

Social return on investment for community-based alcohol consumption control program during Buddhist Lent

Varangkanar Jirattanasopha

Faculty of Dentistry, Mahidol University, Bangkok, Thailand

Nopphol Witvorapong

Faculty of Economics, Chulalongkorn University, Bangkok, Thailand, and

Piya Hanvoravongchai

Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

Abstract

Purpose – The purpose of this paper is to evaluate the cost and benefit of a community-based alcohol consumption control program during the Buddhist Lent (BL) period in terms of social return on investment (SROI).

Design/methodology/approach – The research team evaluated the program in four selected villages from four regions using standard SROI. Relevant stakeholders were involved in the evaluation design and program impact map construction. Data, including costs, were collected from literatures, official documents, stakeholder interviews and focus group discussions. Alcohol abstinence and related data during and after the 2015 BL period were gathered from a survey questionnaire. The SROI ratio presented the social benefits compared against the total social investment.

Findings – The program was effective in producing a greater social value (2.7–5.9 times) than the cost of investment in every village. Cost savings from alcohol consumption constituted a major proportion of the program's value.

Originality/value – The community-based alcohol consumption control program during BL can provide value for investment. Information from this study can be used by policy makers in their decision to continue or scale up the program. The SROI approach mainly relies on stakeholders that may present a bias; however, further study such as social cost-benefit analysis could provide additional insights.

Keywords Alcohol consumption, Social return on investment, Buddhist Lent, Community-based program

Paper type Research paper

Introduction

Alcohol consumption rates in Thailand are ranked amongst the top amongst ASEAN countries[1]. In 2014, 32.3 percent of the Thai population aged 15 years and over consumed alcohol while 42.4 percent of drinkers consumed alcohol regularly[2]. The average monthly expenditure on alcohol consumption was about 509 ± 730.7 baht per drinker, making up an average of 3.6–6.7 percent of total household expenditure[3]. Moreover, alcohol consumption is one of the most significant health risk factors amongst the Thai population[4]. The disease burden from alcohol consumption in terms of disability adjusted life years lost amongst the

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Thai population was almost double that of the global average[5]. In addition to the effects on well-being, alcohol-related problems also cause a substantial loss to the Thai economy. In 2006, the social cost of alcohol consumption was estimated to equal 156,105.4m baht (\$9,627m PPP) or about 2 percent of the national gross domestic product[6].

Thailand has addressed the alcohol consumption problem with focus and dedication. In addition to alcohol policy and interventions recommended by the Global Strategy to Reduce the Harmful Use of Alcohol[1], various approaches have been implemented both at the national and community levels, often in accordance with the Thais' social, cultural and religious values[7].

The "Buddhist Lent Dry Campaign" is an alcohol-control program that adopts Buddhist teachings to encourage behavioral changes amongst consumers of alcohol amongst the Thai population[7, 8]. One of the basic Buddhist moral tenets indicates that lay Buddhist practitioners should refrain from consuming any kind of intoxicants including alcohol. Buddhist Lent (BL) is a meaningful spiritual period that occurs annually for three months in the monsoon season. It involves an intense practice of meditation and studying Dharma for monks. Ordinary Buddhists also do their part by pledging to do good deeds and give up various vices during BL, in much the same way as Christians do during Lent or Muslims during Ramadan. Therefore, the Thai Health Promotion Foundation (ThaiHealth), a major health promotion agency in Thailand, has taken this opportunity stemming from religious grounds, to promote an initiation of alcohol consumption reduction among current drinkers during the BL period or to encourage them to quit drinking altogether as part of the "Buddhist Lent Dry Campaign."

The program has been successfully implemented for more than ten years and is organized at both national and community levels[7]. At the national level, mainstream media and social marketing strategies advertised the program throughout the country[8]. At the community level, the activities varied widely but they all included the dissemination of locally initiated alcohol-control messages to the community, especially urging current alcohol drinkers to reduce and refrain from alcohol during the BL period. The local program also persuaded each alcohol drinker to sign an abstinence pledge to refrain from consuming alcohol during BL. Additional measures included, for example, recreational activities during BL and household visits to strengthen alcohol consumers' adherence to the abstinence pledge[9, 10].

