Minimising alcohol harm: a systematic social marketing review (2000-2014) [1]

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Highlights

This study provides a review of evidence behind social marketing effectiveness in the area of problem behaviours associated with alcohol drinking. This paper presents a review of interventions and their evaluations published in peer-reviewed journals between 2000-2014 to identify the role and use of the key elements of social marketing interventions aiming to minimize harm from alcohol consumption. Social marketing interventions reviewed in this study were found to be largely effective in creating positive effects through changing behaviours and policies to effect short term or immediate changes, and also attaining longer term change via attitude, behavioural intention, and/or raising awareness.

Abstract

This study sought to review social marketing interventions and their evaluations published in peer-reviewed journals between 2000-2014 to identify the role and use of the key elements of social marketing interventions: behavioural objective, audience segmentation, formative research, exchange, marketing mix and competition. A systematic literature search was undertaken examining nine databases and 23 social marketing interventions were identified. None of the social marketing interventions seeking to minimise harm from alcohol employed all six of the aforementioned benchmark criteria. Social marketing interventions reviewed in this study were found to be largely effective in creating positive effects through changing behaviours and policies to effect short term or immediate changes, and also attaining longer term change via attitude, behavioural intention, and/or raising awareness. However, the absence of complete benchmark criteria was also identified and this may be limiting effectiveness indicating further potential for social marketing's reputation as an effective change agent to be enhanced via more comprehensive application of social marketing benchmark criteria.

Keywords: alcohol, problem drinking, social marketing, literature review

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Introduction

Excessive alcohol consumption is a problem behaviour bringing significant harm to individuals, communities and the society at large. Premature mortality rates are two to four times greater among individuals who drink to excess than that of the general population (Room *et al*., 2005). Detrimental effects of excessive alcohol consumption on the physical and psychological health of consumers have been widely documented. For example, excessive alcohol consumption may cause sleep deprivation, sexual dysfunction, heart and blood disorders, pancreas damage and liver cirrhosis, mouth cancer, and lead to loss of personal control, social disintegration, and even suicide (Cargiulo, 2007). Further, excessive drinking results in injuries caused by car accidents (Cismaru *et al.*, 2009; Wechsler and Nelson, 2008), sexual assaults, family and other social problems (Hill *et al.*, 2005). As alcohol is consumed by almost half of the world's population, its negative consequences have serious implications for public health: the World Health Organisation estimates that 3.3 million people worldwide died of alcohol-related causes in 2012 (WHO, 2014).

Excessive alcohol consumption has therefore become one of the most pressing global problems affecting both developed and developing countries (Farrell & Gordon, 2012). In the United States alcohol remains the third preventable cause of death, contributing to 85,000 deaths annually (National Institute on Alcohol Abuse and Alcoholism, 2014). The United Kingdom's Department of Health (2013) estimates that alcohol-related harm cost the British society £21 billion, and between 2010 and 2011 there were 15,000 deaths caused by alcohol. In Australia, alcohol has been associated with net annual costs of $1.61 billion in crime, $1.98 billion in health care, $3.58 billion in lost workplace productivity, $1.57 billion in lost

productivity in the home, and $2.2 billion in road accidents (Collins and Lapsley, 2008). In an attempt to combat problem drinking different approaches have been developed by governments. For example, the Australian government has made substantial efforts via legislation and education, and according to the National Alcohol Strategy (2012), various methods have been adopted to reinforce liquor licensing and restrict alcohol advertising and availability. Further, the National Preventative Health Strategy (2009), designed to tackle obesity and the use of alcohol, illicit drugs, and tobacco, included social marketing, which has become in recent years a widely recognised behaviour change tool (Hastings and Angus, 2011). As the role of social marketing as a tool for shaping responsible alcohol consumption culture has grown in significance (Kotler *et al.*, 2002), its application to the design and implementation of campaigns that aim to minimize problems caused by alcohol consumption has increased in popularity (Glider and Midyett, 2001; Grier and Bryant, 2005; Cismaru *et al.*, 2009; Tay, 2005).

However, while social marketing has been used to combat problem drinking, there are only a handful of studies attempting to integrate the existing knowledge to identify factors leading to success or failure of social marketing interventions (Gordon *et al.*, 2006; Stead *et al.*, 2007). This paper aims to extend previous studies by classifying social marketing interventions according to six key social marketing benchmark criteria proposed by Andresen (2002). The aim of the current study is to provide clear evidence of use for each of six social marketing benchmark criteria which can assist social marketers to understand how key social marketing principles can be applied in future interventions.

Social marketing

The main focus of social marketing is on the application of well-known marketing tools and techniques (i.e. marketing mix) to foster social change (Wymer, 2011). Social marketing has been used to combat problem behaviours for over 40 years (Lefebvre, 2011), and the early development of social marketing focused on health promotion messages (Andreasen, 2003). However, with a focus on promotional methods many early social marketing efforts still lacked more sophisticated marketing techniques such as full employment of a marketing mix offering a value offering enabling exchange with a product or service experience. Until the 1980s, the integration of health promotion and marketing was relatively straightforward. In the late 1980s, though, several new concepts of social marketing were introduced and developed. For example, according to Lefebvre (2003), an enormous shift in emphasis had occurred, from using social marketing as a way of promoting ideas to seeing it as a methodology for changing problem behaviours. In July 2013 the International Social Marketing Association (ISMA), European Social Marketing Association (ESMA) and the Australian Association of Social Marketing (AASM) adopted a consensus definition of social marketing. This consensus definition states that "social marketing seeks to develop and integrate marketing concepts with other approaches to influence behaviours that benefit individuals and communities for the greater social good" (2013).

