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REVIEW OF DFID APPROACH TO SOCIAL MARKETING

ANNEX 5: EFFECTIVENESS, EFFICIENCY AND EQUITY OF SOCIAL MARKETING

APPENDIX TO ANNEX 5

The Social Marketing Evidence Base (April 2003)
Steven Chapman and Hibist Astatke, PSI Research Division.

SEPTEMBER 2003

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INTRODUCTION AND SUMMARY

There are two principal strands to the evidence on the effectiveness and efficiency of social marketing. One is the routine reporting of sales data by the SMOs; the other is a series of research studies of differing types, carried out by a mix of practitioners and academics.

The first strand betrays the origins of social marketing in family planning programmes, where the emphasis was very heavily on aggregate gains in contraceptive prevalence in order to contribute to national fertility reduction targets. In order to convert sales figures for different contraceptive products into common units, it became customary to use the synthetic measure of the "Couple-Year of Protection" or CYP as the common denominator. Standard conversion factors, based on duration or estimated frequency of exposure, are used to calculate the contribution to total CYPs of sales of condoms, pill cycles, hormonal injections, male and female sterilisations and IUD insertions.

The standard attributions of 13 pill cycles = 1 CYP and 4 depo provera (3 monthly) injections = 1 CYP are fairly uncontroversial, but there is more room for dispute on the number of CYPs generated by an IUD insertion or female sterilisation, or the number of condoms used to generate 1 CYP. Indeed, there is a considerable literature on the practical and conceptual problems of using the CYP as a measure of output, with some authors (eg Lenton and West,1997) arguing that it has no value at all.

The deficiencies of CYP (Hanson et al,1999) include failure to take account of use-failure rates, failure to take account of sporadic use, failure to take account of differential fecundity of clients for different methods, and failure to take account of the differential timing of births averted by different methods. Perhaps the greatest problem is in the implicit assumption that all SM sales lead to incremental use of contraception. In practice, some substitution takes place between SM and other suppliers of a given method, and between methods (including traditional methods such as abstinence and withdrawal). It follows that the impacts of SM in increasing CPR and the consequent effects on fertility, infant and child mortality, maternal mortality and morbidity, etc., are all distinctly overstated.

However, the convenience of measuring outputs in common units, derived mechanically from the easily obtained figures for primary sales, explains the persistent popularity of the method, which is why it is frequently employed in this report, as is the associated efficiency measure, of (donor) cost per CYP. Both PSI and DKT employ these concepts widely in their reports. By extension, the notion of a year of protection can be applied to other socially marketed products, including ITNs, ORS salts, water treatment kits, and multivitamin pills. These products give rise to the analogous measures of PYMP (person-years of malaria protection), CYRH (child years of re-hydration), PYTW (person-years of treated water) and WRAYS (women of reproductive age years of supplementation). An example of the algorithm which PSI uses to convert sales data into PYMP follows:

Based on the assumptions that a net lasts 5 years, an insecticide treatment lasts 0.5 years, a treated net provides 50% protection and an untreated net 25% protection, a long-lasting insecticidal net remains effectively treated for 2 years, and 1.8 persons sleep under each net, conversion factors are:

1 treated net or net sold with kit	= 2.1655 PYMPs
1 untreated net	= 1.9405
1 long lasting insecticidal net	= 2.8071
1 retreatment	= 0.225

At the national aggregate level, the sum of PYMPs is converted into numbers of malaria cases averted and number of child deaths averted by the further assumption of 6.5 malaria episodes per annum and 6 child deaths/1000 protected with 0.75 children per net.

Similarly, condom and STI treatment kit sales can be converted into PYPs against HIV/AIDS, and with a more elaborate set of assumptions, these in turn can be translated into primary and secondary infections averted, using a modification of the AVERT model.

What all these methods have in common is a dependence on aggregate sales as the primary data input. There is no requirement for information on precisely who the customers are. Social marketers commonly (and justifiably) make the assumption that, in contrast to free distribution which may be conducive to substantial waste, purchased commodities are used. However, in spite of their self-advertisement as experts in marketing, one of the basic precepts (know your customer) is often flouted in the practice of social marketing, with its heavy reliance on primary sales data. While there is some justification for the use of a synthetic measure in the originating case of family planning, where the intention was to encourage a broad adoption of the small family model, the justification becomes much more tenuous in the context of disease prevention programmes, which often target particularly vulnerable or at risk groups. Specifically, there is a huge difference in the HIV prevention effect of a given number of condoms used by stable married couples primarily for family planning and used by a CSW in the course of business. Although PSI and DKT describe the outputs generated by these methods as being “for illustrative purposes” only, there is a real risk that these data will be treated, by clients and SMOs alike, as satisfactory proxies for valid impact measurements.

The use of sales data as an indicator of output is particularly inappropriate in those cases where an objective of the programme is to produce behaviour changes, such as delayed sexual debut, and reduction in the number of partners, which imply a reduction in the need for product use.

It may be perceived that the very anonymity of commercial sales, which is cited as a positive advantage in some contexts (particularly the purchase of contraceptives) is a disadvantage when t comes to assessing both the effectiveness and equity of social marketing programmes, which depend on knowing, if not the precise individuals, at least the characteristics of the purchasers. There are some proxies for consumer characteristics, such as the type of outlet or its geographical location, which can be used as indicators of consumer characteristics, but the inferences are always weak. Sales data can at best be an imperfect substitute for direct information on consumers.

This is where the second type of evidence from research studies is indispensable. Among the many citations in the bibliography, particularly useful sources were found to be the 2001 review article by Price, various studies by Harvey and associates reported in "Let Every Child Be Wanted" and unpublished articles by Stallworthy. A major addition to the literature is a compilation by the PSI Research Division, "The Social Marketing Evidence Base" which was explicitly produced as an input to the present review. Because of the importance of this source, it is reproduced as an appendix to this annex.

The PSI "evidence base" consists essentially of two parts. The first part is a theoretical framework linking social marketing interventions (activities) to changes in opportunity, ability and motivation (outputs) which give rise to changes in risk behaviour and use of products (which correspond to purpose level impacts), which in turn give rise to gains in health status and other perceived benefits (goal level impacts). This theoretical framework uses the terms "substitution" and "halo effect" in a sense slightly wider than, but including, the more familiar terms "crowding out" and "crowding in".

While this model is interesting, it does not provide guidance on the circumstances in which a social marketing intervention is optimal, nor does it suggest which model should be employed in any particular situation.

The second part is a review of the evaluative literature on social marketing, consisting of some 87 articles which met basic methodological criteria. The largest set of articles, under the heading of "effectiveness" basically answer the simple question: "does social marketing work?" and generally answer in the affirmative by showing some positive impact at the output, purpose or goal level (the goal level impacts relate to four studies of ITN use for malaria control and one study of onchocerciasis treatment). However, amid the preponderance of success stories, there were some negative findings (all related to behaviour change in the HIV context, see Table 10).

Arguably, this was not the most interesting question to ask. It is necessary as a base to establish that social marketing interventions do work, in the sense of achieving the expected results from application of the inputs, but it is a fairly banal result---if condoms or ITNs work, they work at a technical level pretty much regardless of how they are delivered to the consumer. The more interesting question is, does social marketing have a significant impact in delivering product or behaviour change messages? A significant impact could mean either relative to total product delivered, or better still, relative to the presumed need for the product in the entire population.

From the case studies undertaken in the review, market share data were available for most projects (reported in S2 of the main report), with the highest shares reported for condoms in Nigeria (86%) and Pakistan (63%) and ITNs in Kenya (60-70%) with SM having 100% of the market for retreatment kits in Tanzania. However, in most cases it was not possible to set this in the context of the total need of the population. None of the studies reporting effectiveness in the PSI evidence base reported the scale of the achievement.

The efficiency question can be posed as whether SM works better than other modalities for delivering the same technical intervention, for instance, by the public sector delivery

system, or by NGOs and CBOs. Even this question is no longer a matter of simple alternatives, since in many cases SMOs work in collaboration with other public and private agencies in both product distribution and BCC dissemination. In the PSI series of studies providing evidence of efficiency (equated with cost-effectiveness) there is always an implied comparator programme, but in 3 of 7 cases the alternative was not explicitly stated (in two cases, low unit costs were quoted, and in the third case, the comparison was with the $150 per DALY threshold used in some World Bank literature). In a further case, a cost-benefit rather than a cost-effectiveness format was adopted; for an HIV prevention programme, intervention costs were compared with treatment costs averted. This left just three cases where an explicit comparator was stated for a cost effectiveness analysis. Two of these compared CSM and CBD. The first was a study by Vernon et al which found that after 24 months, use of modern FP methods increased less than in areas with community based distribution---but the costs of CBD were proportionately higher, $3.04 - $5.12 per CYP compared with $0.20 - $1.18 profit for CSM. The study therefore concluded that social marketing was more cost-effective. The second was a study by Janowitz et al which reported costs per CYP of $6.13 for CSM and $16.38 for CBD. The third was the study by Berberis and Harvey referred to in S2, giving as the source (Harvey 1999).

In interpreting the results of the studies on equity, it is necessary to take account of the definition used in the PSI theoretical framework. It defines equity as “The absence of a rate or frequency difference in the use of a health product or service, given need, by socio-economic status. When defined as an impact, equity is the reduction or elimination of a rate or frequency difference in the use of health product or service, given need”. This makes it clear that that it is the ex post outcome of distribution by all methods that is taken into account in determining whether equity is achieved. Results reported vary between a positive association between use and socioeconomic status, no association, and inverse association. However, this definition does not require any comparison between the user profile achieved by the programme and that desired or targeted by the programme sponsor. A further complication is the brevity in reporting the summarised results, so that it is not always evident whether use refers to product from all sources or exclusively from SM sources.

These caveats aside, the PSI compilation is an immensely valuable summary of the available research evidence. It acknowledges that there are gaps in the evidence. “In particular, studies do not provide strong guidance to practitioners and program planners for designing interventions”. It points to the difficulty of quasi-experimental research designs, given the preponderance of national programmes, and advocates the use of repeated cross-sectional studies as the next best choice.

APPENDIX TO ANNEX 5

"The Social Marketing Evidence Base (Draft April 10 2003) by Steven Chapman and Hibist Astatke, PSI Research Division.

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Population Services International (PSI) delivers reproductive and other health products, services and information to enable low income and vulnerable people to change their behaviours and lead healthier lives.

Social Marketing Research Series

The Social Marketing Research Series aims to present actionable research findings to PSI stakeholders.

Acknowledgements

This report was produced through support to PSI provided by the United States Agency for International Development, the Department for International Development (United Kingdom), The Netherlands Directorate General for International Co-operation, KfW (Germany) and private donors.

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EXECUTIVE SUMMARY

Introduction. This report provides a set of inputs into a 2003 expert review on social marketing for the Department for International Development. The inputs respond to the consultant terms of reference and include an analytical framework that defines the rationale and role of social marketing in a health system and a systematic review of the evidence base concerning the effectiveness, efficiency, and equity of social marketing interventions.

Social Marketing Analytical Framework. The proposed framework defines key indicators for evaluating social marketing performance, including the halo and substitution effects, cost-effectiveness, and equity and the scope of social marketing activities such as segmentation, monitoring and evaluation.[1] The social marketing analytical framework is based on the behavioural model of health services use (Andersen. 1995). The framework is centered on the twin behavioural aims of social marketing: expanding effective and equitable access to preventive and care products and services and the promotion of non product and service related behaviours that improve health status. The framework defines the determinants of behaviour affected by social marketing interventions as opportunity, ability and motivation (Rothschild. 1999). By doing so, it defines when program planners should include a social marketing intervention to create behaviour change or, instead, use health education or government regulation of health-related behaviours to achieve public health goals.

Social Marketing Evidence Base. The social marketing evidence base was defined through systematic review procedures that included all published studies and excluded unpublished reports of sales and knowledge, attitude and practice studies. The evidence base is growing rapidly. It now consists of 87 published studies, nearly double the number available before 2001. The evidence base is almost exclusively related to HIV/AIDS, maternal and child health, and family planning and reproductive health. In terms of the impact of social marketing on health status, interventions to prevent malaria, classified here as a maternal and child health program, have the broadest and most conclusive evidence base. In terms of the impact of social marketing on behaviour change, the evidence base covers all three health programs, concerns both product and non-product-related behaviours, and is most extensive concerning HIV/AIDS programs, particularly in Africa. The evidence base has grown recently in size and strength with regard to the determinants of behaviour change, primarily in terms of ability and motivation constructs. An evidence base also exists in terms of measures such as equity, the halo and substitution effects, and cost-effectiveness. Authors affiliated with PSI wrote nearly two-thirds of the articles.

