

An Umbrella Review of the Use of Segmentation in Social Marketing Interventions

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Abstract Drawing on evidence from a series of five systematic literature reviews, this umbrella review aims to understand the extent to which segmentation is employed in social marketing interventions. Ninety-three unique social marketing interventions were included in this umbrella review. We identified limited reported use of segmentation in social marketing interventions, with only a handful of social marketing interventions (16 %) reporting the use of segmentation. Further, the majority of social marketing interventions reporting segmentation limited program differences to one P: adaptation of promotional materials. Importantly, interventions reporting using at least four of the social marketing benchmark criteria, at least two out of four Ps, and adapting products rather than just promotional materials to cater to different segments needs and wants were observed to deliver positive behavioural outcomes.

Introduction

Social marketing plays an important role in changing behaviours for the better. Social marketing has been applied across a wide range of different contexts, including (but not limited to) tobacco and other drug consumption (Stead et al. 2007), physical activity (Gordon et al. 2006), environmental protection (McKenzie-Mohr et al. 2012), species conservation (Drury 2009), sport management (Inoue and Kent 2012),

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poverty alleviation (Kotler and Lee 2009), and financial management (Lee and Miller 2012). Segmentation is considered as one of the key components of social marketing, and it has been included in all widely-regarded social marketing planning frameworks (e.g. Andreasen 2002; French and Blair-Stevens 2006; Lefebvre and Flora 1988; Robinson-Maynard et al. 2013). Segmentation describes the process of dividing up a heterogeneous market into homogeneous segments (Donovan and Henley 2010), which are grouped according to similarities to guide strategic planning and decision making. Once segments that are substantial, sustainable and accessible are established, social marketing programs encompassing a marketing mix that includes (but is not limited to) product, price, place and promotion are developed, with differences in programs observable for the segment(s) chosen for targeting. This requires strategic decisions that may involve sometimes ignoring segments which cannot be served effectively using available resources, or do not have the need for the intervention (for example a potential segment consisting of non-drinkers in a social marketing intervention targeting harmful alcohol consumption). Theoretically, application of the segmentation process is expected to optimise scarce financial resources ensuring that social marketers can increase the effectiveness of their programs by identifying segments that include individuals most in need or those where behaviour change and hence campaign success are most likely (Doner Lotenberg et al. 2011).

As social marketing interventions frequently suffer from limited resources (Newton et al. 2013), application of the segmentation process permits social marketers to increase efficacy and to optimise scarce financial and other resources by directing the resources to the most promising segments (McDonald and Dunbar 2012). Research indicates that segments respond differently to social marketing programs (Dietrich et al. 2015a, b). Understanding segment differences permits social marketers to more effectively design programs catering to group differences. For example, in the Dietrich et al. (2015b) study one of the segments, named by the authors as *Bingers*, possessed the lowest alcohol related knowledge score, highest alcohol expectancy score, and the most supportive social environment for binge drinking, indicating a unique approach is warranted to reach this segment. Ideally, social marketers need to target the important others surrounding this segment to reduce support for alcohol drinking.

Regarded as one of the key strategic marketing tools (Dibb et al. 2002), and one of the six social marketing benchmark criteria (Andreasen 2002), a broad understanding of the extent of segmentation use in social marketing is needed. Drawing on evidence from a series of five systematic literature reviews (Carins and Rundle-Thiele 2014; Fujihira et al. 2015; Kubacki et al. 2015a, b, c) this umbrella review aims to understand the extent to which segmentation is employed in social marketing interventions.

Methods

Systematic literature reviews have been growing in popularity in social marketing, with some of the studies published in the last ten years focusing on areas such as alcohol consumption (Kubacki et al. 2015a) and physical activity (Stead et al. 2007), target audiences such as children (Kubacki et al. 2015b) and elderly (Fujihira et al. 2015), the use of social marketing tools such as digital channels (Kubacki et al. 2015c), and the use of the marketing mix, theory and models in social marketing (Luca and Suggs 2010, 2013). Driving those efforts has been the recognition of a growing body of evidence and the resultant need to integrate findings from a rapidly increasing number of studies reporting evaluations of social marketing interventions. The main advantages of systematic literature reviews are their ability to present a vast amount of information about different studies in a succinct manner, focusing on specific research questions, and to reach conclusions based on multiple individual studies (Hartling et al. 2014).