Initially proposed by Andreasen (2002), social marketing benchmark criteria offer a useful guideline to ascertain the extent that social marketing is employed within a change intervention. Social marketing benchmark criteria are also used to distinguish social marketing from other public health approaches. The importance of benchmark criteria in social marketing is advocated by many leading social marketers (Levebvre and Flora, 1988). Alternative social marketing criteria have been introduced by Levebvre and Flora (1988), French and Blair-Stevens (2005) and Robinson-Maynard *et al.* (2013). However, some

frameworks do not offer mutually exclusive criteria for categorisation purposes. For example, consumer orientation and insight are not easily distinguishable in the French and Blair-Stevens (2005) criteria. Further, studies that examined the effectiveness of social marketing campaigns targeting alcohol have previously adopted benchmark criteria as a framework to classify interventions (see Gordon *et al.*, 2006; Stead *et al.*, 2007). Evidence has been put forward indicating that social marketing interventions are more likely to achieve behaviour change when more of the benchmark criteria are used (Carins and Rundle-Thiele, 2014). The six benchmark criteria advocated by Andreasen (2002) include behavioural change, formative research, segmentation, the use of marketing mix, exchange and competition. These six benchmark criteria are endorsed in the later schemes (see French and Blair-Stevens, 2005 and Robinson-Maynard *et al.* 2013). It is therefore important to examine the extent that Andreasen's (2002) benchmark criteria are used by social marketers who are seeking to change problem behaviours, to understand whether further improvements to social marketing implementation can occur.

First, Andreasen (2002) defines behavioural change as the key objective of social marketing interventions. Donovan and Henley (2010) argue that the sole focus on attitude change is not a sufficient social marketing goal. The ultimate goal of social marketing should be to change people's behaviour, not only to inform or educate them about social problems. Second, formative research aims to investigate the consumers' needs and provide understanding of motives that can be influenced to achieve desired behavior change goals (French and Blair-Stevens, 2006; Andreasen, 2002). French and Blair-Stevens (2006) also mentions that this stage of social marketing aims to "drill down from a wider understanding of the customer to focus on identifying key factors and issues relevant to positively influencing particular behaviour." (p. 1). Formative research informs the development of

interventions, the product design, availability, pricing and the communication methods (Donovan and Henley, 2010). Third, segmentation aims to identify whether unique groups (segments) exist along with key needs and motives that distinguish each group to inform different marketing and promotion mixes accordingly (Andreasen, 2002). In commercial marketing, it is evident that different people may respond differently to different advertising methods and products. Similarly in social marketing, segmentation can help campaign designers to better develop the marketing mix in order to satisfy different groups of the target audience (Donovan and Henley, 2010). Fourth, Donovan and Henley (2010) who argue that there are three aspects of exchange, namely: benefit offered by the social marketer; effort the target audience has to make; and the intermediary. Therefore, the main purpose of social marketing exchange is to lower the effort and emphasize/maximise the benefit on the consumer side. As Stead *et al.* (2006, p. 2) argue, "what would motivate people to engage voluntarily with the intervention and offer them something beneficial in return" is exchange. Fifth, the marketing mix includes the marketing mix which is most commonly referred to as product, place, price and promotion. Similar to commercial marketing product refers to the bundle of benefits received by the target audience following exchange (Elliot *et al*., 2014). Price is one of the traditional marketing Ps that is widely debated in social marketing as the use of dollar pricing in social marketing interventions is rare. Price is a transactional concept outlining what a consumer has to exchange in order to receive the bundle of benefits (product or service experience) (Elliot *et al*., 2014). Place refers to where and when the target audience changes behaviour (Elliot *et al*., 2014). Promotion is the most widely adopted aspect of the marketing mix in social marketing. As stated earlier it is important that any social marketing intervention incorporates more than promotion or it is simply social advertising. Finally, competition in social marketing refers to two levels: at the product level, competition could be harmful behaviours or any temptations that will lead to this behavior; at the broader level,

competition could be “any behaviour, product or idea that impacts negatively on health and wellbeing” (Donovan and Henley, 2010 p.219).

Methods

Following the systematic literature review procedures outlined in Carins and Rundle-Thiele (2014) a literature search was conducted to identify social marketing interventions aiming to minimize harm from alcohol consumption and published between January 2000 and May 2014. Nine databases (Table 1) were searched using the following terms: alcohol* or drink* AND intervention* or Randomi#ed Controlled Trial or evaluation or trial or campaign* or program* or intervention or interventions AND social marketing. The variance of records between databases can be attributed to the size and the specialisations of each database and how closely they relate to the search terms. ProQuest, for example, is made up of 20 databases.

Table 1 here.

All downloaded records were collated using EndNote. As multiple databases include the same journals, duplicate records had to be removed reducing the number of unique articles to 546. In the next stage unqualified records including newspaper articles, conference papers and records published before January 2000 and not in English were removed. Then, titles and abstracts of the remaining 527 papers were reviewed and records classified into the following exclusion criteria were excluded: formative research, papers with no social marketing claim, review/conceptual papers, policy related papers.

Following the application of the exclusion criteria 20 articles including evaluations of social marketing interventions aiming to minimize harm from alcohol were identified. Backward and forward searching using authors' names and websites, intervention names, Google Scholar, 'Publish or Perish' and reference lists was completed to identify a further 3 relevant social marketing interventions and other articles providing additional information about the identified interventions. In total 42 articles were included in the analysis covering 23 social marketing interventions. Figure 1 summarises the literature search process, and the full list of 42 papers for each social marketing intervention can be found in Appendix 1. All interventions included in this paper self-identified as social marketing interventions.

Figure 1 here.

All identified interventions were conducted in developed (wealthy, industrialised and democratic) countries. Interventions in all but one country (Finland) were conducted in English-speaking countries: seventeen in the United States, three in the United Kingdom, two in Australia and one in New Zealand. Fifteen interventions identified their source of funding, including governmental organisations (nine interventions), charities (3 interventions), an education institute, athletic organization and a private donor. Only three interventions identified their budgets as US$88,200 (Glider *et al.*, 2001), US$11,000 (Clapp et al., 2005) and £25,672.59 (Lock et al., 2000).