Social Marketing Effectiveness. Social marketing has produced measured health impact in malaria and onchocerciasis programs. Social marketing interventions have produced strong and broad ranging evidence of impact on product behaviours, particularly condom, oral contraceptive, and insecticide treated net use. Evaluations of non-product behaviours have found social marketing to be effective in increasing abstinence and fidelity, and several preventive child health behaviours, including hand washing. Social marketing interventions affect the determinants of behaviour in the

[1] The "halo effect" is an indirect benefit from a social marketing project where behaviours not targeted by the social marketing project improve as a result of the social marketing intervention. The "substitution effect" is where one behaviour is exchanged for another. Such an effect can be either positive or negative and either intended or unintended.

areas of opportunity, ability and motivation. Social marketing increases knowledge about opportunities to use products and the source of those products. It has effects on social norms and perceived self-efficacy that are associated with the adoption of healthy behaviours. Social marketing increases risk perceptions and the need to adopt preventive behaviours. Social marketing creates intentions to change behaviour and perceived benefits of continuing that behaviour.

Social Marketing Efficiency: Social marketing interventions have had substitution effects that have resulted in increased efficiency of the overall contraceptive delivery program in a country. There is no evidence that social marketing cannibalises commercial markets systematically; to the contrary, the socio-economic profile of social marketing users has been found to be lower than that of commercial brand users and higher than that of public sector users. Social marketing has produced halo effects on other risk reducing behaviours, including abstinence and the use of non-social marketing brand products.

Social Marketing Equity: The evidence base is mixed with regard to social marketing and equity. In many studies, differences in product use or other outcomes by socio-economic status do not exist when motivations or other behavioural determinants are included in the statistical models presented. In others, such differences appear in models where these determinants are not controlled. Trend information is currently unavailable to determine whether inequities grow or diminish in settings where social marketing interventions are introduced or social marketing plans are altered. There is no evidence that social marketing perpetuates or worsens inequities.

Conclusions: Social marketing as an intervention in the developing world may now rival health communications in developing countries generally in terms of the size and strength of its evidence base. In sum, social marketing interventions have demonstrated effectiveness in three important health program areas in developing countries. Further, the process by which social marketing changes behaviour through modifying opportunity, ability and motivation to behave is increasingly clear.

Yet, significant gaps remain in the social marketing evidence base to guide practitioners and planners in designing and evaluating interventions, projects and programs. At intervention level, additional and stronger evidence is needed relating to price as a potential barrier to continued use of products and services or the adoption of other risk-reducing behaviours. Evidence of a “dose-response” relative to the intensity of the social marketing intervention and the resulting impact is overly focused on the relationship between promotion and ability and motivation, while the other “3Ps” of marketing and their relationship to changes in measures of opportunity, ability and motivation are less well understood.

At project and program level, multi-year evaluations that produce concurrent evidence of behavioural changes, cost-effectiveness, the halo and substitution effects, and equity impacts are needed. For these, study designs using repeated cross-sectional, representative surveys and reporting on the standard indicators set forth in the proposed analytical framework merit priority. To evaluate the cost-effectiveness by program area of specific social marketing mixes relative to other possible interventions, quasi-experimental studies in addition to those recently done in malaria and adolescent health are required.

1. INTRODUCTION

This report aims to provide a set of inputs into a 2003 expert report on social marketing for the Department for International Development (DFID). The expert report aims to characterize the extent to which social marketing is contributing to DFID's broader development objectives, including the attainment of the millennium development goals for 2015 relating to the reduction of poverty through, in part, improvements in the health status of women and children. The expert report also aims to consider alternatives, if any, that would lead to an achievement of stated social marketing objectives, with a focus on relative cost-effectiveness and efficiency.

DFID's Terms of Reference requests the experts to identify the assumptions made about social marketing by making explicit the analytical framework to apply and then reviewing the evidence base behind the approach in part in terms of effectiveness, efficiency and equity. This report is intended to assist the experts in that effort.

Analytical Framework. The report proposes an analytical framework that defines the rationale for social marketing and the role it plays within an overall health strategy. The framework defines different objectives and impacts, both intended and possibly unintended, and a set of concepts and measures that stakeholders can use to assess the performance of a social marketing program and make decisions. The framework is based on a modified version of the behavioural model of health services (Andersen. 1995). The framework highlights the three central determinants of behaviour change, namely opportunity, ability and motivation, to characterize the role of social marketing relative to other health promotion strategies, including government regulation (Rothschild. 1999).

Social Marketing Evidence Base. The report presents the results of a systematic review of the published literature on social marketing and its effectiveness. Eighty-seven articles are identified through explicit procedures and then coded and described in terms of the analytical framework and the strength of the study design.

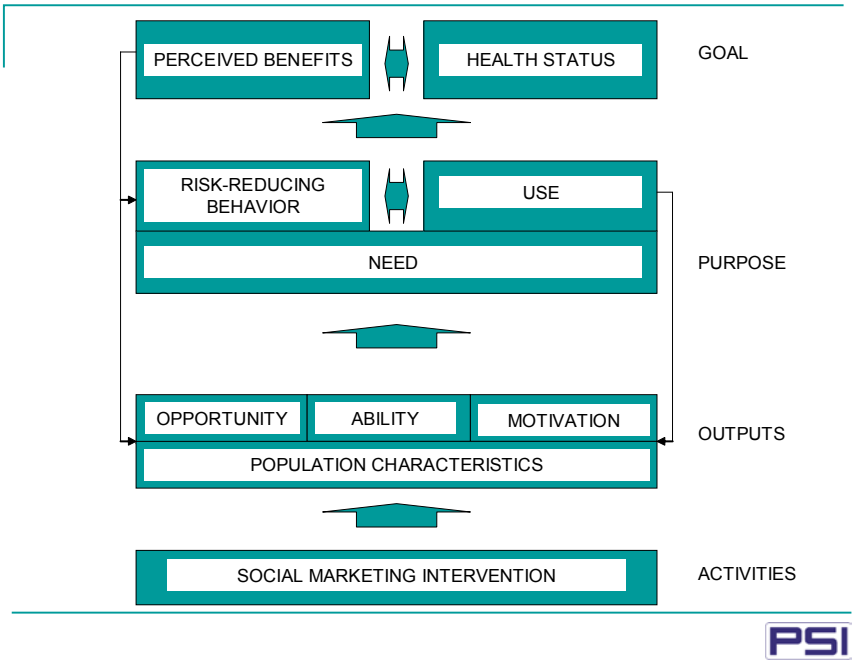
Social Marketing Effectiveness and Efficiency. The report details the evidence concerning the effectiveness and efficiency of social marketing in terms of health impact, behaviour change, changes in opportunity, ability and motivation constructs, and cost-effectiveness. Each relevant study from the evidence base is presented in terms of its intervention and population characteristics and result, prioritised by strength of the study design.

Lastly, the report presents recommendations for further assessment of the performance of social marketing systems in developing countries.

2. ANALYTICAL FRAMEWORK

The proposed framework for assessing social marketing performance is in Figure 1. The framework is based primarily on the Andersen behavioural model of health services use (Andersen. 1995). That model lays a comprehensive foundation for a social marketing framework. It fits the twin behavioural aims of social marketing, including expanding effective and equitable access to preventive and care products and services and the promotion of non product and service-related behaviours that result in improved health status. Its scope is consistent with the dominant social-ecological model of health promotion, such that health seeking behaviour is described as a function of individual, community and environmental characteristics (Stokels, Allen, & Bellingham. 1996). Lastly, the framework can be used to define concepts and measures, like equity and the halo and substitution effect, that are at the heart of donor and government-level decision-making about resource allocation to social marketing.

Figure 1: A Framework for Assessing Social Marketing Performance



The Andersen model is modified in two ways useful to an evaluation of social marketing in developing countries. First, the model is arranged and scoped to reflect the logical framework, which defines the goal, purpose, outputs and activities of a project. In Figure 1, the goal of a social marketing project is to improve health status and to increase the perceived benefits of continuing a healthy behaviour. Such goals are achieved through the purpose of the social marketing project, which is to increase the use of health products and services and the adoption of risk reducing behaviours that do not require health products and services among those defined as having need or vulnerability.[2] The

[2] Examples of risk reducing behaviours for an HIV/AIDS social marketing project would include increasing the age of sexual onset and reducing the number of sexual partners.

outputs of the project are defined in terms of the modifiable determinants of behaviour summarized as opportunity, ability, and motivation. These are characterized as varying by population characteristics, including age, gender, residence, and socio-economic status. Activities consist of the characteristics of the social marketing intervention, also known as the marketing mix or the "4Ps" of product, promotion, placement, and price, and the extent to which a population is exposed to these activities.

Second, the model explicitly includes the summary concepts of opportunity, ability and motivation that can guide program level decision-makers concerning the appropriate role of social marketing. Rothschild (1999) states that public health programs have three principle strategies to change behaviour: education, marketing and law. Education can affect ability and motivation, but is not able to create opportunity – such as increasing the availability of health services -- for people to behave. Law is useful when opportunity and ability to behave are present, but motivation is absent and unlikely to be induced through marketing or education.[3] Yet, legal interventions are considered inappropriate when less coercive interventions, like marketing, are effective. Marketing complements both law and education by its capacity to affect all three summary determinants of behaviour change -- opportunity, ability and motivation – and by permitting targeted audiences to change behaviour voluntarily.

Behavioural Determinants

Figure 2 sets out the PSI Behaviour Change Framework, which details, based on health promotion theories, the summary determinants of behaviour change that are modifiable by the social marketer. The PSI Behaviour Change Framework is based on several of the more than 50 models of behaviour change, including the health belief model, the theories of reasoned action and planned behaviour, and social cognitive theory (Becker & Joseph. 1974; Fishbein & Middlestadt. 1987; Bandura. 1993).

In general terms, opportunity summarizes modifiable societal or structural level elements that are thought necessary to increase the likelihood that a person will be able to use a health product or service. These include awareness of methods and sources of supply and perceptions of social marketing brands and their attributes.[4] Ability summarizes interpersonal level behaviour change constructs such as social norms and perceptions of self-efficacy and affordability that assist or inhibit individuals to be able to act, given opportunity and motivation.[5]

Lastly, motivation summarizes individual level behaviour change constructs such as awareness of a health problem, its causes and severity. This awareness then results in an assessment of personal risk. Separately, both awareness of the health problem and the expected benefits of using solutions to that health problem – like contraception, HIV testing, or an insecticide treated net – are believed to be directly related to a population's propensity to use a health product or service.

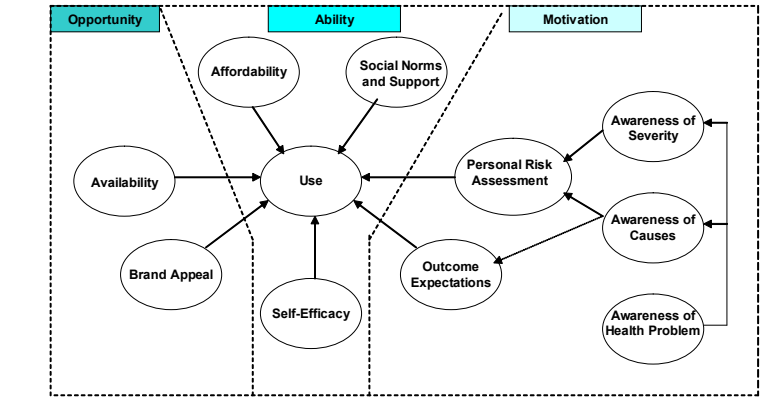
For a malaria prevention project promoting the use of insecticide treated nets, examples would include the wearing of protective clothing by children during waking hours when mosquitos bite.

[3] Laws requiring the use of helmets are an example of an appropriate behaviour change strategy in settings where there is an absence of motivation and the presence of both opportunity and ability to behave.

[4] Brand appeal is the combination of a brand name, slogan, colours, images, and value proposition that together are aimed at creating the impression in the customer's mind that "this brand is for me." It is an opportunity construct because, for example, brands designed to appeal to women may not be perceived by men as being available for their use.

[5] Affordability is the willingness of a client to pay to use a product or service or to adopt a risk reducing behaviour, conditional on an ability to pay, and therefore is classified as an ability construct.