To date, social marketing reviews have been limited to a single behavioural context such as alcohol consumption (Kubacki et al. 2015a) or physical activity (Kubacki et al. 2015b), or a single theoretical problem such as the use of marketing mix or theory (Luca and Suggs 2010, 2013). The extent of application of social marketing benchmark criteria (such as reported use of segmentation) in social marketing interventions described in this chapter can be best measured by conducting an umbrella review. Umbrella reviews, known also as overviews of reviews, are reviews of existing systematic reviews aiming to summarise their results on a selected topic (Whittemore et al. 2014). An umbrella review integrates multiple systematic reviews, synthesising evidence. Recognising the breadth and depth of evidence included in previously published social marketing systematic literature reviews, an umbrella review provides the opportunity to explore the use of segmentation in social marketing across different contexts.

Full details of the literature search processes, data analysis procedures and lists of all articles included in the reviews can be obtained by examining each of the individual reviews (Carins and Rundle-Thiele 2014; Fujihira et al. 2015; Kubacki et al. 2015a, b, c). For the purpose of this umbrella review, previously identified information regarding segmentation, the use of the social marketing benchmark criteria (Andreasen 2002), target audience and behaviour were compiled into a single file, and only interventions reporting the use of segmentation were included for further analysis and discussion.

Fourteen of the interventions identified in the healthy eating review (Carins and Rundle-Thiele 2014) were also included in the review of social marketing interventions targeting children (Kubacki et al. 2015b) and therefore each unique intervention was included in this umbrella review only once. Assessment of segmentation reported in Carins and Rundle-Thiele (2014) was broad, with instances of targeting considered as segmentation. This was not consistent with assessment of segmentation in later reviews where full reporting of segmentation (prior to a targeting decision) was considered as segmentation (Fujihira et al. 2015;

Kubacki et al. 2015a, b, c). To bring assessment of the interventions uniquely identified in the Carins and Rundle-Thiele (2014) review into line with the later assessments, an intervention was deemed to have used segmentation when it reported evidence of dividing a total market into groups with relatively similar needs to design a social marketing intervention that addresses needs by each group (French and Blair-Stevens 2006). As a result, all 34 studies identified in Carins and Rundle-Thiele (2014) were re-analysed by three of the authors to ensure consistency between all social marketing interventions included in this umbrella review.

Results

Table 2.1 provides an overview of the reviews collated in this umbrella review.

In total, across 93 unique social marketing interventions, 15 (16 %) interventions reported the use of segmentation and were included in this umbrella review. All of the included reviews analysed the identified interventions using Andreasen's (2002) social marketing benchmark criteria, including behavioural objectives, audience segmentation, audience research, exchange, marketing mix and competition (Table 2.2). Of the 15 interventions that reported the use of segmentation, only two reported using all six benchmark criteria. Of the ten interventions that reported using at least four benchmarks, eight delivered some positive behavioural change, while only two out of the five interventions that reported using three or fewer

Table 2.1 Segmentation in systematic literature reviews in social marketing

Review	Total number of interventions	Interventions reporting segmentation
Interventions aiming to minimise harm from alcohol consumption (Kubacki et al. 2015a)	23	2 (9 %)
Interventions targeting children under the age of 12 years (Kubacki et al. 2015b)	23	2 (9 %)
Interventions using digital channels for engagement (Kubacki et al. 2015c)	20	8 (40 %)
Physical activity interventions targeting adults 60 years and over (Fujihira et al. 2015)	7	3 (43 %)
Interventions to improve healthy eating behaviour (Carins and Rundle-Thiele 2014)	20 [34 ^a]	0 [1 (3 %) ^b]
Total	93	15 (16 %)

^aOriginally 34 interventions were identified in Carins and Rundle-Thiele (2014). Only 20 studies not originally included in Kubacki et al. (2015b) were included in this umbrella review. None of the 20 studies reported the use of segmentation

^bLevine et al. (2002) was included in two systematic reviews, Carins and Rundle-Thiele (2014) and Kubacki et al. (2015b), and for the purpose of this umbrella review was counted only once

benchmarks reported positive behavioural change. None of the 15 interventions using segmentation reported any negative behavioural outcomes.

