Social marketing to address attitudes and behaviours related to preventable injuries in British Columbia, Canada

Jennifer Smith, Xin Zheng, Kevin Lafreniere, Ian Pike

ABSTRACT

Background  Social marketing is a tool used in the domain of public health for prevention and public education. Because injury prevention is a priority public health issue in British Columbia, Canada, a 3-year consultation was undertaken to understand public attitudes towards preventable injuries and mount a province-wide social marketing campaign aimed at adults aged 25–55 years.

Methods  Public response to the campaign was assessed through an online survey administered to a regionally representative sample of adults within the target age group between 1 and 4 times per year on an ongoing basis since campaign launch. A linear regression model was applied to a subset of this data (n=5,186 respondents) to test the association between exposure to the Preventable campaign and scores on perceived preventability of injuries as well as conscious forethought applied to injury-related behaviours.

Results  Campaign exposure was significant in both models (preventability: \( \beta = 0.27, 95\% \text{CI} 0.20\) to 0.35; conscious thought: \( \beta = 0.24, 95\% \text{CI} 0.13\) to 0.35), as was parental status (preventability: \( \beta = 0.12, 95\% \text{CI} 0.03\) to 0.21; conscious thought: \( \beta = 0.18, 95\% \text{CI} 0.06\) to 0.30). Exposure to the more recent campaign slogan was predictive of 0.47 higher score on conscious thought (95% CI 0.27 to 0.66).

Discussion  This study provides some evidence that the Preventable approach is having positive effect on attitudes and behaviours related to preventable injuries in the target population. Future work will seek to compare these data to other jurisdictions as the Preventable social marketing campaign expands to other parts of Canada.

INTRODUCTION

Social marketing is a catalyst for social change in support of the public good when marketing principles are applied to influence a target audience in domains such as policy, environment and health. Social marketing has long garnered interest among prevention professionals in the public health domain as a potential knowledge translation tool. Mass media campaigns targeting individual attitudes and behaviours related to public health concerns can be a cost-effective intervention and are thus of considerable interest to decision-makers responsible for finite public health resources.

Social marketing applies the principles of traditional marketing to influence behaviour in support of the public good. The focus of any social marketing endeavour is fundamentally consumer-oriented and driven by the perspective of the target audience. Therefore, substantial time and effort is invested in research activities to segment the audience and understand their needs and desires. From this foundation, resources can be efficiently applied to reach the intended audience in the right time and place with a call to action that will engage their attention and elicit a positive response. Further, a social marketing approach must consider barriers to change, such as competing pressures or prohibitive costs associated with the desired behaviour.

In British Columbia (BC), Canada, preventable injuries claimed over 2000 lives and resulted in nearly 35,000 hospitalisations, incurring $2 billion in direct costs to the healthcare system in 2010 alone. The provincial government recognises the significance of this toll and announced an initiative in 2006 to reduce the human and financial burden of preventable injuries. Initially led by government, this task force soon evolved into a not-for-profit organisation, with government fulfilling a role as one of several partners committed to mounting a campaign grounded in foundational market research.

Over the course of 2.5 years, the Community Against Preventable Injuries (Preventable) conducted a detailed formative evaluation to better understand the issue from the perspective of its intended audience and develop an impactful approach. Sampling across the province, Preventable consulted British Columbians regarding their views towards injury prevention and how they might be engaged in a proposed campaign. Iterative focus group consultations, in addition to public attitude surveys, a review of the social marketing literature and economic burden and injury morbidity and mortality data, eventually defined a high-priority target group aged 25–54 years, who were receptive to an injury prevention message. Preventable learnt that this group firmly believed that serious injuries were both ‘a fact of life’ and ‘will never happen to me’. Importantly, this group also asserted that they knew the risks and had sufficient knowledge about how to prevent injuries—they would not pay attention to shocking, graphic, directive or instructional campaign content. Rather, a reminder to use their knowledge, delivered as close as possible to the moment of risk, would be most effective. Preventable’s social marketing strategy was then developed in direct response to the stated preferences of its target audience.
The Preventable approach is theoretically grounded in the Health Action Process Approach (HAPA) model of behaviour change. According to HAPA, once an individual has formed a behavioural intention, he or she must engage in a series of cognitions to translate that intention into action.\(^5\)\(^6\) Along the transitional pathway, the individual must form a plan that includes the steps required to enact that behaviour as well as those needed to mitigate any difficulties or barriers that arise. When Preventable interrupts the planning process by providing a reminder to consider injury as a potential consequence of the intended behaviour, the individual is afforded an opportunity to reassess and adjust the chosen course of action according to his or her pre-existing knowledge. Preventable targets this message to the time and place of potential risk through strategic use of mass media, social media, ambient signage and ‘guerrilla stunts’.