Figure 2: PSI Behavior Change Framework



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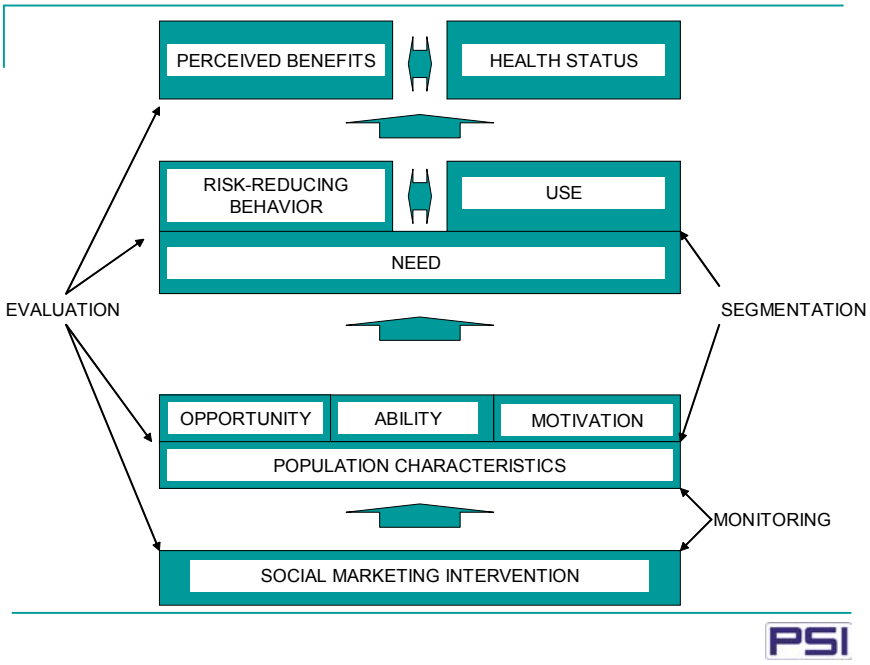
The PSI Behaviour Change Framework is but one of many possible descriptions of the process of behaviour change. Its utility here is to detail one subset of output level indicators in the proposed analytical framework that are the proximate targets of social marketing interventions (Hepworth. 1997).

Social Marketing Evaluation Process

Figure 3 presents the scope of formative, process and evaluative research based on the model. Formative evaluation is known in social marketing as segmentation, which is a process of dividing a population into groups that are homogenous relative to one or more characteristics. Andreasen (1996) suggests that segmentation be done at least in terms of behaviour among those in need, with behaviour defined according to stages of behavioural change, including pre-contemplation, contemplation, action and maintenance (Andreasen. 2002; Prochaska & DiClemente. 1983). Subsequent segmentation can be done by identifying significant associations between behaviour and opportunity, ability and motivation, given a set of population characteristics, such as gender, age, and residence. By doing so, marketing plans can be specified in part in terms of behavioural determinants.

Figure 3: The Scope of Formative, Process and Evaluative Research



The scope of process evaluation (or, more simply, monitoring) relates to the intervention, namely the quantity and quality of exposure to the social marketing project's marketing mix and its effect on opportunity, ability and motivation. The scope of evaluation relates to the project and the program, namely changes in need, behaviour, and health and perceived benefits as a result of exposure to multiple marketing mixes.

Evaluating Social Marketing Performance

Figure 4 and Table 1 present concepts and measures for evaluating social marketing performance.

Figure 4: Concepts and Measures for Evaluating Social Marketing Performance

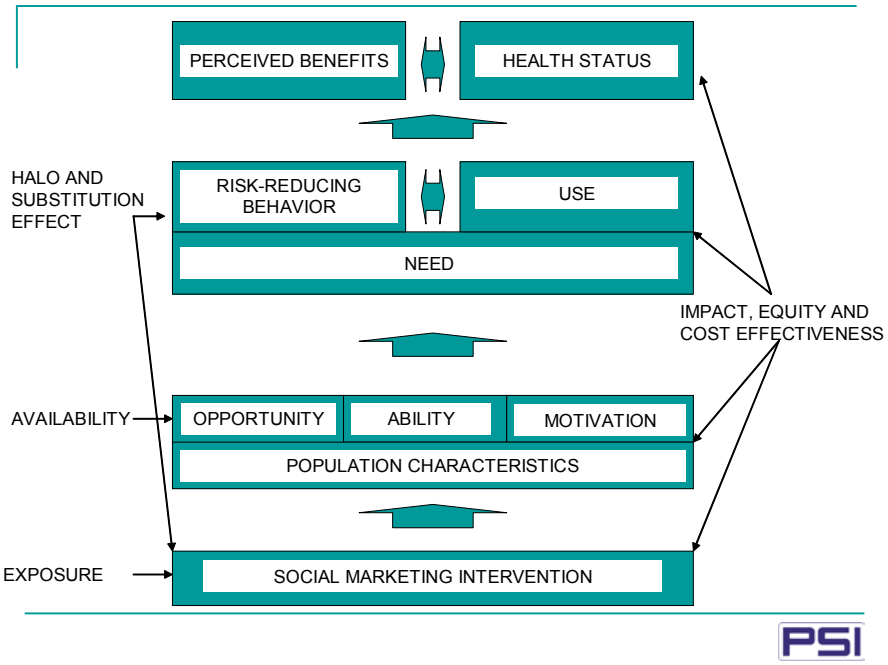


Table 1: Definitions

Concepts and Measures	Definitions
Halo and Substitution Effect	The extent to which exposure to a social marketing campaign that encourages product or service use also results in increases (halo) or decreases (substitution) in the use of non-social marketing products or the adoption of risk-reducing behaviours.
Availability	Multiple measures of opportunity, including knowledge of and distance to a source of supply, perceived convenience, and the presence or absence of other relevant services, given the location.
Exposure	(Pre-testing) Measures the extent to which the target audience understands the concepts, materials, and or messages proposed in the marketing plan. Identifies target population likes and dislikes of the concepts, materials and messages. Measures the extent to which the target audience is persuaded by the concept, materials and or messages (Post-testing) Measures the extent to which the target audience has seen, recalls and understands the elements of the marketing campaign.
Impact (Output Level)	A change in the level of an output indicator (opportunity, ability and motivation), given exposure to the social marketing intervention.

Concepts and Measures	Definitions
Impact (Purpose Level)	A change in the rate and or frequency with which populations use a health product or service or perform a risk-reducing behaviour, given need/vulnerability, population characteristics and exposure to the social marketing intervention
Impact (Goal Level)	The extent to which the use of a social marketing product or service or the adoption of a behaviour encouraged by the social marketing project results in improved health status or perceived benefits
Equity	The absence of a rate and or frequency difference in the use of a health product or service, given need, by socio-economic status. Socio-economic status can be defined as income, expenditure or asset ownership, or other population characteristics such as education, gender, and residence. When defined as an impact, equity is the reduction or elimination of a rate or frequency difference in the use of health product or service, given need.
Cost-Effectiveness	The cost of producing a marginal increase in impact.

This framework and these concepts and measures are proposed as the analytic framework for defining the role and measuring the performance of social marketing. Within this framework, social marketing interventions use the techniques of commercial marketing to change behaviour among the vulnerable, including the use of health products and services and risk-reducing behaviours. Social marketing can be used when the effectiveness of behaviour change is higher than the effectiveness of other determinants of health status, including environmental changes, such as the construction of sanitation systems, or technological changes, such as any eventual introduction of vaccines for HIV or malaria prevention. Social marketing should be used when health education or regulation are inappropriate as indicated by evaluations of the presence or absence of opportunity, ability and motivation. The concepts and measures presented here permit social marketing performance to be measured and compared across countries.

The framework shown here is unable to determine the appropriateness of the two organizational models of social marketing, namely, for- or non-profit management. While the proposed framework is useful for detailing the relationship between the activity-level marketing mixes, including the potential effect of for- or non-profit pricing, and higher level impacts, such as the halo and substitution effect, it does not give guidance to the decision-maker about organizing and managing the social marketing project (Bandura. 1993).

3. SOCIAL MARKETING EVIDENCE BASE

3.1 Methods

The social marketing evidence base presented here is defined through a January 2003 systematic review of the published literature on the effectiveness of social marketing that included screening, coding and summarizing articles according to the proposed analytical framework. The systematic review followed these steps.
In PubMed, the internet based search engine of the National Library of Medicine at the National Institutes of Health, the terms "social marketing AND effectiveness" were entered and 33 results were found and included on the literature search list (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi).

Separately, the term "social marketing" was entered and 325 results were found, including the 33 above. Abstracts of these were reviewed on-line and, if it appeared that the study design might include an experimental or quasi-experimental evaluation design or presented quantitative data based on multi-variate analyses, then it was included on the literature search list. By doing so, 44 additional papers were put on the literature search list, increasing that to 77 published articles.
Thirty-four unpublished PSI Working Papers that presented quantitative data based on multi-variate analyses were then included on the literature search list, increasing the total there to 111 readings.
The authors then scanned the reference lists of the 111 articles to identify additional potentially relevant articles; six additional articles were found and included on the literature search list. The total number of articles reviewed for this paper is one hundred seventeen. These are listed in Appendix 1.

Articles were then screened and coded based on a scheme developed to follow the analytic framework and rate the evidentiary strength of the study using the techniques of meta-evaluation (Sogolow, Peersman, Semaan, Strouse, Lyles, & HIV/AIDS Prevention Research Synthesis Team. 2002). The full coding scheme is in Appendix 2. Meta-evaluation is a method for assessing the methodological rigor of intervention studies. Using this method, the internal validity is rated in five areas: type of research design, sample size and representativeness, specification of population characteristics, measurement quality, and appropriate and replicability of control and experimental procedures.[6] Only the first three criteria were included in the coding scheme used here. Additional coding categories included were study type, disease/health area, setting, study unit, and whether the sample size calculation was made based on power calculations. The coding scheme was used to categorize studies in terms of their focus (settings, program, population, and outcomes) and strength of their methods (study type, design, and sampling strategy). An explicit rating system based on the coding scheme was not developed.

Both authors read and coded half the articles initially, and then read the remainder of the articles and coded independently and cross checked a sample of each other's findings. One author then reconciled differences for all the articles and produced the final coding.

[6] Internal validity is the extent to which the observed effects can be attributed to a planned intervention.

3.2 Results

The evidence base presented here consists of 87 articles. From the original 117 articles, 14 were not found prior to the writing of this report. Those articles not reviewed and coded are marked in bold font in Appendix 1. The remaining 16 articles were excluded as unrelated to social marketing interventions in terms of its structural and process description or as descriptions of social marketing activities only.[7]

Table 2: Study Classification by Program Area

	HIV/AIDS		**Maternal and Child Health**		**Family Planning/ Reproductive Health**		**Other**		**Total**	
	N	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**
Study Design										
Non-experimental	14	(35)	7	(50)	19	(66)	2	(50)	42	(48)
Post-test only	15	(38)	3	(22)	6	(21)	0	(0)	24	(28)
Quasi-experimental	11	(28)	4	(29)	4	(14)	2	(50)	21	(24)
Study Type										
Formative/Review	6	(15)	5	(36)	6	(21)	0	(0)	17	(20)
Baseline	4	(10)	0	(0)	8	(28)	1	(25)	13	(15)
Monitoring	17	(43)	2	(14)	11	(38)	1	(25)	31	(37)
Evaluation	13	(13)	7	(50)	4	(14)	2	(50)	26	(30)
Setting										
Africa	32	(80)	10	(71)	13	(45)	2	(50)	57	(65)
Asia	1	(3)	2	(14)	8	(28)	1	(25)	12	(14)
Eastern Europe/Central Asia	0	(0)	0	(0)	1	(3)	0	(0)	1	(1)
North America	4	(10)	0	(0)	0	(0)	1	(25)	5	(6)
South America	0	(0)	0	(0)	4	(14)	0	(0)	4	(5)
Multiple Settings	3	(8)	2	(14)	3	(10)	0	(0)	8	(9)

[7] Andreasen (2002) identifies a social marketing approach as one in which "1) (Andersen. 1995)behaviour change is the benchmark used to design and evaluate interventions. 2) Projects consistently use audience research to (a) understand target audiences at the outset of interventions (i.e., formative research), (b) routinely pretest intervention elements before they are implemented, and (c) monitor interventions as they are rolled out. 3) There is careful segmentation of target audiences to ensure maximum efficiency and effectiveness in the use of scarce resources. 4) The central element of any influence strategy is creating attractive and motivational exchanges with target audiences. 5) The strategy attempts to use all four Ps of the traditional marketing mix; for example, it is not just advertising or communications. That is, it creates attractive benefit packages (products) while minimizing costs (price) wherever possible, making the exchange convenient and easy (place) and communicating powerful messages through media relevant to—and preferred by—target audiences (promotion). 6) Careful attention is paid to the competition faced by the desired behaviour.