The interventions using segmentation reported targeting a wide range of diverse audiences, from specifically defined audiences such as community physicians (Short et al. 2006) to broad audiences such as all of the 34 million inhabitants of the Sao Paulo state in Brazil (Matsudo et al. 2002). There was also a diverse collection of behaviours targeted by the interventions, from flu prevention (Plourde et al. 2008), intimate partner violence (Harris et al. 2009; Short et al. 2006), and alcohol consumption during pregnancy (Glik et al. 2001 and 2008), to broadly defined physical activity (e.g. Huhman et al. 2008) and healthy eating (Levine et al. 2002). Only one intervention reported adapting the entire marketing mix to different segments (Matsudo et al. 2002), and product and promotional activities were different between segments in Purdy et al. (2011). Further, the product element of the social marketing mix was adapted to different segments in five additional interventions (Harris et al. 2009; Kamada et al. 2013; Keihner et al. 2011; Levine et al. 2002; Short et al. 2006), four of which delivered positive behavioural change. Only promotional materials were adapted to different segments in the remaining eight interventions (Dixon-Gray et al. 2013; Glik et al. 2008; Huhman et al. 2008; Justice-Gardiner et al. 2012; Plourde et al. 2008; Reger-Nash et al. 2006; Rotblatt et al. 2013), of which four did not report any positive behavioural change.

Table 2.2 presents the assessment of each of the 15 social marketing interventions which reported using segmentation against Andreasen's (2002) six social marketing benchmark criteria as well as information about their target audiences and targeted behaviours.

Social marketing interventions aiming to minimise harm from alcohol consumption It is noticeable that segmentation is not common in social marketing interventions aiming to minimise harm from alcohol consumption. Kubacki et al. (2015a) identified 23 social marketing interventions that aimed to minimise alcohol harm and found that only two interventions (Glik et al. 2001, 2008) reported any evidence of segmentation. In the study by Glik et al. (2001), in order to increase awareness about the harm of alcohol drinking during pregnancy, the researchers segmented pregnant women in California, United States into two groups: African-American women and Latina adolescent women, and developed two different sets of promotional materials including slogans, languages (English and Spanish), images, and channels (posters and tear-off cards). In Glik et al. (2008), the target audience was segmented into four groups: Caucasian women, African-American women, Latina English-speaking women and Latina Spanish-speaking women. Then similarly, promotional materials were developed accordingly to better suit each group. In both interventions, the variants of promotional materials between each segment were designed and pretested to respond to any differences between groups. For example, in Glik et al. (2008), role models in the posters were chosen based on the majority of the ethnicity in their respective community, and the colour palettes of the posters were tested for each group.

As Donovan and Henley (2010) argued, segmentation can help campaign designers to better develop the marketing mix (4Ps) in order to satisfy different

Table 2.2 Assessment of the use of Andreasen’s benchmark criteria in social marketing

Interventions	Target audience	Behaviour	No. of SMBC	Behavioural objective	Audience segmentation	Audience research	Exchange	Marketing mix ^(4Ps)	Competition
Purdy et al. (2011)	Young professionals in Turkey	Sexual health	6	✓(+)	✓	✓	✓	✓(4)	✓
Huhman et al. (2008)	Tweens	Physical activity	6	✓(+)	✓	✓	✓	✓(3)	✓
Kamada et al. (2013)	Adults (40–79 years)	Physical activity	5	✓(*)	✓	✓	✓	✓(4)	✗
Matsudo et al. (2002)	34 million inhabitants of Sao Paulo State	Physical activity	5	✓(+)	✓	✓	✗	✓(3 ⁵)	✓
Short et al. (2006)	Community physicians	Intimate partner violence	5	✓(+)	✓	✗	✓	✓(3)	✓
Harris et al. (2009)	California physicians	Intimate partner violence	5	✓(+)	✓	✗	✓	✓(3)	✓
Justice-Gardiner et al. (2012)	Hispanic cancer survivors	Cancer support	4	✓(*)	✓	✗	✗	✓(3)	✓
Keilner et al. (2011)	Children 9–11 years	Healthy eating (and later increased physical activity)	4	✓(+)	✓	✓	✗	✓(3)	✗
Levine et al. (2002)	Children in kindergarten to 4 years	Healthy eating	4	✓(+)	✓	✗	✗	✓(2)	✓
Reger-Nash et al. (2006)	35–65 y/o in McDowell County; 40–65 y/o in	Physical activity	4	✓(+)	✓	✓	✗	✗(1)	✓

(continued)

Table 2.2 (continued)