All identified articles were analysed to identify any potential evidence for use of each of Andreasen's (2002) six social marketing benchmark criteria: the aim to change behaviours (and factors known to influence behavior change in the longer term), reporting of distinct

formative research to inform the intervention, market segmentation to increase the effectiveness of the intervention, clearly identified exchange, the use of a full marketing mix (more than one marketing P), and consideration of competition reported. Further analysis was also completed to determine the target audience for each intervention and identify all intervention outcomes and results reported in the articles. All identified relevant excerpts were reviewed by four social marketing researchers.

Results and Discussion

Intervention outcomes and target audiences

A total of 42 articles were identified through the literature search, describing 23 social marketing interventions aiming to minimize harm from alcohol consumption and published between January 2000 and May 2014 (please see Appendix 1). Each intervention was analysed to determine its target audience. The most frequent type of target audience were university students (n=10). Of the remaining studies, four targeted teenagers and youth (Diamond *et al.*, 2009; Kypri *et al.*, 2005; Rundle-Thiele *et al.*, 2013; Slater *et al.*, 2006),), three targeted young people aged 21-34 years (Perkins *et al.*, 2010; Rivara *et al.*, 2011; Rothschild *et al.*, 2000), two targeted teenage girls and young women (Glik *et al.*, 2001 and 2008), and one targeted chronic homeless (James and Skinner, 2009). The last three interventions targeted medical and health professionals within a context of medical centers (Aalto *et al.*, 2003; Lock *et al.*, 2000; Payne *et al.*, 2010).

Interventions were carried out in a wide range of contexts, targeted many different audiences and used diverse outcome measures, and therefore standard meta-analytical procedures could not be followed. Our assessment focused on identifying whether positive, negative or no intervention effect was observed, without attempting to determine the size and

statistical significance of the effect due to different targeted behaviors and consequently different outcome measures. Five main types of outcomes were included in the analysis: behavioral, attitudinal, awareness, behavioural intentions and policy outcomes.

The clearest indicator of the effectiveness of social marketing intervention is behaviour change (Coffman, 2002). Twelve studies reported some positive behavioural effects, with several studies indicating a significant intervention effect, three studies reported some negative effects, and five reported no behavioural effects in at least one of the aspects of the intervention. Six of the eight interventions that measured attitudinal changes found a positive intervention effect, one study reported some negative intervention effects, and three reported no behavioural effects in at least one aspect of the intervention. All of ten interventions measuring awareness, one measuring behavioural intentions, and two of three interventions aiming to influence policy changes reported positive results, and only one intervention reported no policy change as a result of the intervention (Glider *et al.*, 2011).

Andreasen's (2002) benchmark criteria

Table 2 presents the assessment of each of the 23 social marketing interventions against the six benchmark criteria. None of the interventions gave evidence that they addressed all of the benchmark criteria, and only two interventions addressed five of the six social marketing benchmark criteria (Glider *et al.*, 2001; Rothschild *et al.*, 2006). In both interventions the only benchmark criterion that was lacking was segmentation. Seventeen interventions reported the use of three or less benchmark criteria.

Table 2 here

Behavioral objective

Fourteen interventions aimed to change behaviours, and five of them had only behavioural objectives. The most commonly targeted behaviours included reduction in alcohol consumption, reduction in drink-driving, and increase in the use of designated drivers. Nine of the fourteen interventions included other objectives (i.e. attitude change, awareness, policy change, behavioural intentions). For example, Glider *et al.* (2001), Mattern and Neighbors (2004) and Murphy *et al.* (2012) aimed to correct students' misperceptions about the behaviours and social expectations of peers, and Glassman *et al.* (2010) attempted to change the perception that alcohol use increases sexual opportunities among college students. Five of the interventions aiming to raise awareness had no behavioural objectives indicating that they were social advertising campaigns rather than social marketing interventions (Carins and Rundle-Thiele, 2014). Policy change was an additional aim for three interventions which also had behavioural objectives to reduce drinking. Glider *et al.* (2001) attempted to change policies to restrict the use of alcohol on campus, James and Skinner (2009) tried to change alcohol consumption policies at homeless shelters, and Kypri *et al.* (2005) aimed to enforce provisions relating to the sale of alcohol to minors.

Segmentation

While all of the reviewed social marketing interventions clearly specified their target audience (e.g. students living on a university campus in residence halls (Mattern and Neighbors, 2004); pregnant African-American and Latina women (Glik *et al.*, 2008), only two interventions employed market segmentation. Segmentation involves examining the population of interest to identify segments (or groups) that share similar needs and wants to then target one or more groups to maximize scarce financial resources. Glik *et al.* (2001) identified two groups of pregnant women in California, US: African-American women and

Latina adolescent women. Although the general message of not consuming alcohol during pregnancy was consistent across both segments, its execution and delivery was tailored to each segment with two different slogans, languages (English and Spanish) and images. In Glik *et al.* (2008) however, the target audience was divided into four segments: Caucasian women, African-American women, Latina English-speaking women and Latina Spanish-speaking women, and materials were developed to meet the needs of each group.

Formative research

Formative research was the most commonly used social marketing criterion reported in 20 interventions aiming to minimize harm from alcohol. Formative research provides social marketers with an opportunity to understand the target audience, yet eight interventions used only one method (surveys) to gain insights before designing the intervention. Focus groups (n=13) and surveys (n=12) were the most common formative research methods employed in social marketing interventions. In particular, focus groups were mostly used for pre-testing materials to ascertain their suitability for the target audience and improve their effectiveness. Further, focus groups were often used to provide insights into barriers and benefits of targeted behaviours. Only five interventions used qualitative interviews, two reported use of secondary data analysis and two reported use of observations.