	HIV/AIDS		Maternal and Child Health		Family Planning/ Reproductive Health		Other		Total	
Publication Year										
2001-Present	22	(56)	10	(71)	6	(21)	0	(0)	38	(45)
1996-2000	16	(41)	2	(14)	12	(41)	2	(67)	32	(38)
Pre-1996	2	(3)	2	(14)	11	(38)	2	(33)	15	(18)
PSI Author[a]	31	(78)	1	(7)	22	(76)	0	(0)	54	(62)
Total	40	(100)	14	(100)	29	(100)	4	(100)	87	(100)

Percentages may not add to 100 due to rounding. [a]Includes studies by Philip Harvey.

Table 2 classifies the 87 studies in terms of three program areas, HIV/AIDS (40 studies), Maternal and Child Health (14 studies), Family Planning and Reproductive Health (29 studies) and other (4 studies). It then describes the distribution of studies within these program areas in terms of study design and type, setting, publication year, and whether the author was affiliated with PSI.

Nearly half the studies (42) had a non-experimental design. Approximately one-quarter of the studies (28) are categorized as "post-test" only. These quantitative studies were conducted for segmentation, monitoring or evaluative purposes, and used random sampling techniques, but did not apply a quasi-experimental design, which the remaining quarter (21 studies) did. The quasi-experimental designs ranged from those with an intervention area with a pre- and a post-test and a non-equivalent control or comparison group (the strongest design), to multiple cross-sectional studies without a control population (the weakest design).

Two-thirds of the studies (57) were conducted in Africa, and nearly half (38) were published since 2001. Authors affiliated with PSI wrote nearly two-thirds (52) of the articles.

Tables 3 and 4 exclude 21 literature review, formative qualitative studies and four of six cost studies for purposes of summarizing the remaining coded indicators in terms of the study's evidentiary strength. Table 3 identifies the studies by their sampling characteristics. Nearly three-fourths (54 studies) used random sampling, only four studies reported that the sample size was calculated for power in detecting differences in estimates, and about three-fourths of the studies had the individual as the unit of analysis.

Table 3: Sample Characteristics by Program Area

	HIV/AIDS		Maternal and Child Health		Family Planning/ Reproductive Health		Other		Total	
	N	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**
Random Sample	27	(79)	8	(89)	16	(80)	3	(100)	54	(82)
Sample size/power calculation	0	(100)	2	(22)	1	(5)	1	(25)	4	(6)
Study Unit										
Individual	25	(76)	5	(44)	17	(85)	4	(100)	51	(77)
Household	0	(0)	4	(44)	0	(0)	0	(0)	4	(6)
Group	1	(3)	0	(0)	0	(0)	0	(0)	1	(2)
Outlet	5	(15)	0	(0)	2	(10)	0	(0)	7	(11)
Other	2	(6)	0	(0)	0	(0)	0	(0)	2	(3)
Total	33	(100)	14	(100)	29	(100)	4	(100)	66	(100)

Percentages may not add to 100 due to rounding.

Table 4: Impact Level by Program Area

	HIV/AIDS		Maternal and Child Health		Family Planning/ Reproductive Health		Other		Total	
	N	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**
Goal level										
Evaluated Health Status	0	(0)	5	(56)	0	(0)	3	(75)	8	(12)
Perceived Benefits	1	(3)	0	(2)	3	(15)	0	(0)	4	(6)
Cost Effectiveness	1	(3)	1	(11)	3	(15)	1	(25)	6	(9)
Purpose level										
Risk Reduction	7	(21)	3	(33)	5	(25)	2	(50)	17	(26)
Use (all)	24	(73)	9	(100)	12	(60)	2	(50)	47	(71)
Halo/Substitutio	2	(6)	0	(0)	2	(10)	0	(0)	4	(6)

	HIV/AIDS		Maternal and Child Health		Family Planning/ Reproductive Health		Other		Total	
n Effect										
Equity	7	(21)	2	(22)	5	(25)	0	(0)	14	(21)
Purchase	3	(9)	0	(0)	5	(23)	0	(0)	8	(12)
Output level										
Opportunity	13	(39)	0	(0)	6	(30)	1	(25)	20	(30)
Ability	21	(62)	0	(0)	11	(55)	1	(25)	33	(50)
Motivation	23	(66)	1	(11)	9	(45)	2	(50)	35	(53)
Total	33	(100)	9	(100)	20	(100)	4	(100)	66	(100)

Percentages may not add to 100 due to rounding.

Table 4 presents the impact level by program area. About one-fourth (18 studies) examined goal level measures of effectiveness. Most effectiveness studies were in maternal and child health, primarily of interventions targeting malaria. At purpose level, about 70 percent (47) of the studies examined use, one-quarter (17) examined risk reducing behaviours, and smaller proportions examined equity (14 studies) and the halo and substitution effect (four studies). At output level, approximately one-third examined opportunity, and half examined ability and motivation.

Table 5: Marketing Mix and Intervention Strategy by Program Area

	HIV/AIDS		Maternal and Child Health		Family Planning/ Reproductive Health		Other		Total	
	N	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**
Marketing Mix										
Place (product)	22	(73)	9	(100)	11	(85)	3	(100)	45	(81)
Place (service)	5	(17)	4	(44)	2	(15)	2	(66)	13	(24)
Price	19	(63)	8	(89)	13	(87)	2	(67)	42	(74)
Promotion	93	(28)	9	(100)	13	(100)	3	(100)	53	(97)
Theory-based										
Yes (explicit)	11	(37)	1	(11)	3	(23)	0	(0)	15	(27)
Yes (implicit)	8	(27)	1	(11)	3	(23)	0	(0)	12	(22)
No	11	(37)	7	(77)	7	(54)	3	(100)	28	(51)

	HIV/AIDS		Maternal and Child Health		Family Planning/ Reproductive Health		Other		Total	
Total	30	(100)	9	(100)	15	(100)	3	(100)	55	(100)

Percentages may not add to 100 due to rounding.

Table 5 presents, for 55 monitoring and evaluative studies, the intervention or marketing mix and whether the intervention was theory-based. Nearly all studies (53) reported on promotional elements of interventions, with lower proportions reporting placement of products (45 studies) and price (42 studies). Placement of services was reported in approximately one-quarter of these studies (13). Approximately one-half of interventions were theory-based.

Table 6: Intervention Channel by Program Area

	HIV/AIDS		Maternal and Child Health		Family Planning/ Reproductive Health		Other		Total	
	N	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**	**N**	**(%)**
Advocacy-Opinion Leaders	0	(0)	0	(0)	2	(18)	1	(33)	3	(6)
Community	23	(85)	9	(100)	10	(90)	3	(100)	45	(90)
Group-Peer	14	(52)	5	(56)	5	(45)	1	(33)	25	(50)
Individual	8	(30)	3	(33)	3	(27)	2	(67)	16	(32)
Total	27	(100)	9	(100)	11	(100)	3	(100)	50	(100)

Percentages may not add to 100 due to rounding.

Tables 6 and 7 present marketing mixes in terms of the channel used and intervention content. Table 6 reports on intervention channels for 50 studies. Most channels were at the community-level, which includes in its definition the use of mass media, outdoor advertising, and events. One-half used group-peer approaches and one third used individual approaches. Table 7 presents the content of those interventions for 48 studies. Most included information about products and services and risk reduction. Approximately half provided information relating to interpersonal skills.

Table 7: Intervention Content by Program Area

	HIV/AIDS		Maternal and Child Health		Family Planning/ Reproductive Health		Other		Total	
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
Product/Service	26	(100)	8	(89)	10	(100)	3	(100)	47	(98)
Risk reduction information	23	(89)	8	(89)	9	(90)	2	(67)	42	(88)
Skill information	17	(66)	4	(44)	2	(20)	2	(67)	25	(52)
Product prescription	3	(12)	1	(11)	1	(10)	0	(0)	5	(10)
Total	26	(100)	9	(100)	10	(100)	3	(100)	48	(100)

Percentages may not add to 100 due to rounding.

The social marketing evidence base has nearly doubled in the past two years. Evidence of the impact of social marketing on maternal and child health is available. Most studies examine product and service related behaviours and take place in Africa in the context of HIV/AIDS programming. A large body of evidence is now present examining the effectiveness of social marketing at output level, primarily in terms of ability and motivation. Studies examining equity, the halo and substitution effects, and cost-effectiveness are less common.

In sum, the social marketing evidence base appears to serve its audiences equally in terms of examining performance. The evidence base provides practitioners with output-level information and program planners and evaluators with purpose and goal-level information. However, in terms of making resource allocation decisions among interventions, the evidence base – relative to equity, the halo and substitution effects and cost-effectiveness – is less substantial. The evidence base for all other behaviour change interventions likely has the same weakness..

4. EFFECTIVENESS

This section presents evidence of the effectiveness of social marketing on health, risk reducing behaviour, product or service use, and opportunity, ability, and motivation.

4.1 Health Impact

The evidence base for the health impact of social marketing consists of five studies, of which four relate to malaria, presented in Table 9. The one study unrelated to malaria reported that a social marketing intervention resulted in onchocerciasis treatment in Uganda produced cure rates of 42-84 percent (Kipp, Burnham, Bamuhiiga, Weis, & Buttner. 1998).

The evidence base concerning social marketing and malaria relates to child mortality and morbidity in four studies and infections in the general population in one study. In Tanzania, an insecticide treated net social marketing intervention averted five percent of deaths in children ages one month to four years (Schellenberg, Abdulla, Nathan, et al. 2001). Further, over two years, mean haemoglobin levels among children in this age group rose from 80 grams per liter to 89 grams per liter and anaemia prevalence decreased from 49 percent to 26 percent resulting in a protective efficacy of nets delivered through social marketing of 62 percent (95 percent confidence interval of 38-77 percent) for parasetemia prevalence and 63 percent (95 percent confidence interval of 27-82 percent) for anaemia. (Abdulla, Schellenberg, Nathan, et al. 2001). In Malawi, both rural and urban children under five who slept under insecticide treated nets, most of which were supplied by the social marketing intervention, had lower levels of anemia and parasitemia (Holtz, Marum, Mkandala, et al. 2002). In Afghanistan, purchase of a social marketing net resulted in reduced malaria infections (Rowland, Webster, Saleh, et al. 2002).

4.2 Perceived Benefits

Four studies in Table 10 report evidence of perceived benefits of behaving in a manner that promotes health and using social marketing products. Evaluating consumer satisfaction across behaviours provides insight into elements of the marketing mix that consumers' value, determinants of maintaining that behaviour, opportunities for producing halo and beneficial substitution effects and, potentially, threats for producing possibly negative substitution effects among behaviours. Results from four consumer intercept or profile surveys, which have a post-test design, are reported. They adhere closely to benefits hypothesized by social marketing proponents in terms of opportunity, ability and motivation.

In Malawi, a consumer profile study found that the top three reasons for using the social marketing brand condom were advertising, affordability, and availability. Evidence of the impact of segmentation was found; the top three reasons for using the commercial and social marketing brands differed in terms of preferences for quality, partner tastes, and advertising (Meekers. 1998).

In the Dominican Republic, users of the social marketing brand said that they did so due to a doctor's recommendation (32 percent), another person's recommendation (20 percent), advertising (19 percent), price (16 percent), pharmacist's recommendation (11 percent), and absence of side effects (8 percent) (Green. 1988). In Cameroon, the top

reasons for using the social marketing sexually transmitted disease treatment kit included convenience, price and attractiveness (Crabbe, Tchupo, Manchester, et al. 1998). In Nepal, the top reasons for buying social marketing oral contraceptives at medical shops instead of from family planning clinics included proximity to home and workplace and avoiding waiting at the clinic (Shrestha, Kane, & Hamal. 1990).