Controlling or reducing alcohol consumption has many potential benefits to drinkers, their family members and to society in general[6, 11]. This may include cost saving from reduced or zero alcohol consumption, reversing productivity loss caused by turning up to work in a state of intoxication, absenteeism or premature death, reduced alcohol-related health care expenditure and any accident as well as physical harassment incidents related to alcohol consumption, as well as increased happiness and better relationships among friends and family, etc. Evaluating the social benefits of the alcohol consumption control program in comparison to the program cost is one way to demonstrate the value of the program, especially for those using public money.

Social return on investment (SROI) is an evaluation tool adapted from social cost-benefit analysis, social accounting and social impact assessments. It has been used by social enterprises and the nonprofit sector since 2000. The tool measures social, economic and environmental impacts resulting from activities or programs and assigns value to those impacts. The method involves both qualitative and quantitative approaches. Qualitative approaches include stakeholder engagement to develop an evaluation framework and the program impact map to demonstrate the relationship between inputs, outputs and outcomes. Stakeholders also identify which positive and negative outcomes are meaningful impacts for them and agree upon relevant valuations of those outcomes. The quantitative approach includes quantifying outcomes and converting them to monetary terms. SROI tools also consider the proportion of outcome regardless of program existence (deadweight), the share of outcome from other contributors (attribution) and the reallocation of the program effects (displacement) in the calculation of its impacts. The analytical result is

usually presented in the form of an SROI ratio, by dividing the amount of social benefits by the total social investment cost[12–14].

SROI has been suggested as a useful tool for the evaluation of public health programs[15]. Its first application in public health was in 2005[16]. Recently, a systematic review of SROI of public health interventions between January 1996 and December 2014 found a total of 40 studies, mostly from high-income countries. The studies evaluated different public health-related issues, of which health promotion and mental health were the most popular areas[16]. In Thailand, this method has been used to evaluate health promotion programs supported by ThaiHealth[17]. However, there was no SROI study for alcohol prevention and intervention control programs.

Earlier studies showed that the “Buddhist Lent Dry Campaign” at the community level contributed to the effectiveness of the national program when comparing the change in prevalence of drinking between intervention and non-intervention villages[9]. However, the value of investment in supporting communities to conduct these programs has not been assessed. The information on value for money of the program can provide useful insights for ThaiHealth and other stakeholders in their decision making to continue their support for program continuation and further scaling up of current campaign activities. This study fills the knowledge gap with an objective to evaluate the value for money of the “Community Buddhist Lent Dry Campaign” in selected communities in Thailand using the SROI tool.

Methods

This study conducted SROI analysis in four villages among those receiving financial support from ThaiHealth in 2015[10]. They were purposively selected based on the community’s willingness to participate in the evaluation exercise. The villages were from Nan Province in the north (village A), Ubon Ratchathani Province in the northeast (village B), Lopburi Province in the central region (village C) and Nakhon Si Thammarat Province in the south (village D).

Data collection

This study collected primary data by organizing stakeholder group discussions and interviewing program-related stakeholders. Secondary data were collected from project proposal, hospital and police official documents, accounting reports and relevant records and literatures on resources used.

In each village, the program activities described in the project proposals were reviewed to set a boundary for analysis and identify relevant stakeholder groups. The alcohol-related information regarding road accidents, crime, physical harassment, cost of property damage, illegal fines and compensation that occurred before and during BL were gathered from official police documents. The medical-related alcohol cost was derived from hospital documents. The research team collected program expenditure from program account books. Additionally, data on alcohol abstinence and alcohol-related savings during and after the BL period were compiled from the study that evaluated the community-based campaign for alcohol consumption control during the 2015 BL period[10].

Stakeholder group discussions were organized twice in each village. Each had 11–16 participants comprising representatives from all stakeholder groups, i.e. alcohol consumers, alcohol consumer’s family and neighbors, community leaders and program volunteers. The objective of the first meeting was to collectively develop the program’s impact maps, identify the program’s beneficiaries and losers, select indicators for measuring output and outcomes and discuss how to value outcomes. In the second meeting, the research team presented the preliminary results and discussed with stakeholders regarding outcome contributors, displacement effect of the program and estimated drop-off rate of long-term outcomes. These parameters were necessary for the estimation of the program’s impact.