Eight social marketing interventions reported use of two or more formative research methods to inform the intervention development. The most common combination was the use of both focus groups and surveys (Aalto *et al.*, 2003; Glider *et al.*, 2001; Lock *et al.*, 2000; Rivara *et al.*, 2011; Thompson, 2013). The most extensive use of formative research methods was found in two social marketing interventions. Both used four different methods: Diamond *et al.* (2009) employed focus groups, interviews, observations and the analysis of previous

research, and Thompson *et al.* (2013) used in-depth interviews with 11 undergraduate students and five university administrators, five focus groups, an online survey and observational studies in popular bars. Another interesting example was Rivara *et al.* (2011) who involved stakeholders in their formative research, in order to enlist their support in the community for an intervention regarding drink driving. Interviews with stakeholders, including bar staff, community leaders, neighbourhood organisations and members of the police department were conducted.

Exchange

Exchange is an important part of social marketing as consumers need to gain more than they sacrifice (French and Blair-Stevens, 2006). Interventions aiming to minimize problem drinking face a considerable challenge – the hedonic consumption of alcohol offers immediate rewards (Szmigin *et al.*, 2008), yet the potential long-term consequences are distant and vague (Kubacki *et al.*, 2011). Many of the reviewed studies did not explicitly consider exchange in their intervention design. Seven of the reviewed interventions featured some evidence of exchange. The most common form of exchange was the use of alcohol-free events as an alternative to parties and social events associated with drinking (Diamond *et al.*, 2009; Eckert *et al.*, 2010; Glider *et al.*, 2011; Thompson *et al.*, 2013). Two interventions offered exchange in the form of a service experience designed to minimize the incidence of drink driving. Rothschild *et al.* (2006) provided luxury taxis taking patrons home after a night out for a fee of $US15-20. Rivara *et al.* (2011) on the other hand established 10 new taxi stands to encourage the use of taxis among customers leaving nightclubs and bars late at night. James and Skinner (2009) established shelters for chronic homeless who could receive accommodation and other household products in exchange for moderating their consumption.

Marketing mix

Consistent with previous literature reviews (Carins and Rundle-Thiele, 2014), if evidence of at least two of the marketing mix elements (product, place, price or promotion) was reported in an intervention, the interventions was classified as using a marketing mix. Two types of interventions emerged in the analysis: studies relying only on one element of the marketing mix – promotion, and studies which utilised two or more elements of the marketing mix. Only two interventions provided clear evidence of the use of full marketing mix: product, place, price and promotion (Lock *et al.*, 2000; Rothschild *et al.*, 2006). For example, Lock *et al.* (2000), who targeted health professionals, designed a 'Drink-less kit' (product) allowing doctor's easier identification of problem drinking, the intervention was carried out in GPs' offices and medical centres (place), GPs time and effort was identified as one of the costs of changing behaviours, and posters, banners, leaflets, cards and booklet were used to promote the intervention among physicians.

In another six interventions it was possible to detect the evidence of the use of three marketing mix components. In five of the six interventions utilising 3 elements of the marketing mix the one element that was not mentioned was price. Only James and Skinner (2009), who provided shelter to homeless, included a service charge to participants, but did not declare the use of any forms of marketing communications in their intervention. Ten studies reported the use of only promotion in their interventions, they were therefore examples of what Carins and Rundle-Thiele (2014) in their review described as social advertising.

Evidence of product was identified in nine social marketing interventions. Alcohol-free events were the most common type of products and were used in Diamond *et al.* (2009),

Glider *et al.* (2001), Kypri *et al.* (2005) and Thompson *et al.* (2013). Other products included an online game (Rundle-Thiele *et al.*, 2013), 'Drink-less kit' used by medical practitioners to identify problem drinking (Lock *et al.*, 2000), a questionnaire identifying problem drinking and follow-up consultations (Aalto *et al.*, 2003), cleaning equipment, chemicals and toilet rolls (James and Skinner, 2009), and luxury limousines (Rothschild *et al.*, 2006). One intervention also provided an opportunity to young people to record their music in a professional recording studio, have their work mastered onto a compilation CD, and perform at a series of drug-free shows widely marketed to peers throughout the city (Diamond *et al.*, 2009).

Place as the location where behaviour change needs to occur was identified in eleven interventions. The same four interventions that included alcohol-free events also provided further details of the locations of those events (Diamond *et al.*, 2009; Glider *et al.*, 2001; Kypri *et al.*, 2005; Thompson *et al.*, 2013). Two interventions aiming to change the diagnostic behaviour of medical practitioners took place in medical centres (Aalto *et al.*, 2003; Lock *et al.*, 2000), and university interventions referred to various locations on campus such as the pool, breakfast bar, student union, recreation centre and various athletic venues (Eckert *et al.*, 2010; Glassman *et al.*, 2010). Finally, James and Skinner (2009) acknowledge the shelter as the place where behaviour change was taking place, and Rivara *et al.* (2011) referred to the location of newly established taxi stands. The cost of changing behaviours was explicitly identified only in three interventions in this review. Rothschild *et al.* (2006) referred to the price of the limousine ride home (US$15-20), James and Skinner (2009) to a service charge for providing some cleaning items to participants staying in a shelter, and Lock *et al.* (2000) to the GPs time and effort.

Competition

Competitive analysis gives social marketers an opportunity to identify some of the barriers to behaviour change and address them in the intervention design. Only five studies presented some form of competitive analysis, recognising competition either as alternative behaviours or messages received by target audiences. Two social marketing interventions aiming to reduce alcohol consumption among university students identified traditional drinking occasions (Glider, 2001), bars and house parties (Glassman *et al.*, 2010) as a form of competition fuelling students' drinking. Another example comes from Rothschild *et al.* (2006) who offered patrons leaving nightclubs and bars a ride home in licensed luxury limousines, and recognised other means of transport such as taxis as competition. Rundle-Thiele *et al.* (2013) provided one of the most extensive competitor analyses among all studies, outlining both direct competition such as commercial alcohol marketing containing positive messaging linking alcohol to social settings, relaxation and fun, and indirect competition such as other alcohol education programs. Finally Glik *et al.* (2008) observed that their target market, pregnant women, were exposed to many mixed messages about the dangers of drinking while pregnant, and often were confused about the risks associated with some types of alcohol.