Table 8: The Health Impact of Social Marketing

Author (Reference #), Year		Impact Level, Program Theory	Intervention									Population		Study Design[a]		Result
			Marketing Mix		Channel		Content									
GOAL LEVEL, QUASI-EXPERIMENTAL AND POST-TEST DESIGNS ONLY *(k=5)*																
Kipp, et al (58)	1998	-Level -Program -Theory	Goal Oncho-cerciasis No	- Promotion -Product -Service -Price	Yes Yes Yes No	-Individual -Peer/Group -Community -Advocacy	Yes No Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Africa No	-Design -Type - Random Sample - Sample Size -Unit	Quasi-Exp Eval No Ind.	Baseline Community Microfilarial Load 9.1-19.3 (four communities). Endline CMFL 3.1-5.3. Percentage reduction: 42-84%.
Abdulla, et al. (1)	2001	-Level -Program -Theory	Goal Malaria Yes	- Promotion -Product -Service -Price	Yes Yes No Yes	-Individual -Peer/Group -Community -Advocacy	Yes Yes Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Africa No	-Design -Type - Random Sample - Sample Size -Unit	Quasi-Exp Eval Yes No Ind.	In 2 years, mean haemoglobin levels rose from 80g/l to 89 g/l, anaemia prevalence decreases from 49% to 26%. Protective efficacy of nets is 62% (95% CI: 38-77%) for parasetemia prevalence and 63% (95% CI, 27%-82%) for anaemia.
Rowland, et al (94)	2002	-Level -Program -Theory	Goal Malaria No	- Promotion -Product -Service -Price	Yes Yes Yes Yes	-Individual -Peer/Group -Community -Advocacy	Yes Yes Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Asia No	-Design -Type - Random Sample -	Quasi-Exp Eval Yes Yes Ind.	59% reduction in *plasmodium facliparum* among ITN users (OR 0.41, 95% CI 0.25-0.66), symptomatic *p. falciparum* (OR 0.31, 95% CI 0.21-0.47), *p. vivax* (OR 0.75, 95% CI 0.66-0.85).

Author (Reference #), Year		Impact Level, Program Theory	Intervention								Population		Study Design[a]		Result
			Marketing Mix		Channel		Content								
												Sample Size -Unit			
Schellen-berg et al (98)	2001	-Level -Program -Theory	Goal Malaria Yes	- Promotion -Product -Service -Price	Yes Yes No Yes	-Individual -Peer/Group -Community -Advocacy	Yes Yes Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Africa No	-Design -Type - Random Sample - Sample Size -Unit	Quasi-Exp Eval Yes No Ind	In 3 years, 18% child and 50% household ITN coverage associated with 27% increase in survival of children age 1 month to 4 years (95% CI 3-45%) and prevention of 5% of deaths.
Holtz, et al (51)	2002	-Level -Program -Theory	Goal Malaria No	- Promotion -Product -Service -Price	Yes Yes No Yes	-Individual -Peer/Group -Community -Advocacy	No No Yes No	-Product -Service -Skills	Yes Yes No	-Setting -PSI Program	Africa Yes	-Design -Type - Random Sample - Sample Size -Unit	Post-test Eval Yes Yes Ind.	Malaria parasitemia in children < 5 higher without net (rural RR 4.9, 95% CI 2.3-10.5 *p<0.001;* urban RR 2.1, 95% CI 1.0-4.2, *p=0.04*).

Table 9: The Impact of Social Marketing on Perceived Benefits

Author, Year	Impact Program Theory	Level,	Intervention						Population		Study Design[a]		Result
			Marketing Mix		Channel		Content						
Meekers (71) 1998	-Level -Program -Theory	Purpose HIV Yes	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual -Peer/Group -Community -Advocacy	No No Yes No	-Product -Service -Skills	Yes Yes No	-Setting -PSI Program	Africa Yes	-Design -Type -Random Sample -Sample Size -Unit	Post-test Mon Yes No Outlet	Top three reasons for using social marketing brand were advertising, affordability, and availability. Top three reasons for using commercial brand were quality, partner preference, and advertising.
Green (47) 1988	-Level -Program -Theory	Purpose FP/RH Yes	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual -Peer/Group -Community -Advocacy	No No Yes No	-Product -Service -Skills	Yes Yes No	-Setting -PSI Program	South Amer No	-Design -Type -Random Sample -Sample Size -Unit	Post-test Mon Yes No Outlet	Main reasons for using were a doctor's recommendation (32%), another person's recommendation (20%), advertising (19%), price (16%), pharmacist's recommendation (11%), and absence of side effects (8%).
Crabbe, et al (36) 1998	-Level -Program -Theory	Goal FP/RH No	-Promotion -Product -Service -Price	Yes Yes Yes Yes	-Individual -Peer/Group -Community -Advocacy	Yes No Yes No	-Product -Service -Skills	Yes Yes No	-Setting -PSI Program	Africa Yes	-Design -Type -Random Sample -Sample Size -Unit	Non-Exp Eval No No Ind.	Top reasons for using STD treatment kit include convenience, price and attractiveness.
Shresth 1990	-Level	Goal	-	Yes	-Individual	Yes	-	Yes	-Setting	Asia	-Design	Non-	Top reasons for

a, et al (103)	-Program -Theory	FP/RH Yes	Promotion -Product -Service -Price	Yes Yes Yes	- Peer/Group - Community -Advocacy	Yes Yes Yes	Product -Service -Skills	Yes Yes	-PSI Program	No	-Type -Random Sample -Sample Size -Unit	Exp Mon. No No Outlet	buying social marketing oral contraceptives at medical shops instead of from family planning clinics include proximity to home and workplace and avoiding waiting at the clinic.

[a]Study Type is Baseline, Monitoring, or Evaluation. Unit is individual, household, group, outlet, or other.

4.3 Risk Reducing Behavior

The impact of social marketing on risk reducing behaviour as established through quasi-experimental studies is presented in Table 11. The effectiveness of social marketing is established for maternal and child health behaviours such as the adoption of preventive hand and dishwashing behaviours in Thailand and for use of oral rehydration therapy in Kenya (Pinfold & Horan. 1996; Kenya, Gatiti, Muthami, et al. 1990).

Yet, the effectiveness of social marketing on risk reduction for HIV/AIDS is mixed in these studies. After a two year social marketing intervention in Cameroon, the proportion of women having sex before age 15 significantly declined. Among men, there was a significant decrease in the proportion having two or more partners in the past 30 days (Van Rossem & Meekers. 2000).

In the early 1990s in Uganda, after 18 months, there was no evidence of a statistically significant decline in proportions of men and women having casual partnerships (Schopper, Doussantousse, Ayiga, Ezatirale, Idro, & Homsy. 1995). In Guinea, there was a significant increase in those reporting fewer partners as a means to protect themselves from AIDS, yet the survey recorded a significant increase in those reporting two or more partners in the past month (Agha. 2002a). In Soweto, after 20 months, a study found no change in the proportion of virgin adolescents or adolescents who abstained to age 16 (Meekers. 2000).

Table 10: The Impact of Social Marketing on Risk Reducing Behavior

Author, Year	Impact Level, Program Theory	Intervention								Population	Study Design[a]		Result
		Marketing Mix		Channel		Content							
PURPOSE-LEVEL, RISK REDUCING BEHAVIOR, QUASI-EXPERIMENTAL STUDIES ONLY *(k-6)*													
Van Rossem and Meekers (111)	2000	-Level -Program -Theory	Purpose HIV Yes	-Promotion -Product -Service -Price	Yes Yes Yes Yes	-Individual - Peer/Group -Community -Advocacy	Yes Yes Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Africa Yes	-Design -Type -Random Sample -Sample Size -Unit	Quasi-Exp Eval Yes No Ind.	After two years, among women, decrease in proportion having sex before age 15. Among men, decrease in proportion having two or more partners in past 30 days.
Schopper et al (100)	2000	-Level -Program -Theory	Purpose HIV No	-Promotion -Product -Service -Price	Yes Yes No No	-Individual - Peer/Group -Community -Advocacy	No Yes Yes No	-Product -Service -Skills	Yes Yes No	-Setting -PSI Program	Africa No	-Design -Type -Random Sample -Sample Size -Unit	Quasi-Exp Eval Yes No Ind.	After 18 months, no statistically significant decline in proportions of men and women not having casual partnerships.
Agha (11)	2002	-Level -Program -Theory	Purpose HIV Yes	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual - Peer/Group -Community -Advocacy	No Yes Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Africa Yes	-Design -Type -Random Sample -Sample Size -Unit	Quasi-Exp Eval Yes No Ind.	In Guinea, significant increase in those reporting fewer partners to protect from AIDS, yet significant increase in those reporting two or more partners in the past month.
Meekers	2000	-Level -Program -Theory	Purpose HIV Yes	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual - Peer/Group -Community -Advocacy	No Yes Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Africa Yes	-Design -Type -Random Sample -Sample Size -Unit	Quasi-Exp Eval Yes No Ind.	After 20 months, no change in proportions ever having had sex or ever doing so before age 16.

Author, Year		Impact Level, Program Theory		Intervention						Population		Study Design[a]		Result
				Marketing Mix		Channel		Content						
Pinfold and Horan (91)	1996	-Level -Program -Theory	Purpose MCH No	-Promotion -Product -Service -Price	Yes Yes Yes Yes	-Individual - Peer/Group -Community -Advocacy	No Yes Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Asia No	-Design -Type -Random Sample -Sample Size -Unit	Quasi -Exp Eval Yes No Ind.	Significant improvement in hand and dishwashing behaviours.
Kenya, et al (57)	1990	-Level -Program -Theory	Purpose MCH No	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual - Peer/Group -Community -Advocacy	No Yes Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Africa No	-Design -Type -Random Sample -Sample Size -Unit	Quasi -Exp Eval Yes No Ind.	Significant increase in use of Oral Rehydration Therapy.

4.4 Product and Service Use

The results from sixteen quasi-experimental studies are presented in Table 12; evidence from 29 post-test and non-experimental studies has been excluded. The effectiveness of social marketing for increasing the use of products and services is well established in the areas of HIV/AIDS, maternal and child health and family planning and reproductive health. For example, among adolescents, ever use of condoms, use of condoms for pregnancy prevention, and use of abstinence for pregnancy prevention increased significantly in Cameroon (Agha. 2002a). The same study found that use of contraception increased significantly in Botswana and that, in Guinea, condom use at last sex and ever use of the pill increased significantly.

Among Zambian adults, after three years of intervention, condom use at last sex with any partner increased significantly from 27 percent to 36.2 percent in women, and 34.7 percent to 36.7 percent in men (Agha. 2002b). In the United States' state of Louisiana, a four year social marketing project found a significant 30 percent increase in condom use over baseline rates of 40 percent in an HIV risk population (Cohen, Farley, Bedimo-Etame, et al. 1999) An adolescent HIV project in major cities in the United States found that, after one year, condom use at last sex increased significantly by 4.3 percent (Kennedy, Mizuno, Seals, Myllyluoma, & Weeks-Norton. 2000).

Among factory workers in Zimbabwe, 48.9 percent of sexual contacts were found to be protected by condoms. Social marketing condoms were used in 34.6 percent of sexual contacts and free condoms given by the government were used in 9.6 percent. Social marketing was effective at protecting high risk encounters but this may have been achieved at the expense of less precise targeting (Meekers. 2001). In South Africa, ever use of condoms in the intervention area increased significantly from 57.4 percent to 73.4 percent ($p<0.10$) and use at last sex increased significantly from 38 percent to 54 percent. The two-year intervention also recorded large and significant increases in condom use in the control area rendering intervention increases insignificant (Meekers. 2000).