The research team interviewed alcohol consumers, non-drinkers (including family and program participants) and program organizers/volunteers. The number of interviewees in each village is shown in Table I. We conducted in-depth interviews of the program organizers to explain the activities of the program and its related cost including the time consumed by each activity and the number of participants. We collected data from the alcohol consumers by questionnaire interview on their demographics, the number of abstinence working days before and during BL, their average income, traffic accidents and physical injuries related to alcohol consumption and other positive and negative effects on them from the program. They were also asked about the magnitude effect of the community program on their behavioral change, their attitude to the program and their willingness to pay to support future programs. The non-drinkers were asked about the effect of the program and alcohol consumer's behavior change on them, as well as their attitude to the program and their willingness to pay for supporting future programs in the following year.

Data analysis

For cost analysis, an activity-based approach was used to account for the resources consumed by the program. Cost analysis considers both direct and indirect costs. The direct costs were mainly operational costs including materials, labor, facility and transportation costs. The indirect costs included the opportunity costs of the volunteers and the program participants who attended the activities. These opportunity costs were calculated based on their average actual income during that period.

To assess the program's impacts, the outputs and outcomes selected by stakeholders in the first round meeting of each village were used to calculate the effectiveness of the program in each village. The impact was analyzed by deducting the deadweight (the magnitude effect on behavior change regardless of program existence estimated by drinkers), attribution from other contributors and the program's displacement effect. The program's drop-off rate was already considered in the estimation of long-term abstinence. The magnitude of attribution, displacement and drop-off rates were estimated by focus group discussion that were mentioned in the data collection section. For outcomes that last longer than one year, the rate of 3 percent per annum was discounted from its value.

Non-monetized outcomes such as avoidable absenteeism and participant's happiness were converted into monetary value and summed up with the monetized outcomes. The value of short-term avoidable absenteeism was calculated from average daily income of working age population in the village as reported in the village survey. The benefit of long-term abstinence such as avoidable productivity lost from illnesses or premature death was calculated using the data from the cost-of-illness study amongst the Thai population[17].

	Village			
	A	B	C	D
Region	North	Northeast	Central	South
No. of households	317	105	268	215
Total population	1,094	446	667	656
No. of drinkers	340	126	106	250
No. of BL program organizers/volunteers	10	6	11	8
No. of participants in focus group	11	16	14	11
<i>No. of Interviewees</i>				
Alcohol consumers	102	126	100	120
Non-drinkers (family and program participants)	102	120	80	120
Program organizers/volunteers	10	6	11	8

Table I.
Village characteristics
and number of
interviewees
for this study

State preference techniques were used to value abstract outcomes such as happiness and relationships in villages A, B and D. However, stakeholders in village C disagreed with the approach to value these outcomes as a result of this the outcomes from village C were not included in the SROI analysis of the program. All the outputs, outcomes and the methods to value non-monetized outcomes are presented in Table II.

The SROI ratio was calculated separately for each village. The ratio divided the value of benefits by total investment. All total costs and benefits of the program were expressed in Thai baht (THB). We conducted a scenario analysis to assess the robustness of our analysis when the long-term abstinence outcomes were negligible, i.e. current abstinence could not be sustained beyond one year.

The study protocol was reviewed and approved by the Institutional Review Board of the Faculty of Medicine, Chulalongkorn University, Thailand (COA No. 450/2015, IRB No. 267/58).

Results

The characteristics of the four villages and their households are provided in Table I.

Table II lists key resource categories and reports the total cost of investment by category in each community. The resources used for the program included operation costs, volunteer and participant opportunity costs and their self-support traveling costs. The operation cost was mainly supported by ThaiHealth. The total costs of investment in each village ranged between THB97,523 and 134,966. Operation costs constituted the largest expense at more than half of all total costs.

The outputs and outcomes considered by the stakeholders as meaningful were on three main groups, i.e. alcohol consumers, non-drinkers and program volunteers. They were quite similar across the four study villages, as presented in Table III, and could be grouped into either economic or social outcomes. The economic outcomes included cost saving from alcohol consumption avoided, prevention of productivity loss and earning more income from joining skills-related training workshops (only in village C). The social outcomes were on avoidance of any accident and physical harassment related to alcohol consumption, increasing happiness and relationship among friends and family, etc.