Preventable tracked public response to the campaign with a province-wide survey that measured injury-related attitudes, beliefs, awareness and behaviours, in addition to tracking advertising metrics and market penetration. The survey was administered at strategic intervals throughout the duration of the campaign, from launch in 2009 to the present day. The purpose of this paper is to examine the tracking data that relates to attitudes and behaviours within the context of the HAPA model, illustrating with examples from the Preventable campaign and discuss the implications for other population-level injury prevention interventions.

### METHODS

#### Survey background

Preventable contracted with Insights West and Ipsos ASI, full-service marketing companies that each maintain large panels of adult volunteers in Western Canada, to develop and administer the survey in consultation with the academic team. Questions relating to injury attitudes and behaviours were developed to validate the findings of the focus groups (figure 1). The survey is administered online to a regionally representative\(^1\) sample between 1 and 4 times per year and is not sent to the same person within a 12-month period. In addition to collecting demographic information, the survey tracks injury attitudes, awareness and behaviours as well as brand metrics and response to specific campaign elements. The latter varies between surveys, and so to provide feedback about current campaign creative material, the exact number of questions changes slightly between waves. Importantly, the survey includes questions referring to specific scenarios or injury types that have been featured in the campaign as well as those that have not.

#### Inclusion criteria

The survey was administered at baseline in May 2009, immediately prior to campaign launch. Throughout the launch period, the survey was administered on a rolling basis in order to monitor the pilot phase of the campaign. After the end of the launch period, the survey was switched to a wave schedule, with 17 waves completed between January 2010 and December 2016. Each wave was structured to be representative of the provincial population by age, gender and region, generating a sample between approximately 300 and 700 responses per wave. Because the survey changes slightly over time as questions are added, a subset of the data was selected in order to have a complete dataset for analysis. Survey waves that included the question, ‘In the past 12 months, have you been injured

---

\(^1\)BC is geographically vast, with many rural areas and remote communities. The BC population is approximately 4.7 million people, with almost half located in the Greater Vancouver Regional District.\(^17\) The province is divided into Health Authority (HA) regions for the delivery of health services tailored to the needs of each regional population, with high-level coordination across BC.
seriously enough where you received medical treatment (such as ER, hospitalisation or an MD office)? were included. Waves 10 through 16 met this criterion, collected between November 2012 and April 2016.

Participants
Panellists residing in BC, between the ages of 25 and 54 years, able to complete the survey in English and with no current or prior professional expertise in marketing or advertising were eligible to participate. Respondents who rated the same score on every item, including the reverse item ‘it is inevitable that people get injured’ (n=120), were excluded.

All participants provided written informed consent prior to completing the survey.

Data analysis
Proportions were calculated to describe demographic characteristics of the subsample. Information regarding the characteristics of non-respondents was not available and is therefore not included in the analysis.

Exposure to the campaign was defined as answering ‘yes’ to any question on the survey about awareness of Preventable as an organisation, knowledge of the website or having seen any ad prior to the date of survey. Respondents were considered not exposed if they answered ‘no’ to all of the above.

A linear regression model was used to test the effect of exposure to the campaign on attitudes towards injury (‘preventability’) and conscious forethought preceding behaviour (‘conscious thought’), while controlling for various demographic factors such as age, gender, education level, income, employment status, marital status, parental status, region of residence as well as survey year. In addition, history of a medically attended injury to self or family in the preceding 12 months and history of knowingly riding in a vehicle with a driver who had consumed alcohol were included in the model. Outcome variables ‘preventability’ and ‘conscious thought’ were each scaled as an average score on a number of related survey items. Figure 2 shows the items included in each scale as well as the distribution of scores. Because two outcome variables were tested, a significance level of p value<0.025 was set. All analyses were conducted using Statistical Analysis System V.9.4.