Conclusion, Limitations and Future research

Social marketing plays an increasingly important role in minimising the harm associated with excessive alcohol consumption (Kotler *et al.*, 2002). This study sought to review social marketing interventions and their evaluations published in peer-reviewed journals to identify the use of the key social marketing benchmark criteria in interventions aiming to reduce problem behaviours. No complete application of social marketing principles was evident despite evidence indicating that the more Andreasen's (2002) benchmark criteria are applied

the greater the likelihood that positive behaviour change will be achieved; there is therefore considerable room for improvement in the application of social marketing. The review outlines clear examples of use for all six social marketing benchmark criteria to guide future intervention development.

While the use of all six social marketing benchmarks was not argued for in 2002 by Andreasen, the time has come for more complete application. The current study was undertaken to update the evidence base on the extent that social marketing principles outlined by Alan Andreasen in 2002 are employed in social marketing interventions seeking to minimise harm from alcohol. Social marketing interventions reviewed in this study were found to be largely effective in creating some positive change through changing behaviours and policies to effect short term or immediate changes, and also attaining longer term change via attitude, behavioural intention, and/or raising awareness. As behaviour change remains the main goal of social marketing (Andreasen, 2002) focus should always be given to assessing behavioural outcomes. However, social marketing has advanced considerably in recent decades with definition consensus reached by peak social marketing bodies in 2013. While advertising will always remain a core component of marketing - social advertising or communications only campaigns that are not part of a larger marketing program - cannot be viewed as social marketing. As a recent study indicates, for social marketing effectiveness to be achieved more of the social marketing benchmark criteria should be used (Carins and Rundle-Thiele, 2014), and therefore for an intervention to be recognised as social marketing we contend that all six of Andreasen's (2002) social marketing benchmark criteria should be clearly evident. The absence of complete benchmark criteria use is limiting social marketing effectiveness and in doing so damaging social marketing's reputation as an effective change agent. The alcohol industry doesn't just advertise – it offers a wide array of product and

service offerings that meet the needs and wants of its target audience at a convenient time and place.

Opportunities exist to further extend our understanding of social marketing's effectiveness. For example, studies identified in this review can be analysed using theoretical frameworks other than Andreasen's (2002) six benchmark criteria (see for example Lefebvre and Flora, 1988; French and Blair-Stevens, 2005; Robinson-Maynard et al. 2013). Earlier social marketing reviews looked into the use of theory and models in social marketing (Luca and Suggs, 2012) and the use of marketing mix in social marketing interventions (Luca and Suggs, 2010). There is a need for future integrative work for example to focus on the formative research methods and evaluation approaches used in social marketing.

The current review identified narrow methodological focus in formative research with the dominant use of focus groups and surveys, both of which are self-report methods. The application of multiple research methods (or triangulation) has been recommended to provide an in-depth understanding of the target audience (Denzin & Lincoln, 2005). Triangulation in the formative research process is a strategy that adds rigour, richness and depth to an investigation (Flick, 2009). Given that self-report methods are impacted by known biases such as social desirability (Baumgartner & Steenkamp, 2006) and memory bias; additional methods (such as evaluating revealed preferences, stated preferences, experiments and archival data) are recommended to gain further insights into target audiences and the environments that enable desired behaviours. Moving beyond an over-reliance on one method will assist audience insights (Grier & Bryant, 2005; Lefebvre, 2013) and best practice examples are summarised (Rundle-Thiele *et al*., 2013).

A key challenge in social marketing relates to sustainability with short-term funding sources most of which come from the public and non-profit sector. Few examples of pricing were identified in this literature review and this represents the area that offers most promise for emerging social marketing scholars and practitioners. Specifically, pricing offers the ability to generate revenue that in turn could lead to self-sustained programs that do not require funding from public and non-profit sources in the longer term. Interventions offering products and service experiences that the target audience would readily exchange money for must be considered as a viable alternative in the social marketing field. By meeting the needs and wants of the target audience on a repeated basis social marketers can ensure both intervention longevity and behavioural outcomes that benefit society over time.

The findings in this study are restricted by several important limitations. First, this review included only studies which self-identified as social marketing interventions. Inevitably, studies may have been missed or excluded as they did not self-identify as social marketing, even if the actual interventions presented in those studies might have had social marketing characteristics. Moreover, definitions and understandings of social marketing vary across authors and studies, therefore one may argue that studies included in this review represent many different approaches to social marketing. Those are, however, philosophical debates which need to be explored in future research. Second, evaluation of factors contributing (or not) to behavior change was not the focus of the current review. Moreover, standard meta-analytical procedures could not be followed in the analysis as studies focused on changing different behaviours and consequently different behavioural measures were used. Therefore the analysis was limited to descriptive rather than analytical techniques. Our descriptive analysis identified whether positive negative or no intervention effect was observed for each of the 23 social marketing interventions. Third, we acknowledge that the papers reviewed in

this study may not contain all important information about social marketing interventions they described, and therefore information identified in the analysis may not have been fully comprehensive. Finally, literature review guidelines such as PRISMA (Moher *et al*., 2009) offer means to further extend on work undertaken in the current systematic literature review. Specifically, twenty-seven PRISMA guidelines provide researchers with a checklist of activities to undertake which include assessing bias in studies reviewed. Such approaches offer a highly critical perspective for researchers to apply to data presented.