The alcohol consumer group gained the highest benefits which were THB772,909, 330,066, 287,265 and 333,700 in villages A, B, C and D, respectively. For nondrinker and program volunteers, only small benefits were gained as shown in Table IV. All villages presented similar patterns of benefits but the values varied. When considering the relative importance of economic, social and environmental outcomes, the benefit derived from the program was mainly from economic return. The impact on social outcome was minimal,

Resource categories	Village A	Village B	Village C	Village D
Operational cost	77,900	72,980	89,513	91,983
Materials/supplied used expense	45,200	41,400	75,813	71,104
Labor	22,700	21,180	7,200	16,874
Transportation	1,000	400	2,000	2,005
Facility (rent/depreciation)	9,000	10,000	4,500	2,000
Organizer/volunteer cost	31,683	17,318	20,047	12,265
Time cost (opportunity cost)	31,228	16,151	19,517	11,750
Paid transport	455	1,167	530	515
Participant cost	25,383	7,325	14,776	10,500
Time cost (opportunity cost)	25,383	7,325	14,646	10,300
Paid transport	0	0	130	200
Total	134,966	97,523	127,336	114,748

Table II.
Cost of investment in
each village (THB)

Note: THB1 = \$0.03

Stakeholder groups	Outcomes	Valuing non-monetized outcomes	Source of data
Alcohol consumers	Fewer alcohol-related expenses		[10]
	Avoidable accident and physical injury	Actual cost of injuries, damaged property, lawsuit, compensation and medical cost	Reviewing police and hospital documentation
	Avoidable absenteeism	Average income	Interview
	Happiness	Willingness to pay for support next year's program	Interview
Program participants (non-drinkers)	Avoidable illness and premature death (long-term outcomes)	Cost saving ^a (cost of productivity loss) when abstinence lifetime	Interview ^a [18]
	Increased happiness and improved community unity and relationship	Willingness to pay for supporting next year's program	Interview
	Increased income from skilled training workshop		Program account book
Program volunteers	Pride and experience from team work	Traveling cost and time cost	Interview

Table III.
Lists of outputs, outcomes, valuation method and source of data

while the environmental benefit was not considered by the stakeholders (Table V). The aggregated value created by the program for village A was the highest at THB772,909, while the benefits in other villages were more comparable, from THB344,719 to 352,846.

The SROI analysis showed that the program created a positive return value that was greater than the cost of investment in all four villages. The return values for every 1 baht of investment for the program in villages A, B, C and D were 5.9, 3.5, 2.7 and 3.1 baht, respectively (Table VI).

	Benefits to drinkers	Benefits to non-drinkers	Benefits to volunteers	Total (THB)
Village A	772,909	13,054	10,098	796,061
Village B	330,066	7,450	7,203	344,719
Village C	287,265	24,958	33,033	354,256
Village D	333,700	6,600	12,564	352,846

Table IV.
Amount of benefits of "Community Buddhist Lent Dry Campaign" to stakeholders in each village

	Economic benefit	Social benefit	Total benefit (THB)
Village A	759,109	36,952	796,061
Village B	325,726	18,993	344,719
Village C	321,223	33,033	354,256
Village D	326,600	26,246	352,846

Table V.
Amount of economic and social benefits derived from "Community Buddhist Lent Dry Campaign" in each village

	Total cost	Base case analysis		Sensitivity analysis	
		All benefits	SROI ratio	Benefits excluding long-term outcome	SROI ratio
Village A	134,966	796,061	5.9	334,446	2.5
Village B	97,523	344,719	3.5	219,693	2.2
Village C	127,336	354,256	2.7	179,728	1.4
Village D	114,748	352,846	3.1	86,796	0.8

Table VI.
Base case and sensitivity analyses in each village

Based on the scenario analysis described above, the SROI ratio results are lower without long-term abstinence. In this scenario, the value of the program for village D would be lower than implementation costs (SROI ratio = 0.8). The SROI ratios for the villages A, B and C are still more than unity at 2.5, 2.2 and 1.4, respectively (Table VI).

Discussion

The results of this study confirmed that “Community Buddhist Lent Dry Campaign” in most assessed villages gave higher return in social value than its investment. The SROI ratios were more than one for all the four villages when including long-term outcomes. The program remained as a cost benefit in three of the four villages when long-term outcomes were excluded from the valuation.