RESULTS
There were 5186 respondents included in the analysis. Survey response rates varied between waves, ranging from 32% to 24%, with an average rate of 27.6%. The sample was evenly distributed between females (55.3%), married persons (50.2%), those employed full-time (59.6%) and parents (50.3%). Two-thirds had been exposed to the Preventable campaign (67.6%) and well over one-third had completed university (39.6%) or reported an annual household income of $75 000 or more (36.8%). Participant characteristics are further described in table 1.

Table 2A and B show the results of the regression analysis. Exposure to the campaign was significant in both models, as were age category, gender and parental status. Campaign exposure predicted increases of 0.27 in preventability (95% CI 0.20 to 0.35) and 0.24 in conscious thought (95% CI 0.13 to 0.35). Parental status predicted slightly higher scores on preventability

| Preventability Items included in the scale, each rated on a 10-point Likert scale: |
| The majority of injuries are preventable |
| Poisoning |
| Drowning |
| Falls from ladders |
| Workplace injuries |
| Head injuries from not wearing a helmet while bike riding, snowboarding, ice skating/hockey or skateboarding |
| Motor vehicle crashes from driving while distracted (e.g. cell phone, texting, DVD player, reading) |
| Motor vehicle crashes from falling asleep at the wheel |
| Injuries resulting from jaywalking |
| Burns in the home from fire flames & hot substances |
| Injuries due to operating machinery or a motor vehicle while under the influence of drugs or alcohol |
| Electrocution |

| Conscious Thought Items included in the scale, each rated on a 10-point Likert scale: |
| Taking over-the-counter medication |
| Taking prescribed medication as directed |
| Mixing medications |
| Storing dangerous materials/products safely away |
| Taking precautionary actions around pool/lakes/water |
| Taking precautionary actions around ladders |
| Taking precautionary actions in your work environment |
| Riding a bike without a helmet |
| Jaywalking to cross a street |
| Multitasking while driving (i.e. on your cell phone, texting, watching a DVD) |
| Driving while fatigued |
| Working near power lines |

Figure 2 Preventability and conscious thought scales.
Clinical significance is reflected in the statistically significant relationship between the duration of injurious behaviour and injury outcomes. The incidence of injury increased with the number of months of injurious behaviour. As depicted in Table 1, the duration of injurious behaviour was not statistically correlated with a driver who had consumed alcohol (β=0.12, 95% CI 0.03 to 0.21) and conscious thought (β=0.18, 95% CI 0.06 to 0.30). Modelling age, education level and household income as ordinal, rather than nominal variables did not change the results, although education did not achieve significance in the preventability model when this alteration was made. One region was significant in the preventability model only, and personal or family history of a medically attended injury trended but did not achieve significance. Recall of the campaign slogan ‘Seriously?’ was significant only in the model of conscious thought (β=0.47, 95% CI 0.27 to 0.66), as were markers of deliberate behaviour, such as marital status and knowingly riding in a vehicle with a driver who had consumed alcohol.

**DISCUSSION**

Social marketing has been established as a valuable component of any modern public health strategy.7 Health promotion campaigns, such as the truth campaign, have used social marketing principles to change public attitudes and influence health behaviours.” “A prominent Canadian example is ParticipACTION, a multimodal physical fitness promotion and obesity prevention campaign that ran for 30 years and was relaunched in 2007 after a 6 year hiatus.10 The campaign began in the 1970s, before social marketing was developed in the health promotion field, yet social marketing concepts are easily recognisable in the organisation’s branding, communications and community mobilisation activities.11 No other Canadian health promotion campaigns have yet achieved the longevity of ParticipACTION, but the demonstrated successes of carefully applied social marketing techniques have generated interest in leveraging these techniques to strengthen other areas of public health promotion.13