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Table 1: Databases and articles retrieved in initial search

Database	**Number of articles retrieved**
EBSCO All Databases	86
Emerald	13
INSPEC (Web of Knowledge)	60
Medline (R; and InProcess) (Ovid)	114
ProQuest All Databases	375
PsycINFO (Ovid)	67
ScienceDirect	10
Taylor & Francis	45
Web of Science	317
Total	**1087**

Figure 1: Flowchart of the literature search process

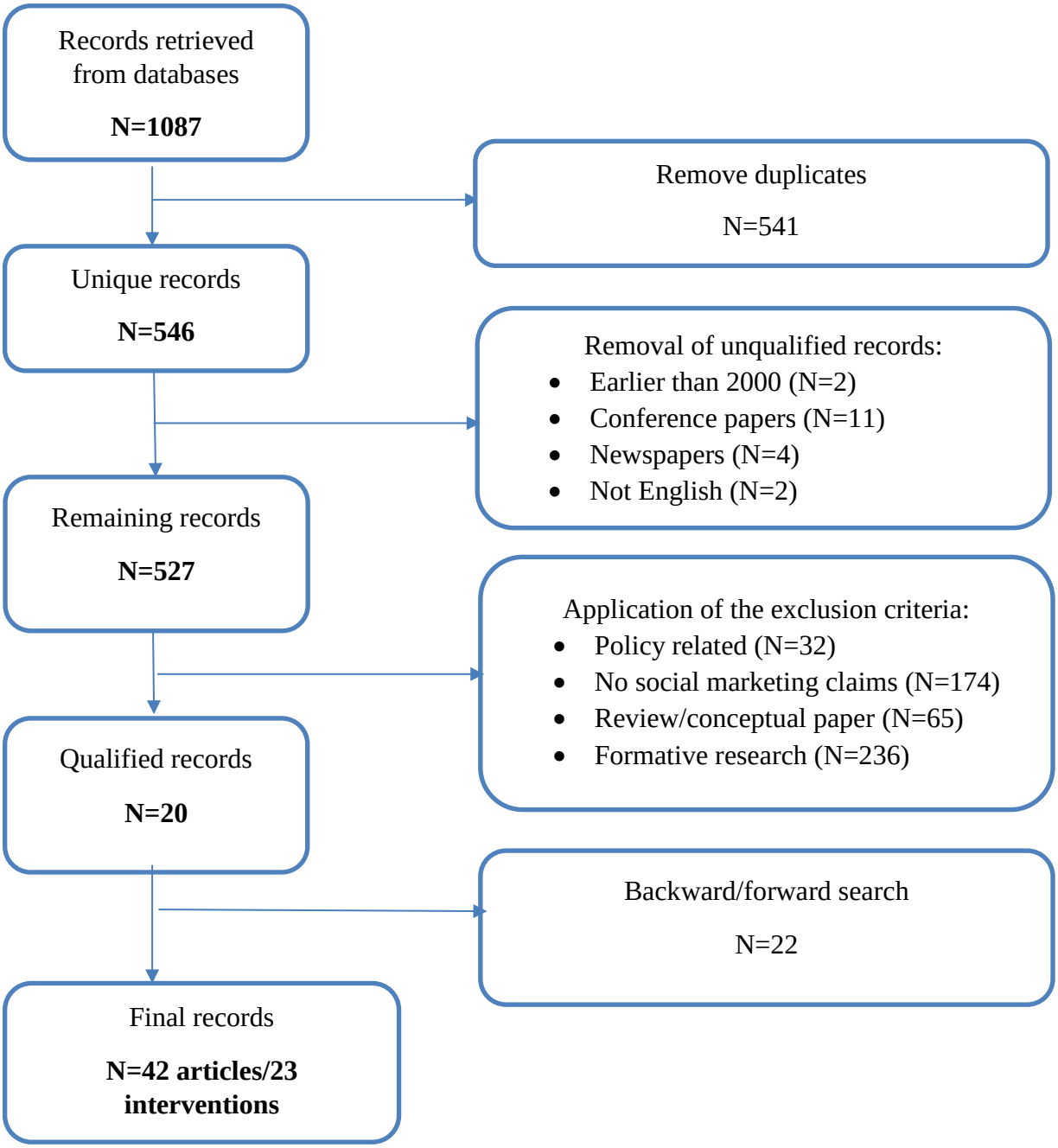

Table 2: Assessment of the use of Andreasen's benchmark criteria in social marketing interventions

No.	Authors	Behaviour	Audience	No. of SMBC	Behavioural objective	Audience segmentation	Audience research	Exchange	Marketing mix	Competition
1	Glider et al., 2001	Binge Drinking	University students	5	✓(+)[2]	×	✓	✓	✓(3)[3]	✓
2	Rothschild et al., 2006	Drink Driving	21-34 years old males, who frequented bars	5	✓(+/*)	×	✓	✓	✓(4)	✓
3	Glassman et al., 2010	Alcohol Consumption	College students	4	✓(+)	×	✓	×	✓(2)	✓
4	James & Skinner, 2009	Alcohol Consumption	Chronic homeless	4	✓(+)	×	✓	✓	✓(3)	×
5	Rivara et al., 2011	Drink Driving	21–34-year olds who frequent bars and clubs in Seattle	4	✓(+/*)	×	✓	✓	✓(2)	×
6	Thompson et al., 2013	Alcohol Consumption	College students	4	✓ (+)	×	✓	✓	✓(3)	×
7	Aalto et al., 2003	Alcohol Consumption	Health professionals, nurses, and receptionists	3	✓(*)	×	✓	×	✓(3)	×
8	Diamond et al., 2009	Alcohol Consumption	Urban youth ages 14-20	3	×	×	✓	✓	✓(3)	×
9	Eckert et al., 2010	Alcohol Consumption	College students	3	×	×	✓	✓	✓(2)	×
10	Glik et al., 2008	Alcohol during pregnancy	Pregnant women	3	×	✓	✓	×	×	✓
11	Kypri et al., 2005	Alcohol Consumption	General community	3	✓(+)	×	✓	×	✓(3)	×
12	Rundle-Thiele et al., 2013	Alcohol Consumption	High school students	3	×	×	✓	×	✓(2)	✓

[2] + positive behavioural outcomes reported, - negative behavioural outcomes reported, * no behavioural change
[3] The number of marketing mix components (product, place, price, promotion) reported in the intervention