Table 11: The Impact of Social Marketing on Product or Service Use

Author, Year	Impact Level, Program Theory	Intervention								Population		Study Design[a]		Result
		Marketing Mix		Channel		Content								
PURPOSE-LEVEL, USE OF SOCIAL MARKETING PRODUCT OR SERVICE *(k=16)*														
Agha (11)	2002	-Level -Program -Theory	Purpose HIV Yes	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual - Peer/Group -Community -Advocacy	No Yes Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Africa Yes	-Design -Type -Random Sample -Sample Size -Unit	Quasi -Exp Eval Yes No Ind.	In Cameroon, ever use of condoms, use of condoms for pregnancy prevention, use of abstinence for pregnancy prevention increases significantly. In Botswana, use of contraception increases. In Guinea, condom use at last sex and ever use of the pill increases significantly.
Agha (4)	2002	-Level -Program -Theory	Purpose HIV No	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual - Peer/Group -Community -Advocacy	No No Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Africa Yes	-Design -Type -Random Sample -Sample Size -Unit	Quasi -Exp Eval No No Ind.	After 3 years, condom use at last sex with any partner increase from 27% to 36.2% in women, and 34.7% to 36.7% in men.
Cohen, et al (34)	2002	-Level -Program -Theory	Goal HIV Yes	-Promotion -Product -Service -Price	Yes Yes No No	-Individual - Peer/Group -Community -Advocacy	No No Yes No	-Product -Service -Skills	Yes No No	-Setting -PSI Program	NA No	-Design -Type -Random Sample -Sample Size -Unit	Quasi -Exp Eval No No Ind	After 4 years, 30% increase in condom use (baseline 40%).
Kennedy	2000	-Level	Purpose	-Promotion	Yes	-Individual	Yes	-Product	Yes	-Setting	NA	-Design	Quasi	After 1 year, condom use

Author, Year		Impact Level, Program Theory		Intervention						Population		Study Design[a]		Result
				Marketing Mix		Channel		Content						
et al (56)		-Program -Theory	HIV No	-Product -Service -Price	No No No	- Peer/Group -Community -Advocacy	Yes Yes No	-Service -Skills	Yes Yes	-PSI Program	No	-Type -Random Sample -Sample Size -Unit	-exp Cost Yes No Ind	at last sex increased 4.3%.
Meekers (74)	2001	-Level -Program -Theory	Purpose HIV No	-Promotion -Product -Service -Price	No Yes No Yes	-Individual - Peer/Group -Community -Advocacy	No No Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Africa Yes	-Design -Type -Random Sample -Sample Size -Unit	Quasi -Exp Eval No No Ind.	48.9% of sexual contacts protected, 34.6% by social marketing brand, and 9.6% by free condoms. Social marketing was very effective at protecting high risk encounters but this was achieved at the expense of less precise targeting.
Meekers (68)	2000	-Level -Program -Theory	Purpose HIV Yes	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual - Peer/Group -Community -Advocacy	No Yes Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Africa Yes	-Design -Type -Random Sample -Sample Size -Unit	Quasi -Exp Eval Yes No Ind.	Chi-square test for trend significant at p<0.10 for increase in ever use among men from 57.4% to 73.4%; use at last sex increases from 38.0 % to 54.%. Two-year intervention also saw large increases in condom use in control area rendering intervention increases insignificant.
Van Rossem and Meekers (111)	2000	-Level -Program -Theory	Purpose HIV Yes	-Promotion -Product -Service -Price	Yes Yes Yes Yes	-Individual - Peer/Group -Community -Advocacy	Yes Yes Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Africa Yes	-Design -Type -Random Sample -Sample Size	Quasi -Exp Eval Yes No	After two years, increase of 19% in women reporting ever using a condom (57% to 76%). 12% increase in male partner's report of the use of IUD or injectable (baseline < 1%) and 25%

Author, Year		Impact Level, Program Theory		Intervention						Population		Study Design[a]		Result
				Marketing Mix		Channel		Content						
												-Unit	Ind.	increase in reported pill use (baseline 3%).
Schopper et al (100)	2000	-Level -Program -Theory	Purpose HIV No	-Promotion -Product -Service -Price	Yes Yes No No	-Individual - Peer/Group -Community -Advocacy	No Yes Yes No	-Product -Service -Skills	Yes Yes No	-Setting -PSI Program	Africa No	-Design -Type -Random Sample -Sample Size -Unit	Quasi -Exp Eval Yes No Ind.	After 18 months, statistically significant increase in condom use in casual partnerships from 23%-46% overall (6.5% to 33% in women and 27% to 48% in men).
Vernon, et al (114)	1988	-Level -Program -Theory	Purpose FP/RH Yes	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual - Peer/Group -Community -Advocacy	No Yes Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	South Amer. No	-Design -Type -Random Sample -Sample Size -Unit	Quasi -exp Cost Yes No Model	After 24 months, increase in modern method prevalence less than that in areas with CBD (but increase deemed more cost effectively produced).
Schellen-berg et al (98(	2001	-Level -Program -Theory	Goal MCH/ Malaria Yes	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual - Peer/Group -Community -Advocacy	Yes Yes Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Africa No	-Design -Type -Random Sample -Sample Size -Unit	Quasi -Exp Eval Yes No Ind	In 2 years, ITN coverage increases from 10% to 50%.
Abdulla, et al. (1)	2001	-Level -Program -Theory	Goal MCH/ Malaria Yes	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual - Peer/Group -Community -Advocacy	Yes Yes Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Africa No	-Design -Type -Random Sample -Sample Size -Unit	Quasi -Exp Eval Yes No Ind.	In 3 years, net ownership increases from 10% to 61%.

Author, Year		Impact Level, Program Theory		Intervention						Population		Study Design[a]		Result
				Marketing Mix		Channel		Content						
Rowland, et al (94)	2002	-Level -Program -Theory	Goal MCH/ Malaria No	-Promotion -Product -Service -Price	Yes Yes Yes Yes	-Individual - Peer/Group -Community -Advocacy	Yes Yes Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Asia No	-Design -Type -Random Sample -Sample Size -Unit	Quasi -Exp Eval Yes Yes Ind.	After 4 years, 59% of families had purchased a net.
Pinfold and Horan (91)	1996	-Level -Program -Theory	Purpose MCH No	-Promotion -Product -Service -Price	Yes Yes Yes Yes	-Individual - Peer/Group -Community -Advocacy	No Yes Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Asia No	-Design -Type -Random Sample -Sample Size -Unit	Quasi -Exp Eval Yes No Ind.	No significant difference in fingerprint contamination in households that had received water container and those that had not
Kenya, et al (57)	1990	-Level -Program -Theory	Purpose MCH No	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual - Peer/Group -Community -Advocacy	No Yes Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Africa No	-Design -Type -Random Sample -Sample Size -Unit	Quasi -Exp Eval Yes No Ind.	Proportion ever administering ORS increased from 18-54% in 12 months.
Black and Harvey (29)	1976	-Level -Program -Theory	Purpose FP/RH Yes	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual - Peer/Group -Community -Advocacy	No No Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Africa Yes	-Design -Type -Random Sample -Sample Size -Unit	Quasi -Exp Eval Yes No Ind.	After 30 months, condom use increased from 4-15%.
Janowitz et al (53)	1992	-Level -Program -Theory	Purpose FP/RH No	-Promotion -Product -Service	Yes Yes No	-Individual - Peer/Group	No No Yes	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI	South Amer. No	-Design -Type	Quasi -exp Eval	After 3 years, oral contraceptive use increased 2.5%, while CSM

Author, Year	Impact Level, Program Theory	Intervention				Population	Study Design[a]		Result
		Marketing Mix		Channel	Content				
		-Price	Yes	-Community -Advocacy	No	Program	-Random Sample -Sample Size -Unit	Yes No Ind	oral contraceptive use increased by 3.3%.

[a]Study Type is Baseline, Monitoring, or Evaluation. Unit is individual, household, group, outlet, or other.

A two year intervention in Cameroon measured a significant 19 percent increase (57 percent to 76 percent) in women reporting ever using a condom. Males reported a 12 percent significant increase in their partner's use of the IUD or injectable (baseline < 1 percent) and a 25 percent significant increase in reported pill use (baseline: three percent) (Van Rossem & Meekers. 2000). In Uganda, after 18 months, Schopper et al (1995) found a statistically significant increase in condom use in casual partnerships from 23 percent to 46 percent overall; the increase in women was 6.5 percent to 33 percent in women and 27 percent to 48 percent in men.

For maternal and child health programs focused on malaria, insecticide treated net coverage in one area of Tanzania increased significantly from 10 percent to 50 percent in two years and to 61 percent in three years.(Schellenberg, Abdulla, Nathan, et al. 2001) (Abdulla, Schellenberg, Nathan, et al. 2001). In Afghanistan, Rowland et al (2002) found that 59 percent of families had purchased a net after four years. (Rowland, Webster, Saleh, et al. 2002). For other maternal and child health programs, no significant difference in fingerprint contamination in households that had received a safe water container and those that had not was found in Thailand (Pinfold & Horan. 1996). In Kenya, the proportion ever administering oral rehydration salts increased significantly from 18-54 percent in 12 months (Kenya, Gatiti, Muthami, et al. 1990) .
For family planning and reproductive health, one of the first social marketing programs measured a significant increase in condom use, after 30 months, from four to fifteen percent (Black & Harvey. 1976) A 24 month operations research project in Columbia measured an increase in modern method prevalence through social marketing less that was less than that in areas served by community-based distributors, but social marketing was found to be relatively cost effective (Vernon, Ojeda, & Townsend. 1988). Also in Colombia, after three years of intervention, oral contraceptive use increased significantly by 2.5 percent, while social marketing oral contraceptive use increased significantly by 3.3 percent (Janowitz, Suazo, Fried, Bratt, & Bailey. 1992)

4.5 Opportunity, Ability and Motivation

Table 13 presents the impact of social marketing interventions on opportunity, ability and motivation. For opportunity, knowledge of methods and sources of supply are the most common determinant reported. For ability, self-efficacy and social norms are the most common determinant reported, with price and other indicators of ability reported in few studies. For motivation, a variety of constructs are reported, with risk perception being the most common, outcome expectations relating to use of products or behaviours the next most common, and awareness of risk generally within a setting the least common.

Table 12: The Impact of Social Marketing on Opportunity, Ability and Motivation

Author and Intervention	Opportunity	Ability	Motivation
Van Rossem & Meekers (2000). Cameroon, quasi-experimental design, males and females ages 12-22, all 4Ps	Knowledge of condom, pill, and IUD, among men and women ages 12-22, significantly increased in intervention area.	Increases in three measures of self-efficacy. 1. the likelihood of discussing sexuality and contraceptives with anyone and health workers. 2. likelihood of women having seen condom demonstrations, and 3. likelihood of women considering themselves responsible for HIV/STI protection.	Increases among men in perceived risk of HIV/AIDS infection. Increase among women in belief that HIV/AIDS can be avoided.
Agha, 2002. Zambia, quasi-experimental design, male and female, secondary school, peer education.	Significant increase in knowledge of where condoms can be obtained.	Increases in belief that it is normal for both women and men to propose abstinence and that it is normal for both women and men to propose condom use. Approval of condom use increased	Increases in knowledge of HIV/AIDS severity and abstinence, belief in the effectiveness of abstinence in preventing HIV/AIDS, and belief that condoms are effective in preventing HIV and STIs.
Agha et al 2002. Africa, post-tests and cross-sectional studies, male and female, reproductive age, reasons for non use of condoms	Condom availability is less important than partner trust as a reason for non use of condoms with a marital and regular partner. Not having a condom at hand relatively more important as a reason for non-use	Partner objection and price relatively less important reasons for non use of condoms compared to trusted partnerships.	Being in a trusted partnerships most common reason for non-use of condoms in eight sub-Saharan countries, under different partnership definitions, and among male and female

	with casual partners.		respondents.
Bailey et al 1989. Honduras, post-test, females of reproductive age, introduction of social marketing.	Lack of oral contraceptive availability associated with contraceptive discontinuation	Social marketing users lower SES than users of commercial brands, and higher SES than users of public sector brands.	Experiencing and fearing side effects most common determinant of switching oral contraceptive supply.
Kennedy et al 2000, United States, post-test, adolescents, all 4Ps	Intervention increased proportion carrying and using a condom with a main partner at last sex.	Greater exposure to the intervention resulted in greater self-efficacy and social norm scores	Greater exposure to the intervention did not result in improved attitudes.
Agha, 2001. Kenya, post-test, males and females 15-39, branded and generic advertising	Exposure to branded advertising resulted in decrease in perceived difficulty in accessing condoms.	Exposure to brand advertising increased self-efficacy (can convince my spouse to use condoms). Also increased openness (knows someone with HIV/AIDS).	Exposure to brand advertising increased belief in condom efficacy, increased sense of risk perception, increased perceived severity of HIV/AIDS. Brand advertising has does-response effect and greater influence than generic advertising.
Black and Harvey, 1976, Kenya, males and females 15-49, all 4Ps	Increase in awareness of family planning and contraception.	Norms associated with social marketing disapproval.	Exposure to social marketing resulted in increase in approval of family planning.
Meekers, 1997, Cameroon, post-test, adolescents, all 4Ps	Males and females who have ever used a condom significantly more likely to have procured a social marketing condom.	Price not associated with ever use.	
Agha, 2002, Zambia, post-test,	Higher levels of condom use	Higher levels of condom use	