Commonly, approaches to injury prevention in the health promotion field tend to focus on one specific target group, environmental context or injury type.12 For example, parents are often the target of educational and preventative public health messaging about injuries to children in the home.13 Another highly visible example is drinking and driving campaigns aimed at reducing alcohol-related motor vehicle fatalities.14 The underlying commonality of these types of campaigns is that they target each injury type or risk population as a specialised concern and lying commonality of these types of campaigns is that they treat environmental context or injury type.12 For example, parents are often the target of educational and preventative public health messaging about injuries to children in the home.13 Another highly visible example is drinking and driving campaigns aimed at reducing alcohol-related motor vehicle fatalities.14 The underlying commonality of these types of campaigns is that they target each injury type or risk population as a specialised concern and lie in the health promotion field tend to focus on one specific target group, environmental context or injury type.12 For example, parents are often the target of educational and preventative public health messaging about injuries to children in the home.13 Another highly visible example is drinking and driving campaigns aimed at reducing alcohol-related motor vehicle fatalities.14 The underlying commonality of these types of campaigns is that they target each injury type or risk population as a specialised concern and lying commonality of these types of campaigns is that they treat environmental context or injury type.12 For example, parents are often the target of educational and preventative public health messaging about injuries to children in the home.13 Another highly visible example is drinking and driving campaigns aimed at reducing alcohol-related motor vehicle fatalities.14 The underlying commonality of these types of campaigns is that they target each injury type or risk population as a specialised concern and lying commonality of these types of campaigns is that they treat environmental context or injury type.12 For example, parents are often the target of educational and preventative public health messaging about injuries to children in the home.13 Another highly visible example is drinking and driving campaigns aimed at reducing alcohol-related motor vehicle fatalities.14 The underlying commonality of these types of campaigns is that they target each injury type or risk population as a specialised concern and lying commonality of these types of campaigns is that they treat environmental context or injury type.12 For example, parents are often the target of educational and preventative public health messaging about injuries to children in the home.13 Another highly visible example is drinking and driving campaigns aimed at reducing alcohol-related motor vehicle fatalities.14 The underlying commonality of these types of campaigns is that they target each injury type or risk population as a specialised concern and lying commonality of these types of campaigns is that they treat environmental context or injury type.12 For example, parents are often the target of educational and preventative public health messaging about injuries to children in the home.13 Another highly visible example is drinking and driving campaigns aimed at reducing alcohol-related motor vehicle fatalities.14 The underlying commonality of these types of campaigns is that they target each injury type or risk population as a specialised concern and lying commonality of these types of campaigns is that they treat environmental context or injury type.12 For example, parents are often the target of educational and preventative public health messaging about injuries to children in the home.13 Another highly visible example is drinking and driving campaigns aimed at reducing alcohol-related motor vehicle fatalities.14

Continued
This study examined the effect of exposure to the Preventable campaign on the attitudes of British Columbians towards the preventability of injuries, as well as their level of conscious thought applied to injury-related behaviours. The results of the regression model appear to indicate that the campaign has the desired effect. Exposure to the Preventable campaign predicted a higher perceived preventability and greater conscious forethought. British Columbians who have seen the campaign (approximately two-thirds of the