No.	Authors	Behaviour	Audience	No. of SMBC	Behavioural objective	Audience segmentation	Audience research	Exchange	Marketing mix	Competition
13	Brown, 2004	Alcohol Consumption	University students	2	✓(+/*)	×	✓	×	×	×
14	Clapp et al., 2005	Drink Driving	College students	2	✓(+)	×	✓	×	×	×
15	Glik et al., 2001	Alcohol during pregnancy	Female African American and Latina teenagers	2	×	✓	✓	×	×	×
16	Lock et al., 2000	Alcohol Consumption	Medical practitioners	2	×	×	✓	×	✓(4)	×
17	Mattern & Neighbors, 2004	Alcohol Consumption	University students	2	✓(+/-)	×	✓	×	×	×
18	Murphy et al., 2012	Alcohol Consumption	University students	2	✓(*)	×	✓	×	×	×
19	Perkins et al., 2010	Drink Driving	Young adults between the ages of 21 and 34.	2	✓(+)	×	✓	×	×	×
20	Slater et al., 2006	Alcohol Consumption	Middle or high school students	2	✓(+)	×	✓	×	×	×
21	Gomberg et al., 2001	Alcohol Consumption	University students	1	×(-/*)	×	✓	×	×	×
22	Payne et al., 2011	Alcohol education	Paediatricians	1	×(+)	×	✓	×	×	×
23	Vinci et al., 2010	Alcohol Consumption	College students	1	×	×	✓	×	×	×

Appendix 1

42 articles included in the analysis of 23 social marketing interventions.

No.	Intervention	Articles included
1	Aalto et al., 2003	**Aalto**, M., Pekuri, P. & Seppä, K. 2003. Primary health care professionals' activity in intervening in patients' alcohol drinking during a 3-year brief intervention implementation project. *Drug and Alcohol Dependence,* 69**,** 9-14. Heather, N. 2006. WHO Collaborative Project on Identification and Management of Alcohol related Problems in Primary Health Care: Report of Phase IV: Development of Country-wide Strategies for Implementing Early Idetification and Brief Intervention in Primary Health Care. World Health Organization Geneva.
2	Brown, 2004	**Brown**, J. J. (2004). An Analysis of the Freshmen Alcohol Abuse Program. Californian Journal of Health promotion, 2(2), 41-71.
3	Clapp et al., 2005	**Clapp**, J. D., Johnson, M., Voas, R. B., Lange, J. E., Shillington, A. & Russell, C. 2005. Reducing DUI among US college students: Results of an environmental prevention trial. *Addiction,* 100**,** 327-334.
4	Diamond et al., 2009	**Diamond**, S., Schensul, J. J., Snyder, L. B., Bermudez, A., D'alessandro, N. & Morgan, D. S. 2009. Building Xperience: A multilevel alcohol and drug prevention intervention. *American Journal of Community Psychology,* 43**,** 292-312.
5	Eckert et al., 2010	**Eckert**, J., Melancon, J. & James, G. 2010. Using social marketing to impact alcohol consumption of first-year college students. *TAHPERD Journal,* 78**,** 12-16.
6	Glassman et al., 2010	**Glassman**, T. J., Dodd, V., Miller, E. M. & Braun, R. E. 2010. Preventing high-risk drinking among college students: A social marketing case study. *Social Marketing Quarterly,* 16**,** 92.
7	Glider et al., 2001	**Glider**, P., Midyett, S. J., Mills-Novoa, B., Johannessen, K. & Collins, C. 2001. Challenging the collegiate rite of passage: A campus-wide social marketing media campaign to reduce binge drinking. *Journal of Drug Education,* 31**,** 207-220. Johannessen, K., Collins, C., Glider, P. & Mills-Novoa, B. 1999. A Practical Guide to Alcohol Abuse Prevention: A Campus Case Study in Implementing Social Norms and Environmental Management Approaches.
8	Glik et al., 2001	**Glik**, D., Halpert-Schilt, E. & Zhang, W. 2001. Narrowcasting risks of drinking during pregnancy among African American and Latina adolescent girls. *Health Promotion Practice,* 2**,** 222-232.
9	Glik et al., 2008	**Glik**, D., Prelip, M., Myerson, A. & Eilers, K. 2008. Fetal alcohol syndrome prevention using community-based narrowcasting campaigns. *Health Promotion Practice,* 9**,** 93-103.

10	Gomberg et al., 2001	**Gomberg**, L., Shari Kessel, S. & Dejong, W. 2001. Evaluation of a social norms marketing campaign to reduce high-risk drinking at the University of Mississippi. *The American Journal of Drug and Alcohol Abuse,* 27**,** 375-389.
11	James & Skinner, 2009	**James**, S. & Skinner, H. 2009. The Shoreline Project for street drinkers: Designing and running a supported housing project for the "Unhousable". *Social Marketing Quarterly,* 15**,** 49.
12	Kypri et al., 2005	**Kypri**, K., Dean, J., Kirby, S., Harris, J. & Kake, T. 2005. Think before you buy under-18s drink': Evaluation of a community alcohol intervention. *Drug and Alcohol Review,* 24**,** 13-20. Cagney, P. & Palmer, S. 2007. *The sale and supply of alcohol to under 18 year olds in New Zealand: A systematic overview of international and New Zealand literature (Final Report)* [Online]. New Zealand. Available: http://www.alcohol.org.nz/research-resources/research-publications/sale-and-supply-alcohol-under-18-year-olds-new-zealand [Accessed 03-06 2013]. Clark, S. 2007. Youth Access to Alcohol: Early Findings From a Community* Action Project to Reduce the Supply of Alcohol to Teens. *Substance Use & Misuse,* 42**,** 2053-2062. Holder, H. D. 2003. *Alcohol related data collection for harm reduction purposes at the local level: A review of New Zealand data and action recommendations* [Online]. Available: http://www.alcohol.org.nz/research-resources/research-publications/alcohol-related-data-collection-harm-reduction-purposes-lo-0 [Accessed 03-06 2013]. Kypri, K. & Dean, J. I. 2002. *The Should You Supply community alcohol intervention: An evaluation for the Alcohol Advisory Council of New Zealand,* Alcohol Advisory Council of New Zealand. Kypri, K., Dean, J. I. & Stojanovski, E. 2007. Parent attitudes on the supply of alcohol to minors. *Drug and Alcohol Review,* 26**,** 41-47.
13	Lock et al., 2000	**Lock**, C. A., Kaner, E., Heather, N., Gilvarry, E. & Mcavoy, B. R. 2000. Changes in receptionists' attitudes towards involvement in a general practice-based trial of screening and brief alcohol intervention. *The British Journal of General Practice,* 50**,** 111. Hutchings, D., Heather, N., Dallolio, E., Kaner, E., Lock, C. & Cassidy, P. 2001. Alcohol screening and brief intervention in primary care: Which way now? *Drugs and Alcohol Today,* 1**,** 28-33. Kaner, E., Bland, M., Cassidy, P., Coulton, S., Deluca, P., Drummond, C., Gilvarry, E., Godfrey, C., Heather, N., Myles, J., Newbury-Birch, D., Oyefeso, A., Parrott, S., Perryman, K., Phillips, T., Shenker, D. & Shepherd, J. 2009. Screening and brief interventions for hazardous and harmful alcohol use in primary care: a cluster randomised controlled trial protocol. *BMC Public Health,* 9**,** 287. Kaner, E., Lock, C. A., Mcavoy, B. R., Heather, N. & Gilvarry, E. 1999. A RCT of three training and support strategies to encourage implementation of screening and brief alcohol intervention by general practitioners. *The British Journal of General Practice,* 49**,** 699. Lock, C. A. 2004. Alcohol and brief intervention in primary health care: what do patients think? *Primary Health Care Research and Development,* 5**,** 162-178.