males and females, all 4Ps	among men and women who know a condom source of supply.	among men and women with increasing levels of education and assets.	
Agha et al 2001. Mozambique, post-test. Males and females, all 4Ps	Knowledge of a condom source significantly associated with reported condom use in last sex with a non-regular partner.		
Oladosu and Ladipo, 2001, Nigeria, post-test, sex workers, exposure to advertising		Self-efficacy (consistently asking clients to use condoms) associated with condom use.	Knowledge of transmission associated with condom use. Worrying about HIV/AIDS associated with use.
Meekers, et al 1997, Botswana, quasi-experimental design, all 4Ps.		Males reported increased self-efficacy (reduction in those claiming that it is hard to convince a partner to use condoms). Females reported changed social norm (reduction in those believing it good to have sex in order to encourage marriage).	Among females, increased perceived risk of HIV/AIDS, increased belief in condom and abstinence efficacy.
Adetunji and Meekers 2001. Zimbabwe, post-test, barrier identification, exposure to condom promotion		Males more likely to report consistent condom use than females.	Positive attitude about condoms associated with consistent condom use.
Agha and van Rossen, 2002. Tanzania, exit		Mass media and provider education leads to increased	Peer education affects directly intention to use

survey, male and female consumers, 4Ps		discussion among partners about female condom and then leads to increased intention to use.	condoms.
Agha 2002. quasi-experimental, Cameroon, Botswana, South Africa, Guinea, male and female, adolescents, 4Ps		Among women in Cameroon, social marketing increased social norms (women may propose condom use), self efficacy (AIDS is avoidable; discussing sex and contraception more frequently).l In Zambia, women felt less confused about sex (self-efficacy). Among men, increase in discussion of sexuality and contraception in Cameroon.	Among women, risk perception increased (Bots., Cam), knowledge of the benefits of abstinence for unwanted pregnancy increased (Cam, SA) and for AIDS (Bots), benefits of condom use for unwanted pregnancy (Cam, Bots), and for AIDS (Bots, SA) and benefits of contraception for family planning (Cam, SA). Among men, condom benefits for AIDS and FP increased in Cameroon.
Meekers (2000), South Africa, quasi-experimental, female, 4Ps.		Decrease in belief that youth have problems preventing pregnancy, STDs, and HIV. Increased self-efficacy in discussing contraception	Increased awareness of pregnancy and HIV/AIDS, increased risk perception for pregnancy and HIV/AIDS, increased belief in contraception as the best way to avoid pregnancy and condoms as the best way to avoid HIV/AIDS.

Meekers (2000), South Africa, Male Migrant Workers, quasi-experimental, 4Ps			Increase in risk perception.
Agha (2000), Zambia, males and females, post-test, 4Ps			Intention to use associated with self-efficacy.

5. EFFICIENCY

5.1 Cost Effectiveness

Table 14 presents information on the cost-effectiveness of social marketing projects. Social marketing has been found to be cost-effective relative to other HIV/AIDS, maternal and child health and family planning and reproductive health interventions when outcomes are defined as changes in health status or behaviour.

When effectiveness is defined as a change in health status, one study reported that the cost per disability-adjusted life year-averted of social marketing was less than US$150, thereby under the threshold set by the World Bank for highly cost-effective. (Varley, Tarvid, & Chao. 1998). In Louisiana, another study found that a 30 percent increase in condom use averted 170 HIV infections, saved 1,909 quality adjusted life-years, and $33 million in care costs. Sensitivity analysis found that a 2.7 percent increase in use would be cost effective (Bedimo, Pinkerton, Cohen, Gray, & Farley. 2002)

When effectiveness is defined in terms of product delivered, one study in the 1970s found that the cost per couple-year of protection in social marketing was US$6.19 (Davies & Louis. 1977). In the 1980s, the cost per couple year of protection was lower for social marketing than for community-based distribution in Colombia. Social marketing was found to produce a US$0.20-1.18 profit, while community-based distribution required a subsidy of $3.04-$5.12 (Vernon, Ojeda, & Townsend. 1988). In Honduras, the cost per couple year of protection was found to be US$6.13 for social marketing and US$16.8 for community-based distribution. (Janowitz, Suazo, Fried, Bratt, & Bailey. 1992). Lastly, in a cross-national study of multiple modes of service delivery in the 1990s, the cost per couple-year of protection for sterilization was $1.85, for social marketing $2.14, for clinics excluding sterilization $6.10, for community-based distribution $9.93, and for clinics plus community-based distribution $14 (Barberis & Harvey. 1997)

One study reported the cost per treatment for an onchocerciasis social marketing project was low at $0.29 per person. (Kipp, Burnham, Bamuhiiga, Weis, & Buttner. 1998)

Table 13: Profile of Cost Effectiveness Studies

Author, Year		Impact Level, Program Theory		Intervention						Population		Study Design[a]		Result
				Marketing Mix		Channel		Content						
Vernon, et al	1988	-Level -Program -Theory	Purpose FP/RH Yes	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual -Peer/Group -Community -Advocacy	No Yes Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	South Amer. No	-Design -Type -Random Sample -Sample Size -Unit	Quasi-exp Cost Yes No Model	Cost per Couple Year of Protection lower for CSM than CBD; CSM produces US$0.20-1.18 profit, CBD costs $3.04-$5.12)
Janowitz et al	1992	-Level -Program -Theory	Purpose FP/RH No	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual -Peer/Group -Community -Advocacy	No No Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	South Amer. No	-Design -Type -Random Sample -Sample Size -Unit	Quasi-exp Cost Yes No Ind	Cost per couple-year of protection is US$6.13 for CSM and US$16.8 for CBD.
Davies and Louis	1977	-Level -Program -Theory	Purpose FP/RH No	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual -Peer/Group -Community -Advocacy	No Yes Yes No	-Product -Service -Skills	Yes Yes No	-Setting -PSI Program	Asia Yes	-Design -Type -Random Sample -Sample Size -Unit	Post-test Cost No No Ind.	Cost per couple-year of protection is US$6.19
Kipp, et al	1998	-Level -Program -Theory	Goal Oncho-cerciasis No	-Promotion -Product -Service -Price	Yes Yes Yes No	-Individual -Peer/Group -Community -Advocacy	Yes No Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Africa No	-Design -Type -Random Sample -Sample Size -Unit	Quasi-exp Eval No Ind.	Cost of treatment was $0.29 per person.
Varley, et al	1998	-Level -Program -Theory	Goal MCH No	-Promotion -Product -Service -Price	Yes Yes Yes Yes	-Individual -Peer/Group -Community -Advocacy	Yes Yes Yes No	-Product -Service -Skills	N/A N/A N/A	-Setting -PSI Program	Multi. No	-Design -Type -Random	Non-exp Cost N/A	Cost per DALY of social marketing and other behavioural interventions less than

Author, Year		Impact Level, Program Theory		Intervention						Population		Study Design[a]		Result
				Marketing Mix		Channel		Content						
												Sample -Sample Size -Unit	N/A Model	US$ 150 per DALY averted.
Bedimo, et al.	2002	-Level -Program -Theory	Goal HIV Yes	-Promotion -Product -Service -Price	Yes Yes No No	-Individual -Peer/Group -Community -Advocacy	No No Yes No	-Product -Service -Skills	Yes No No	-Setting -PSI Program	NA No	-Design -Type -Random Sample -Sample Size -Unit	Non-exp Cost No No Ind	30% increase in condom use averted 170 HIV infections, and saved 1909 QALYs and $33 million in care costs. Sensitivity analysis found that a 2.7% increase in use would be cost effective
Barberis and Harvey	1997	-Level -Program -Theory	Purpose FP/RH No	-Promotion -Product -Service -Price	N/A N/A N/A N/A	-Individual -Peer/Group -Community -Advocacy	N/A N/A N/A N/A	-Product -Service -Skills	N/A N/A N/A	-Setting -PSI Program	Multi. Some	-Design -Type -Random Sample -Sample Size -Unit	Non-exp Cost No No Model	Cost per couple-year of protection for sterilization ($1.85), social marketing ($2.14), clinics excluding sterilization ($6.10), CBD ($9.93), clinics plus CBD ($14).

5.2 Halo and Substitution Effect

Table 15 presents evidence that social marketing produces a halo and substitution effect. In Honduras, 45 percent of those using social marketing oral contraceptive were new users. About 25 percent had switched from the public sector – a likely positive substitution effect in terms of increasing the overall efficiency of the health system -- and the remainder had done so from the commercial sector – a negative substitution effect. Users switched from the social marketing brand at about the same rate as those from the commercial brand, generally within two months from last purchase. (Bailey, Janowitz, Solis, Machuca, & Suazo. 1989)

In the Dominican Republic, 34 percent of those using the social marketing brand were new users. Ten percent had switched from a less effective method and 35 percent had switched from community-based distribution, both likely positive substitution effects. The halo effect from the social marketing campaign equaled 60 new commercial users for every 100 new social marketing users.(Green. 1988).
In Malawi, 82 percent of social marketing condom users were new, 7.6 percent previously used commercial brands, and 1.2 percent used the public sector. Forty-six percent of commercial users had previously used the social marketing brand and 22.6 percent were new users (Meekers. 1998)

Table 14: Profile of Halo/Substitution Effect Studies

Author, Year		Impact Level, Program Theory		Intervention						Population		Study Design[a]		Result
				Marketing Mix		Channel		Content						
Bailey	1989	-Level -Program -Theory	Purpose FP/RH Yes	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual - Peer/Group - Community -Advocacy	No No Yes No	-Product -Service -Skills	Yes Yes No	-Setting -PSI Program	South Amer No	-Design -Type -Random Sample -Sample Size -Unit	Post-test Mon Yes No Outlet	45% of those using social marketing oral contraceptive were new users. About 25% had switched from the public sector and the remainder had done so from the commercial sector. Users switched from the social marketing brand at about the same rate as those form the commercial brand, generally within 2 months from last purchase.
Green	1988	-Level -Program -Theory	Purpose FP/RH Yes	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual - Peer/Group - Community -Advocacy	No No Yes No	-Product -Service -Skills	Yes Yes No	-Setting -PSI Program	South Amer No	-Design -Type -Random Sample -Sample Size -Unit	Post-test Mon Yes No Outlet	34% of those using the social marketing brand were new users. 10% had switched from a less effective method. 35% switched from CBD. Halo effect equaled 60 new commercial users for every 100 new social marketing users.
Meekers	1998	-Level -Program -Theory	Purpose HIV/AID Yes	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual - Peer/Group - Community	No No Yes No	-Product -Service -Skills	Yes Yes No	-Setting -PSI Program	Africa Yes	-Design -Type -Random Sample	Post-test Mon Yes No	82% of social marketing condom users were new, 7.6% previously used commercial brands,

Author, Year	Impact Level, Program Theory	Intervention			Population	Study Design[a]	Result
		Marketing Mix	Channel	Content			
			-Advocacy			-Sample Size -Unit / Outlet	and 1.2% used the public sector. 46% of commercial users had previously used the social marketing brand and 22.6% were new users.

[a]Study Type is Baseline, Monitoring, or Evaluation. Unit is individual, household, group, outlet, or other.

6. EQUITY

Table 16 presents nine studies on equity and social marketing. For condoms, there was no significant difference in Zimbabwe in consistent condom use in non-marital relationships in terms of a socio-economic index based on amenities and possessions, after adjustment for other socio-economic status factors. However, those with secondary or more education were 1.54 times ($p<0.01$) more likely to use condoms consistently than those with less education. (Adetunji & Meekers. 2001). In Zambia, those at the fourth and highest level of assets were more likely ($p<0.01$) to use the female condom. Those at the third and fourth highest levels of assets were more likely to use the male condom (Agha. 2001). Lastly, an earlier study in Zambia found that higher education was not significantly related to condom use by women's partners. (Agha. 1998)

For contraceptives, a study in Pakistan found that higher income was related to ever use of condoms and the IUD and current use of condoms, injection and any modern method (vs traditional method). However, income was unrelated to ever use of the oral contraceptive, injection, and modern methods and current use of the oral contraceptive and the IUD (Agha. 2000). In Honduras, new users of the social marketing oral contraceptive were less educated, less likely to live in homes with electricity and had lower quality sanitation facilities than new users of other, including commercial, brands. (Bailey, Janowitz, Solis, Machuca, & Suazo. 1989) In Malawi, no significant differences between social marketing and community-based/clinic users were found in urban and rural areas of a non-governmental organization program by socio-economic status either when examined alone or in combination with educational status. (Janowitz, Suazo, Fried, Bratt, & Bailey. 1992).