Interventions	Target audience	Behaviour	No. of SMBC	Behavioural objective	Audience segmentation	Audience research	Exchange	Marketing mix ^(4Ps)	Competition
	Broome County, NY; 40–65 y/o in Morgantown; 50–65 y/o in Wheeling								
Rotblatt et al. (2013)	African American, Latina females aged 12–25 years	Sexual health	3	✓(+)	✓	✗	✗	✓(4)	✗
Plourde et al. (2008)	Floridians	Flu prevention	3	✓(+)	✓	✓	✗	✗	✓
Dixon-Gray et al. (2013)	Latinas, 18–29 years, born in the US	Sexual health	3	✗	✗	✓	✗	✗	✓
Glik et al. (2008)	Pregnant women	Alcohol during pregnancy	3	✗	✓	✓	✗	✗	✓
Glik et al. (2001)	Female African American and Latina teenagers	Alcohol during pregnancy	2	✗	✓	✓	✗	✗	✗

* No behavioural change reported

+ Positive behavioural outcome reported

(4Ps) The number of marketing mix elements reported in the intervention (product, price, place and promotion)

groups within the target audience. It is noteworthy that although segmentation was identified in both studies by Glik et al. (2001, 2008), the researchers only limited their segmented strategies in the communication aspect of their intervention design, by using narrowcasting. As the authors mentioned, narrowcasting refers to “a marketing strategy that uses highly focused messages for specific priority populations” (Glik et al. 2001, p. 223). The authors focused on designing tailored messages and channels for each segment but they did not adapt other marketing mix elements (product, place and price). Both campaigns did not deliver any behavioural change. In Glik et al. (2001) the exposure to campaign materials was quite high, yet knowledge levels had mixed results. Further, knowledge of the dangers of drinking during pregnancy for African-American teenage girls increased sharply after the campaign, while that of Latina girls who already had high levels of knowledge remained the same. In Glik et al. (2008) the campaign had mixed results in different communities. Overall, the exposure rate to the campaign was low; however, the exposure rate was much higher for the clinic-based audience (more than 50 %).

Social marketing interventions targeting children under the age of 12 Of 23 social marketing interventions reported in Kubacki et al. (2015b), only two reported using segmentation and both of them delivered positive behavioural outcomes (Keihnner et al. 2011; Levine et al. 2002). Keihnner et al. (2011) used ten grade-specific lessons for Grade 4 and Grade 5 to provide stronger links to the arts and/or mathematics subjects of the California Content Standards. In addition, English and Spanish language brochures were used for parents. In both grades, students showed improvements in requests for fruit and vegetables and shopping self-efficacy.

Similarly, Levine et al. (2002) also used grade-specific activities catering to age differences for three different groups of children: pre-kindergarten and kindergarten, first and second grades, and third through fifth grades. The grade-specific activities were designed to build children’s skills and motivate them to make healthy food choices. The intervention also included strategies designed for secondary audiences. Teachers and school canteen staff were educated as part of the intervention. Training and technical advice were provided to school nutrition staff to assist with motivation and skills-based knowledge. Classroom education was provided through curriculum modules to address behavioural goals and to enable children to practice to make and assess their food choices. In addition, parents were also targeted in the intervention period, and participated by getting involved in take-home activities, contributing to classroom events (e.g. sending in a recipe), or attending school and community events. Overall, students showed improvement in their food choices.

Social marketing interventions using digital channels for engagement Kubacki et al. (2015c) identified 20 social marketing interventions using digital channels for engagement, and seven of them reported the use of segmentation. In the most comprehensive of those interventions, a commercial enterprise was established in Turkey to promote two brands of condoms, both targeting young adults (Purdy et al. 2011). Fiesta and Kiss respectively targeted the premium and budget segments of the market: Fiesta condoms were aimed at more affluent consumers, at a higher

price point and with more variants, than Kiss condoms. Fiesta condoms were marketed using an extensive digital campaign, whilst Kiss condoms were not promoted using any social marketing tools. Overall, more than 4.3 million Fiesta condoms were sold with a higher than average proportion of online condom sales for a middle-income country (8 % sold online). In comparison, 2.6 million Kiss condoms were sold.

Two further interventions, Short et al. (2006) and Harris et al. (2009), developed online continuing medical education programs aiming to inform physicians about intimate partner violence. The interventions developed four separate sets of cases tailored to health professionals' different clinical areas: family/internal medicine, obstetrics/gynaecology, paediatrics, and mental health. Three to four unique cases were developed for each clinical speciality area. Both interventions reported positive changes in physicians' intimate partner violence management practices.