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14	Mattern & Neighbors, 2004	**Mattern**, J. L. & Neighbors, C. 2004. Social norms campaigns: Examining the relationship between changes in perceived norms and changes in drinking levels. *Journal of Studies on Alcohol,* 65**,** 489-493.
15	Murphy et al., 2012	**Murphy**, S., Moore, G., Williams, A. & Moore, L. 2012. An exploratory cluster randomised trial of a university halls of residence based social norms intervention in Wales, UK. *Bmc Public Health,* 12.
16	Payne et al., 2011	**Payne**, J. M., France, K. E., Henley, N., D'antoine, H. A., Bartu, A. E., O'leary, C. M., Elliott, E. J., Bower, C. & Geelhoed, E. 2011. RE-AIM evaluation of the Alcohol and Pregnancy Project: Educational resources to inform health professionals about prenatal alcohol exposure and fetal alcohol spectrum disorder. *Evaluation & the Health Professions,* 34**,** 57-80. Elliott, E. J., Payne, J., Haan, E. & Bower, C. 2006. Diagnosis of fetal alcohol syndrome and alcohol use in pregnancy: A survey of paediatricians' knowledge, attitudes and practice. *Journal of paediatrics and child health,* 42**,** 698-703. France, K., Henley, N., Payne, J., D'antoine, H., Bartu, A., O'leary, C., Elliott, E. & Bower, C. 2010. Health professionals addressing alcohol use with pregnant women in Western Australia: barriers and strategies for communication. *Substance Use & Misuse,* 45**,** 1474-1490. Payne, J., France, K., Henley, N., D'antoine, H., Bartu, A., O'leary, C., Elliott, E. & Bower, C. 2011. Changes in health professionals' knowledge, attitudes and practice following provision of educational resources about prevention of prenatal alcohol exposure and fetal alcohol spectrum disorder. *Paediatric and Perinatal Epidemiology,* 25**,** 316-327. Payne, J. M., France, K. E., Henley, N., D'antoine, H. A., Bartu, A. E., Mutch, R. C., Elliott, E. J. & Bower, C. 2011. Paediatricians' knowledge, attitudes and practice following provision of educational resources about prevention of prenatal alcohol exposure and Fetal Alcohol Spectrum Disorder. *Journal of paediatrics and child health,* 47**,** 704-710.
17	Perkins et al., 2010	**Perkins**, H. W., Linkenbach, J. W., Lewis, M. A. & Neighbors, C. 2010. Effectiveness of social norms media marketing in reducing drinking and driving: A statewide campaign. *Addictive Behaviors,* 35**,** 866-874.
18	Rivara et al., 2011	**Rivara**, F. P., Boisvert, D., Relyea-Chew, A. & Gomez, T. 2011. Last Call: Decreasing drunk driving among 21–34-year-old bar patrons. *International Journal of Injury Control and Safety Promotion,* 19**,** 53-61.

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19	Rothschild et al., 2006	**Rothschild**, M. L., Mastin, B. & Miller, T. W. 2006. Reducing alcohol-impaired driving crashes through the use of social marketing. *Accident Analysis and Prevention,* 38**,** 1218-1230.
20	Rundle-Thiele et al., 2013	**Rundle-Thiele,** S. R., Russell-Bennett, R., Leo, C. & Dietrich, T. 2013. Moderating teen drinking: Combining social marketing and education. *Health Education,* 113**,** 2-2.
21	Slater et al., 2006	**Slater**, M. D., Kelly, K. J., Edwards, R. W., Thurman, P. J., Plested, B. A., Keefe, T. J., Lawrence, F. R. & Henry, K. L. 2006. Combining in-school and community-based media efforts: Reducing marijuana and alcohol uptake among younger adolescents. *Health Education Research,* 21**,** 157-167.
22	Thompson et al., 2013	**Thompson**, E. B., Heley, F., Oster-Aaland, L., Stastny, S. N. & Crawford, E. C. 2013. The impact of a student-driven social marketing campaign on college student alcohol-related beliefs and behaviors. *Social Marketing Quarterly,* 19**,** 52.
23	Vinci et al., 2010	**Vinci**, D. M., Philen, R. C., Walch, S. E., Kennedy, R., Harrell, M., Rime, C. & Matthews, J. 2010. Social norms tactics to promote a campus alcohol coalition. *American Journal of Health Education,* 41**,** 29-37.