| Parameter | Estimate | SE | t Value | Pr > |t| | 95% confidence limits |
|-----------|----------|----|---------|------|------|-----------------------|
| Intercept | 30.8665147 | 51.9916525 | 0.59 | 0.5528 | −71.0592158 | 132.7922452 |
| Campaign exposed | 0.27388744 | 0.03985484 | 6.87 | <0.0001 | 0.1957503 | 0.3520195 |
| Not exposed | 0 | | | | | |
| Age 35–44 years | 0.25855092 | 0.04763348 | 5.43 | <0.0001 | 0.16512985 | 0.3519700 |
| Age 45–55 years | 0.39769468 | 0.04680236 | 8.50 | <0.0001 | 0.30594218 | 0.4894719 |
| Age 25–34 years | 0 | | | | | |
| Male | −0.1856785 | 0.0376408 | −4.93 | <0.0001 | −0.25947081 | −0.1188699 |
| Female | 0 | | | | | |
| Married | 0.04663505 | 0.0362448 | 1.3 - | 0.1907 | 0.0829766 | 0.0707908 |
| Domestic partnership | 0.04746075 | 0.0383964 | 1.2 - | 0.2226 | 0.0786467 | 0.0786467 |
| Widowed | −0.34553149 | 0.19736179 | −1.75 | 0.0800 | −0.73444466 | 0.04138147 |
| Divorced | 0.12066397 | 0.08353066 | 1.44 | 0.1486 | −0.04309162 | 0.2841956 |
| Separated | 0.06515086 | 0.1140181 | 0.57 | 0.5678 | −0.15841955 | 0.2872127 |
| Some high school | 2.44014479 | 0.53215343 | 4.59 | <0.0001 | 1.39689796 | 3.4839162 |
| Graduated high school | 2.40393111 | 0.5289833 | 4.60 | <0.0001 | 1.37871179 | 3.42927444 |
| Trade school/attended college | 2.54732825 | 0.5226605 | 4.87 | <0.0001 | 1.5228862 | 3.5723677 |
| Some college or university | 2.50593109 | 0.5219665 | 4.80 | <0.0001 | 1.4822560 | 3.5296037 |
| Graduated college/university | 2.52742575 | 0.52179103 | 4.84 | <0.0001 | 1.50449361 | 3.5503588 |
| Post graduate | 2.48305432 | 0.5209655 | 4.74 | <0.0001 | 1.45560329 | 3.5105624 |
| Eighth grade or less | 0 | | | | | |
| Parent | 0.12436667 | 0.04358138 | 2.85 | 0.0043 | 0.03892864 | 0.2198047 |
| Not a parent | 0 | | | | | |
| Income $25 000–$39 999 | 0.05204012 | 0.0816687 | 0.61 | 0.5412 | −0.11429231 | 0.2190037 |
| Income $40 000–$49 999 | 0.05759938 | 0.09405941 | 0.95 | 0.3417 | −0.09169542 | 0.2388579 |
| Income $50 000–$59 999 | 0.02957611 | 0.09074007 | 0.33 | 0.7404 | −0.14672871 | 0.2073418 |
| Income $60 000–$74 999 | 0.05802720 | 0.09022005 | 0.64 | 0.5201 | −0.11884424 | 0.23486984 |
| Income $75 000 or more | 0.15251375 | 0.08124322 | 1.88 | 0.0605 | −0.06765748 | 0.31178497 |
| Income prefer not to answer | 0.07118471 | 0.08348300 | 0.86 | 0.3899 | −0.09187789 | 0.2354631 |
| Income under $25 000 | 0 | | | | | |
| Injury to self in past 12 months | −0.11400554 | 0.05464297 | −2.09 | 0.0370 | −0.22112897 | −0.0068821 |
| No injury to self in past 12 months | 0 | | | | | |
| Injury to family in past 12 months | 0.08943370 | 0.04362396 | 2.05 | 0.0404 | 0.00391219 | 0.1740552 |
| No injury to family in past 12 months | 0 | | | | | |
| Passenger in vehicle with drinking driver | 0.00677588 | 0.03920381 | 0.17 | 0.8628 | −0.07008024 | 0.0836220 |
| Not a passenger in vehicle with drinking driver | 0 | | | | | |
| Campaign slogan ‘Seriously?’ | 0.0558835 | 0.07282851 | 0.77 | 0.4429 | −0.0889133 | 0.1986532 |
| Campaign slogan ‘Have a word with yourself’ | 0 | | | | | |
| Region Fraser Valley | −0.10634715 | 0.05631172 | −1.89 | 0.0590 | −0.21476245 | 0.00440774 |
| Region Vancouver Island | −0.08005552 | 0.06444068 | −1.24 | 0.2142 | −0.20638663 | 0.0462560 |
| Region Northern | 0.07322363 | 0.06543751 | 1.12 | 0.2632 | −0.05509500 | 0.20151167 |
| Region Vancouver Coastal | −0.1774487 | 0.05929829 | −2.99 | 0.0028 | −0.29368472 | −0.06118502 |
| Region Interior | 0 | | | | | |
| Year | −0.01275582 | 0.02582722 | −0.49 | 0.6214 | −0.0638815 | 0.0378765 |

Predictor variables that achieved p value<0.025 are shown in bold font.
sample) are more likely to perceive many different injury scenarios as preventable and think consciously before enacting a potentially risky behaviour, regardless of whether that particular scenario has been featured in any of the campaign ads or not.

Parental status was also significant in both models, a finding that was consistent with the views expressed in the focus group consultations during the development phase of the campaign platform. Parents who were consulted during the formative

Parental status was also significant in both models, a finding that was consistent with the views expressed in the focus group consultations during the development phase of the campaign platform. Parents who were consulted during the formative
evaluation tended to be more fatalistic about injuries, indicating that it is not feasible, or even desirable, to prevent all injuries. These parents felt that children needed freedom to test their limits and that some risk was the cost of the learning experience vital to normal healthy growth and development. At the same time, they expressed a strong need to set a good example and take more precautions when in the presence of their children. These findings are reflected in the current study, with parental status predictive of higher scores on preventability and conscious thought.