In Huhman et al. (2008), an intervention developed to address the public health problem of sedentary lifestyles among American children, specialised messages and media strategies were developed for different segments, including Native Americans, African Americans, Asian Americans and Hispanic/Latino tweens, through extensive formative and message-testing research. The interventions also offered specialised messages for parents, the intervention's secondary target audience, to encourage them to support their tweens' physical activity. The results of this intervention reported a significant increase in physical activity for the entire target audience following a two-year intervention period.

Finally, four interventions adapted the intervention materials into at least one other language: Justice-Gardiner et al. (2012), Dixon-Gray et al. (2013) and Rotblatt et al. (2013) into Spanish and English, and Plourde et al. (2008) into Spanish, Creole and English. No intervention outcomes were reported by Dixon-Gray et al. (2013) and Justice-Gardiner et al. (2012). In Rotblatt et al. (2013) during the first 12 months following the introduction of the online program, providing the self-administered chlamydia and gonorrhoea home testing kit increased the testing volume four times in comparison to the per-clinic average chlamydia testing volume in the same time period. In Plourde et al. (2008) heavier exposure to the intervention was associated with larger increases in behaviour change.

Social marketing physical activity interventions targeting adults 60 years and over Three out of seven interventions reported in Fujihira et al. (2015) reported using segmentation. However, only one of those interventions targeted solely people 60 years and older and segmented this primary target group—women 60–79 years of age—into two smaller segments with different needs and abilities, both of which had lower back or knee pain and were to be targeted with different social marketing offerings including different types of physical activities (Kamada et al. 2013). The first offering targeted women who were either not engaged in or insufficiently engaged in regular walking behaviour, and the second offering targeted women who engaged in flexibility and/or muscle-strengthening activities, either occasionally or daily. However, when comparing each intervention group with the control group for regular physical activity, pain outcomes, and each different activity, no significant changes were observed.

People over 60 were one of several different segments, including students and workers, targeted in Matsudo et al. (2002), a community-wide intervention aimed at all inhabitants of the Sao Paulo state in Brazil. The intervention included programs and materials developed specifically for each of the segments. The intervention successfully increased people's physical activity levels: 54.8 % of the total population reached the recommended minimum 30 min' physical activity level after four years of the program.

Finally, the intervention reported in Reger-Nash et al. (2006) included segmentation that did not focus specifically on people over 60; however, the intervention provided advertisements for the African American community by featuring African American actors to appeal to the regional minority population. An increase of walking behaviour was observed during the intervention, and was maintained for 12 months following the intervention.

Social marketing interventions to improve healthy eating behaviour Only one of the thirty-four interventions reported in Carins and Rundle-Thiele (2014) was deemed to have used segmentation. This was the Levine et al. (2002) study that also appeared in the Kubacki et al. (2015b) review. As mentioned in the section above, the Levine (2002) study segmented children into three different age groups, providing activities specific to each group, after which students showed improvement in their food choices.

Discussion

The aim of this umbrella review was to understand the extent to which segmentation was used in social marketing interventions identified in five systematic literature reviews completed between 2013 and 2015 (Carins and Rundle-Thiele 2014; Fujihira et al. 2015; Kubacki et al. 2015a, b, c). Umbrella reviews provide an integrated overview of primary studies to inform scientific debates and decision-making in practice (Whittemore et al. 2014). Umbrella reviews also synthesise a breadth and depth of evidence where individual systematic reviews may fall short of presenting a bigger picture view (ibid.). This is the first umbrella review focusing on application of benchmark criteria (Andresean 2002) in social marketing, namely segmentation.

This umbrella review identified limited reported use of segmentation in social marketing interventions, with only a handful of social marketing interventions (16 %) reporting the use of segmentation. Further, the majority of social marketing interventions reporting segmentation limited program differences to one P: adaptation of promotional materials. Importantly, interventions reporting using at least four of the social marketing benchmark criteria, at least two out of four Ps, and adapting products rather than just promotional materials to cater to different segments needs and wants were observed to deliver positive behavioural outcomes. Taken together, results of the umbrella review indicate that application of segmentation to inform the design of a product or service offering catering to the

unique needs and wants of segments to be targeted may enhance behaviour change outcomes.

This umbrella review shows that the use of segmentation in social marketing interventions aiming to minimise harm from alcohol consumption (9 %), targeting children under the age of 12 years (9 %), using digital channels for engagement (40 %), social marketing physical activity interventions targeting adults 60 years and over (43 %) and interventions aiming to improve healthy eating behaviour (3 %) is low: only 15 out of 93 (16 %) interventions reported the use of segmentation. Given that behaviour change is more likely when more of the social marketing benchmarks are applied (Carins and Rundle-Thiele 2014) social marketers are encouraged to use segmentation in future. While further empirical examination is recommended to confirm this finding (Rundle-Thiele 2015), evidence does indicate that application of segmentation needs to become part of everyday social marketing practice.