When we assess value for money of a program or a project, we have to consider both the investment cost and the outcomes gained. The investment cost depends on intensity of activities, number of participants and organizers and their economic status. The cost of village A was the largest due to extensive activities and the large number of participants. On the other hand, village B presented the lowest cost because of minimal activities and the lowest number of alcohol consumers and community members. Similarly, several factors can influence the benefits such a program can generate. These include the prevalence of alcohol consumers, magnitude of alcohol consumption problems before introducing the program and the experience of the program organizers, etc. When compared to the outcomes, lifetime abstinence is a major source of value gained. A high degree of sensitivity was exhibited when this outcome was excluded from the analysis.

Although the SROI ratio in village A was the highest, it is not correct to compare the SROI ratios across the village. This is because the assessment differed across each village and it depended on measured outcomes, valuation of non-monetized outcomes and stakeholder judgments and decisions specific to each village. For example, village B did not consider the number of absences from work in the measured outcomes, village C provided skilled training workshop which gained incomes for participants and stakeholders in village C disagreed to value abstract outcomes. Therefore, the SROI ratios among villages were not comparable. However, these ratios demonstrated that the community-based program in each village was worthwhile.

The results shown as SROI ratio for each village can help each program implementer to improve their value for money by exploring potential strategies in a specific village to reduce costs and increase outputs and outcomes so that the value for investment can be even higher in the future. For example, if a program organizer gains more experience and invests the program resource to conduct key activities that can effectively increase the number of abstinence, the outcome per resource use will be higher.

Earlier studies have identified that evaluation of public health interventions, including the economic evaluation of a community public health program, is a challenging task[19–22]. For instance, public health interventions usually involve many stakeholders. Benefits of intervention are not limited to only interested groups but they are also indirectly extended to other groups. Moreover, the outcomes of public health interventions are sometimes beyond health gained, very often with no accounting value, and it is time consuming to capture long-term outcomes. Furthermore, the economic evaluation methods, such as cost-benefit analyses, demand robust evidence which is costly and resource intensive to collect meaningful data[23, 24]. Therefore, many public health interventions have not been economically assessed. The SROI analysis is a method to evaluate the value of public health intervention that can be technically and financially more feasible[14]. The method takes relevant outcomes into the analysis by relying on stakeholder engagement process, which captures significant outcomes better than using only the evaluator’s viewpoint. If the evaluation process encounters any data limitation, this analysis allows the use of a stakeholder participatory process to estimate them. However, this subjective process can introduce additional risk of

bias and can affect the reliability and validity of the analysis results[25–27]. It is therefore important to make careful interpretations when utilizing the SROI results.

This study has several limitations. First, the cost of investment in this study could be partly underestimated because some indirect investments such as program organizing experience costs were not included. Second, stakeholders were unfamiliar with the SROI methodology particularly in the participatory process. Some stakeholders did not express their opinions that may have excluded some important outcomes. However, the research team resolved this problem by involving community leaders in the process, creating a friendly meeting environment and providing adequate time for group discussion. Third, the benefit of long-term abstinence was calculated using the data from the existing cost-of-illness study. The value may be lower than actual benefits because the previous study did not include avoidable health care costs and other non-medical costs such as the cost of caretakers and the cost of property damage related to alcohol consumption in their analysis. Nevertheless, the benefits in this study did not completely cover every aspect and the return of investment is still higher than the cost of investment. However, the SROI approach relies mainly on program stakeholders that may present a risk of bias and further study using other approaches such as social cost-benefit analysis could provide additional insights.

ThaiHealth could use the result of this analysis for internal management of the program in each village to get better value for money. They can use the current level of return as a reference to set a higher goal for next year's program. The level of return in each village can be compared overtime to assess the program improvement.

Sharing knowledge and experience among villages might help each of them to improve the program effectiveness for future programs. The information generated from this study can also be useful for all stakeholders involved in the design and implementation of community-level alcohol-control interventions both at local and national levels.

This study demonstrated that the “Community Buddhist Lent Dry Campaign” created benefits more than investment when including long-term outcomes. Cost savings from reduced alcohol consumption constituted the major proportion of the beneficial value. The result can be used as additional evidence for all stakeholders involved to consider when they decide over further scale-up of the program.

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Corresponding author

Piya Hanvoravongchai can be contacted at: piya.h@chula.ac.th

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