For malaria, a study in Malawi found that rural residence, with or without bednets, was the strongest risk factor for malaria parasitaemia in children under five (relative risk (RR) 4.9 in a household without a net; RR 5.6 in a household with net). Living in an urban environment in a household without a net was significantly associated with parasitaemia, (RR 2.1) (Holtz, Marum, Mkandala, et al. 2002). In one area of Tanzania, households in the highest income quartile were more likely to own a net (Abdulla, Schellenberg, Nathan, et al. 2001)

Table 15: Profile of Equity Studies

Author, Year		Impact Level, Program Theory		Intervention						Population		Study Design[a]		Result
				Marketing Mix		Channel		Content						
Abdulla, et al.	2001	-Level -Program -Theory	Goal Malaria Yes	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual -Peer/Group -Community -Advocacy	Yes Yes Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Africa No	-Design -Type -Random Sample -Sample Size -Unit	Quasi -Exp Eval Yes No Ind.	Net use, by income quartile: Lowest, 67%, ref 2nd, 71%, OR1.25 (0.6 to 2.7) 3rd, 73% OR1.13 (0.7 to 1.7) 4th, 89% OR2.7 (1.6 to 4.8)
Adetunji and Meekers	2001	-Level -Program -Theory	Purpose HIV/AID Yes	-Promotion -Product -Service -Price	N/A N/A N/A N/A	-Individual -Peer/Group -Community -Advocacy	N/A N/A N/A N/A	-Product -Service -Skills	N/A N/A N/a	-Setting -PSI Program	Africa No	-Design -Type -Random Sample -Sample Size -Unit	Post-test Base Yes No Ind.	Consistent condom use in non-marital relationships. No significant differences in likelihood of use by amenities and possessions index, after adjustment for other socio-economic status factors. Those with secondary or more education 1.54 (p<0.01) more

Author, Year		Impact Level, Program Theory		Intervention						Population		Study Design[a]		Result
														likely to use condoms consistently than those with less education.
Agha	2000	-Level -Program -Theory	Purpose FP/RH Yes	-Promotion -Product -Service -Price	N/A N/A N/A N/A	-Individual -Peer/Group -Community -Advocacy	N/A N/A N/A N/A	-Product -Service -Skills	N/A N/A N/a	-Setting -PSI Program	Asia Yes	-Design -Type -Random Sample -Sample Size -Unit	Post-test Base Yes No Ind.	Higher income related to ever use of condom and IUD and current use of condom, injection and any modern method (vs traditional method). Income unrelated to ever use of pill, injection, and modern methods and current use of pill and IUD.
Agha	2001	-Level -Program -Theory	Purpose HIV/AID Yes	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual -Peer/Group -Community -Advocacy	No No Yes No	-Product -Service -Skills	Yes Yes No	-Setting -PSI Program	Africa Yes	-Design -Type -Random Sample -Sample Size -Unit	Post-test Mon Yes No Outlet .	Fourth and highest level of assets related ($p<0.01$) to use of female condom. Third and fourth highest levels of assets related to use of male condom.
Agha	1998	-Level -Program -Theory	Purpose HIV/AID Yes	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual -Peer/Group -Community -Advocacy	No No Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	Africa Yes	-Design -Type -Random	Post-test Mon Yes	Higher education not significantly related to use

Author, Year		Impact Level, Program Theory		Intervention						Population		Study Design[a]		Result
												Sample -Sample Size -Unit	No Indiv	by women's partners.
Bailey	1989	-Level -Program -Theory	Purpose FP/RH Yes	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual -Peer/Group -Community -Advocacy	No No Yes No	-Product -Service -Skills	Yes Yes No	-Setting -PSI Program	South Amer No	-Design -Type -Random Sample -Sample Size -Unit	Post-test Mon Yes No Outlet	New users of social marketing oral contraceptives were less educated, less likely to live in homes with electricity and had lower quality sanitation facilities than new users of other, including commercial, brands.
Holtz, et al	2002	-Level -Program -Theory	Goal Malaria No	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual -Peer/Group -Community -Advocacy	No No Yes No	-Product -Service -Skills	Yes Yes No	-Setting -PSI Program	Africa Yes	-Design -Type -Random Sample -Sample Size -Unit	Post-test Eval Yes Yes Ind.	Multivariate poisson regression showed that rural residence, with or without bednets, was the strongest risk factor for malaria parasitaemia in children under five (RR 4.9 w/out net; RR 5.6 in HH w/net). Living in an urban environment in

Author, Year		Impact Level, Program Theory		Intervention						Population		Study Design[a]		Result
														a household without a net remained significantly associated with parasitaemia, (RR 2.1).
Janowitz et al	1992	-Level -Program -Theory	Purpose FP/RH No	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual -Peer/Group -Community -Advocacy	No No Yes No	-Product -Service -Skills	Yes Yes Yes	-Setting -PSI Program	South Amer. No	-Design -Type -Random Sample -Sample Size -Unit	Quasi-exp Cost Yes No Ind	No significant differences between CSM and CBD/clinic users in urban and rural areas of IPPF-affiliate program by SES or SES/Education status.
Meekers	1997	-Level -Program -Theory	Purpose FP/RH Yes	-Promotion -Product -Service -Price	Yes Yes No Yes	-Individual -Peer/Group -Community -Advocacy	No No Yes Yes	-Product -Service -Skills	N/AN/A N/A	-Setting -PSI Program	Africa Yes	-Design -Type -Random Sample -Sample Size -Unit	Post-test Mon. Yes No Ind.	Users of social marketing brand more likely than public and commercial sector users to use a condom at last sex (OR14.6, ref=public sector) and ever use a condom (OR 6.6, ref = public sector).

[a]Study Type is Baseline, Monitoring, or Evaluation. Unit is individual, household, group, outlet, or other.

7. DISCUSSION AND CONCLUSIONS

The evidence base for social marketing is growing and, particularly with regard to product and service use and the determinants of use, substantial. Overall, social marketing as an intervention in the developing world may now rival health communications generally in terms of the size and strength of its evidence base. Evidence of the effectiveness of social marketing exists at different levels of impact for HIV/AIDS, maternal and child health, and family planning and reproductive health. Particularly for malaria, efforts have begun to link changes in behaviour resulting from social marketing interventions to changes in health status. There is ample evidence of a relationship between social marketing interventions and changes in behaviour, defined either as product or service use or non-product related behaviours. There is growing evidence of the process by which social marketing creates behaviour change through examinations of opportunity, ability and motivational constructs, and the dose-response relationship between exposure to interventions and these determinants. There is some evidence relating to equity and the halo and substitution effects.

In sum, it is clear that social marketing is effective. Yet, this review of the evidence base demonstrates gaps in the knowledge base about social marketing. In particular, studies do not provide strong guidance to practitioners and program planners for designing interventions, projects and programs. In terms of behaviour change, patterns are not yet detectable concerning the rates at which the practice of behaviours targeted for change by social marketing projects increase. Whether social marketing is most effective and efficient at low, medium, high or all levels of use or practice is not known, nor is whether different marketing mixes vary in effectiveness and efficiency as behaviour changes within a population. Little is known about the decay in healthy behaviour over time, and whether social marketing's effect on perceived benefits is relatively higher or lower than that of other interventions.

At intervention level, there is scant evidence relating to price as a potential barrier to continued use of products and services or the adoption of other risk-reducing behaviours given the interest in this question by program planners. While several studies provide evidence of a dose-response relating to exposure to communications and changes in opportunity, ability and motivation, there are too few data points and, generally, insufficient intervention and setting descriptions to begin to determine patterns of dose-response by targeted impact and population characteristics. Most importantly, current ways of measuring exposure favour promotion over the other "three Ps", and no study has monitored changes in the overall marketing mix on the determinants of behaviour or behaviour itself.

At project and program level, multi-round evaluations that combine information about behavioural changes, cost-effectiveness, the halo and substitution effects, and equity impacts have not been conducted. The theoretical role of social marketing relative to educational and regulatory interventions has not been examined empirically. The overall performance of social marketing in a given setting relative to other interventions has not been examined. None of these comments intends to suggest that other behaviour change interventions enjoy a larger evidence base in terms of their appropriate role and performance; most likely, the opposite is true. Overall, it might be said that the only advice appropriate to a program planner now is to include a social marketing intervention in the project mix in HIV/AIDS, maternal and child health, and family planning and reproductive health and maximize exposure given the levels of resources available for as long as possible.

Barriers to increasing the knowledge base of the performance of social marketing are likely low. The total number of social marketing programs around the world is large

and growing program budgets make increasing use of audience research more likely in future than today. As in health communications programs, the use of quasi-experimental designs will likely remain limited due to the national scope of interventions. As such, study designs using repeated cross-sectional surveys and reporting on standard indicators, such as impact, equity, the halo and substitution effects, and priority segments and barriers merit primary attention for social marketing monitoring and evaluation programs.

Yet, a mandate for cost-effectiveness in social marketing relative to all other possible interventions requires the need for a steady increase in the number of quasi-experimental studies conducted on social marketing. Establishing the effectiveness of social marketing, among diverse programs and in diverse settings, at all levels of impact, is needed to compare the value of social marketing to other possible program investments.

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Coding scheme

Research Phase/Study Type
1 Literature review
2 Formative
3 Baseline
3.1Household KAP survey
3.2 Target population survey
3.3 other
4 Monitoring (output)
4.1 Media Impact (Household KAP)
4.2 Consumer profile (CPS)
4.3 Distribution (DS)
4.4 other
5 Evaluation (outcome)
5.1 KAP follow up
5.2 Target population follow up
5.3 other
6 Cost analysis

Disease/Health Area
1 HIV/AIDS
2 Malaria
3 Family planning/reproductive health
4 Maternal and child health
5 other

Study design
1 Experimental design
1.1 randomised pretest and post test with one control group
1.2 randomised pretest and post test with multiple control groups
1.3 randomised post test only with one or more control groups
2 Quasi-experimental design
2.1 pretest and post test with a non-equivalent control group (comparison group)
2.2 pre-test and post test with multiple non-equivalent control groups (comparison groups)
2.3 multiple time series with a comparison group
2.4 post-test only with control group
2.5 multiple time series with a single group
2.6 pretest and post test with no comparison group
2.7 multiple cross sectional studies with a control population
2.8 multiple cross sectional studies without a control population
2.9 post-test only with no comparison group
3 Non-experimental designs

Population
1 Age (range)
2 Gender
2.1 Male only
2.2 Female only
2.3 Male and female
3 SES reported
4 AIDS risk groups
2.1 Yes

2.2 No

Setting
1. Africa
2. Asia
3. Eastern Europe/Central Asia
4. North America
5. South America

Sample representativeness
1. Sampling strategy
1.1 sampling before stratification
1.1.1 simple random/systematic sampling of clusters
1.1.2 random/systematic sampling of study unit
1.2 sampling after single stage stratification
1.2.1 simple random/systematic sampling of clusters
1.2.2 simple random/systematic sampling of study unit
1.3 sampling after multiple stage stratification
1.3.1 simple random/systematic sampling of clusters
1.3.2 simple random/systematic selection of study unit
1.4 convenience sampling

2. Study unit (analysis unit)
2.1 household
2.2 individual
2.3 group
2.4 outlet
2.5 other

Sample size calculation
1. Calculated for specific effect size and power?
1.1Yes
1.2 No

Outcome variables
1 Health outcomes
1.1 Health status
1.2 Perceived Health Status
1.3 Customer Satisfaction
1.4 cost-effectiveness

2 Behavioural outcomes
2.1 Risk reduction w/o product and/or service use
2.2 Product/Service use (action)
2.3 Sustained risk reduction/product use or service use (maintenance)
2.4 Halo and substitution effect
2.5 Equity

3 Intermediate outcomes
3.1 Ability
3.2 Opportunity
3.3 Motivation

Intervention characteristics
1 Type

1.1 Communication/promotion
1.2 Product distribution
1.3 Service delivery
1.4 Price

2 Theoretical basis
2.1 Explicit theory or model
2.2 Implicit theory
2.3 Not reported

3 Level
3.1 individual
3.2 group/peer
3.3 community
3.4 Advocacy/opinion leaders

4 Content
4.1 information
4.2 skills