The model of conscious thought showed that exposure to the slogan ‘Seriously?’ had a significant effect, and while this may be due in part to the longer period of time for which the campaign was already in market when this slogan was introduced, it may also provide some evidence for the ability of the campaign to target the moment of decision and interrupt the planning process that precedes action. Preventable messaging follows the HAPA model, which posits that the transition between intention and action is moderated by a cognitive process that helps the person plan how to enact the intended behaviour as well as how to mitigate potential barriers to action.15 A previous study of helmet use behaviours among cyclists in the context of the HAPA model found that exposure to the Preventable campaign was associated with a greater propensity to plan to use a helmet. Those who see or recall the message at the moment of decision and plan it is most relevant and compelling demonstrates how to mitigate potential barriers to action. The model of conscious thought showed that exposure to the slogan ‘Seriously?’ had a significant effect, and while this may be due in part to the longer period of time for which the campaign was already in market when this slogan was introduced, it may also provide some evidence for the ability of the campaign to target the moment of decision and interrupt the planning process that precedes action. Preventable messaging follows the HAPA model, which posits that the transition between intention and action is moderated by a cognitive process that helps the person plan how to enact the intended behaviour as well as how to mitigate potential barriers to action. Preventable messaging follows the HAPA model, which posits that the transition between intention and action is moderated by a cognitive process that helps the person plan how to enact the intended behaviour as well as how to mitigate potential barriers to action.

The strength of the Preventable campaign lies in the careful and thorough consultation with the target audience conducted throughout BC prior to the development of the campaign messaging. Preventable sought to fully understand the prevailing attitudes and awareness of its audience with respect to injury prevention as a singular issue as well as identify points of entry into the public discourse of serious injuries. British Columbians clearly expressed their willingness to engage with an injury prevention message, but not if it came directly from government, as there were concerns about hidden agendas or conflicts of interest. Thus, Preventable was set up as a not-for-profit organisation with a board of directors representing public, private and non-profit organisations, to deliver its message in a format acceptable to its audience.

Over the course of the formative evaluation phase prior to campaign launch, Preventable found that British Columbians believed that injuries were inevitable, yet they also believed that they would never personally experience a serious injury. Clearly, a traditional, information-based public health campaign was not going to be effective. Consistent with the literature on public understanding of the word ‘accident’, Preventable found that the intended audience already understood that injuries resulting from ‘accident’ were preventable. Generally, people felt that injuries were the result of taking shortcuts, not thinking ahead or being careless, and even in some cases ‘plain stupidity’. Accordingly, the most common solutions offered were ‘just be more careful’ or ‘be more aware’. Rather than filling a knowledge gap, the challenge was to develop an approach that would address the underlying reasons why people behave in ways that do not seem consistent with their understanding of injuries.

Focus group participants consulted during the formative evaluation strongly rejected content that would bring them to a ‘dark place’ where the outcome of an injury-producing event was made explicit. In particular, parents refused to even discuss the idea of ads that feature ‘the dark place’ with respect to children, asserting that they would be strongly repelled by such content. Rather than messaging intended to shock or shame them into changing their behaviour, they indicated that a reminder to exercise their judgement in the right place and time would be welcome, as they felt such a message respected their intelligence and personal agency in preventing injuries. These preferences were common across the target age group, regardless of gender, socioeconomic status, parental or marital status or region of residence. The campaign messaging was developed following the consultation period in direct response to the stated preferences of British Columbians to be addressed as thoughtful, responsible individuals who are credible sources of prevention knowledge in their own right.

This study examines the approach of the Preventable campaign messaging in the context of the prevailing attitudes and behaviours related to preventable injuries among British Columbian adults. Engaging messaging that reminds the audience to ‘Have a word with yourself’ in the time and place of potential risk was found to have a significant effect on perceived preventability of injury as well as conscious forethought applied to behaviour in this population. This paper describes the attitudes and behaviours of adults in BC; however, the campaign...
is currently active in Alberta and undergoing market testing in the Atlantic provinces. Future work will seek to compare the effect of the campaign as it expands to other jurisdictions in Canada and as long-term tracking data in these regions becomes available.

