fear and sadness, than social threat.

Among the four conditions, physical loss and social gain message frames appear to be more effective at reducing perceptions of driving as beneficial and important (F(1,244) = 6.70, p = .01). Within the gain frame treatment, participants exposed to social threat treatments scored lower than those exposed to physical threat. The pattern was reversed in the loss frame treatment (Figure 4). There was also a main effect of gender; females across all conditions scored lower than males (F(1,240) = 12.916, p < .001).

Conclusions

A two-way ANOVA found a significant interaction between frame and threat factors on the perception of driving as beneficial and important (F(1,244) = 6.70, p = .01). Within the gain frame treatment, participants exposed to social threat treatments scored lower than those exposed to physical threat. The pattern was reversed in the loss frame treatment (Figure 4). There was also a main effect of gender; females across all conditions scored lower than males (F(1,240) = 12.916, p < .001).

Intentions x GENDER

A significant interaction was found between gender and condition (F(3,230) = 3.26, p < .05) (Figure 5). Simple main effect analyses revealed that females in the social loss condition scored significantly lower than females in any other condition (all p < .05).

Intentions x DRIVING FREQUENCY

An interaction was found between participants’ driving frequencies and frame treatment (F(2,235) = 6.09, p < .01) (Figure 6). Those who do not drive in the loss frame conditions scored lower than those in the gain treatment conditions. For low frequency drivers, the trend was reversed.

Discussion

When designing future environmental communications for youth in the context of social marketing, frame and threat factors should be taken into consideration. Segregating the adolescent population based on gender, driving frequency, and level of engagement in environmental behaviours would aid in identifying the appropriate message frame to use. More research is needed on the effect of threat type and gender on responses to framed messages. Furthermore, studies of the interaction of frame and threat factors should be conducted on other environmental behaviours in order to strengthen the applicability of these findings on influencing sustainable change in youth.

Literature Cited


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