Very few interventions provided detailed descriptions of their segmentation strategy (see for example Kamada et al. 2013; Purdy et al. 2011). Segmentation procedures differ and reporting of procedures used is recommended to evaluate the quality of the work undertaken. The overwhelming majority of studies focused on reporting key differences in social marketing mixes used to target different segments (for example Dixon-Gray et al. 2013; Reger-Nash et al. 2006) and, thus, the evidence regarding the use of segmentation in social marketing remains limited.

In addition to the limited use of segmentation in social marketing interventions and restricted descriptions of the examples of segmentation in the identified papers, the most commonly adapted component of the social marketing mix was promotion. Across 15 interventions, eight relied on their segmentation approach to adapt promotional materials to more effectively communicate with and to reach different demographic groups. Translation into different languages was the most common form of adaptation, suggesting considerable room for improvement in adaptation to cater to the unique needs and wants of segments. For example, social marketers could target separate media channels, deliver different appeals, adapt the communication mix to more effectively reach different groups and so on. A narrow focus on communication led to positive behavioural change in 50 % (n = 4) of cases.

There is significant room for improvement in the application of segmentation in social marketing. In the absence of empirical evidence available on the effective use of segmentation in social marketing we outline two recommendations for future testing. First, as 84 % of interventions identified across 5 systematic literature reviews did not report using segmentation, there is a conspicuous gap in social marketing literature and practice. As segmentation has been included in all widely-regarded social marketing planning frameworks (e.g. Andreasen 2002; French and Blair-Stevens 2006; Lefebvre and Flora 1988; Robinson-Maynard et al. 2013) and is recognised as one of the key strategic tools in the marketing toolkit (Dibb et al. 2002), more research is urgently needed to assess the effectiveness of segmentation in achieving the behavioural goals of social marketing interventions (see also Rundle-Thiele 2015). Second, when segmentation is used in social marketing interventions it is often limited to very basic adaptation of communication

materials, including translations to different languages. Finally, over-reliance on traditional demographic variables such as age and ethnicity overlooks the importance of other variables such as behavioural and psychographic data (Rundle-Thiele et al. 2015). More research is needed in social marketing to identify segments using a wider range of different segmentation bases and variables (Schuster et al. 2015). Empirical examination of segmentation approaches is recommended to compare and contrast alternatives.

Limitations and Future Research Directions

This umbrella review provides a starting point in order to support future social marketing research on segmentation and the use of segmentation in social marketing interventions. However, results should be treated with caution. First, only studies that self-identified as social marketing were included in the original reviews, therefore it is possible there are more interventions using segmentation that did not explicitly self-identify as social marketing. Second, the interventions presented in this chapter were conducted in very different contexts and used different behavioural measures, therefore our review is limited to descriptive comparisons. We acknowledge the presence or lack of each of the social marketing benchmark criteria (Andreasen 2002) and our inability to follow meta-analytical procedures. Third, this umbrella review focused on social marketing health interventions, and therefore future umbrella reviews should be conducted into the use of segmentation by social marketing interventions influencing other types of behaviours and issues so that a greater evidence base can be established. Fourth, our analysis was limited to information reported in identified studies. It is possible that social marketing interventions used segmentation but did not report it (Aceves-Martins et al. 2016). Further, previous research indicated that more than 70 % of alcohol misuse prevention campaigns did not fulfil any of the benchmark criteria (Wettstein and Suggs 2016). Social marketing studies often focus on reporting intervention outcomes, without paying attention to the process through which such outcomes are achieved. It is therefore important that future studies fully acknowledge the use of social marketing benchmark criteria. This final limitation highlights the importance of providing standardised intervention descriptions (for example following Andreasen's (2002) social marketing benchmark criteria). This would enable future research to integrate results from multiple studies and permit synthesis, thereby extending our understanding of effective social marketing practice. The unique role of segmentation on social marketing effectiveness cannot be empirically examined without an experimental design. An experimental design is needed to isolate the unique effect of segmentation on program outcomes and to test alternate segmentation approaches to understand which approaches optimise outcomes for social marketers. A final opportunity for future research lies in empirically assessing theoretical claims to determine whether segmentation permits financial resources to be optimised.

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