Limitations

This study is subject to some limitations. While efforts were made to ensure adequate regional representation in each survey wave, with slight oversampling in the least populous region and undersampling in the most populous region, the sample is slightly skewed towards the more educated and affluent, so findings may not be as reliably generalised to populations of lower socioeconomic status. However, recruitment of respondents continued until sufficient numbers were gathered that provided statistically representative samples at the provincial and regional health authority levels, permitting comparisons among the regions and between those respondents that recalled the campaign and those that did not. Last, the distributions of the outcome variables (preventability and conscious thought) were not perfectly normal, although the sample size was large enough and the model fit adequate to compensate. Additionally, we purposely delayed in publishing these data to ensure sufficient time in market with consistent messaging to have a population-level effect as well as allow for long-term data collection and amassing a large sample size for analysis.

CONCLUSION

The Preventable campaign represents a unique approach to injury prevention from a public and population health perspective. Crown corporations, NGOs and leading organisations in both the private and public sectors have all brought their talents and resources to the table, to provide funding and guidance and to provide unique and meaningful touch points and communication channels to reach the target audience. Preventable has been a catalyst for shifting injury-related attitudes and behaviours among the adult population, with its creative platform and approach to messaging that engages its audience in the right place and at the right time: with its creative platform and approach to messaging that has been a catalyst for shifting injury-related attitudes and behaviours among the adult population, with its creative platform and approach to messaging that engages its audience in the right place and at the right time: before an injury occurs.

What is already known on this subject

► Social marketing is a useful tool for prevention and raising awareness within the domain of public health.
► The Health Action Process Approach model of health behaviour change proposes that the transition between intention and behaviour is moderated by planning.

What this study adds

► Preventable’s innovative creative platform provides a reminder in the time and place that serious injuries have the potential to occur.
► Adults aged 25–54 years already know how to stay safe. For them, engaging campaign content leaves room to assess the intended behaviour within the context of their pre-existing knowledge.

REFERENCES

1. Luca NR, Suggs LS. Theory and model use in social marketing health interventions. J Health Commun 2013;18:20–40.
2. Grier S, Bryant CA. Social marketing in public health. Annu Rev Public Health 2005;26:319–39.
3. Andreasen AR. Marketing social marketing in the social change marketplace. Journal of Public Policy & Marketing 2002;21:13–13.
4. Rajabali F, Ibrahimova A, Barnett B, et al. Economic burden of injury in British Columbia. Vancouver, Canada 2015.
5. Schwarzer R. Modeling health behavior change: how to predict and modify the adoption and maintenance of health behaviors. Appl Psychol 2008;57:1–29.
6. Schwarzer R, Luszczynska A. How to overcome health-compromising behaviors: The health action process approach. Eur Psychol 2008;13:141–51.
7. Smith BJ, Tang KC, Nutbeam D. WHO health promotion glossary: new terms. Health Promot Int 2006;21:340–5.
8. Douglas Evans W, Wasserman J, Bertolotti E, et al. Branding behavior; the strategy behind the truth social marketing campaign. Soc Mar Q 2002;8:17–29.
9. Farrell MC, Nonnemaker J, Davis KC, et al. The influence of the national truth campaign on smoking initiation. Am J Prev Med 2009;36:379–84.
10. Faulkner G, McCoy C, Plotnick CR, et al. Relaunching a national social marketing campaign: expectations and challenges for the “new” ParticipACTION, Health Promot Pract 2011;12:569–76.
11. Bauman A, Maddill J, Craig CL, et al. ParticipACTION: this mouse roared, but did it get the cheese? Can J Public Health 2004;95:Suppl 2(SUPPL. 2):S14–9.
12. Pike I, Richmond S, Rothman L, et al. Canadian injury prevention resource. Toronto, Ontario, 2015.
13. Kendrick D, Ca M, Ye L, et al. Parenting interventions for the prevention of unintentional injuries in childhood. Cochrane Database Syst Rev 2013;28:CD006020.
14. Elder RW, Shults RA, Sleet DA, et al. Effectiveness of mass media campaigns for reducing drinking and driving and alcohol-involved crashes: a systematic review. Am J Prev Med 2004;27:57–65.
15. Karl FM, Smith J, Pled S, et al. Applying the health action process approach to bicycle helmet use and evaluating a social marketing campaign. Inj Prev 2017. DOI: 10.1136/injuryprev-2017-042399. [Epub ahead of print]
16. Girasek DC. How members of the public interpret the word accident. Inj Prev 2015;21:205–10.
17. Government of British Columbia ERB. Trends in B.C.’s population size & distribution. http://www.env.gov.bc.ca/sse/indicators/sustainability/bc-population.html (accessed 28 Jun 2017).