

External Evaluation of the Southern African Regional Social and Behaviour Change Communication Programme

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EXECUTIVE SUMMARY

Background: In 2011, the Tulane University School of Public Health and Tropical Medicine was commissioned to conduct a post-project evaluation and cost-effectiveness analysis of the Southern African Regional Social and Behaviour Change Communication Program in eight countries of southern Africa. The Regional Programme combined the HIV/AIDS prevention and treatment mass media of the Soul City Institute for Health and Development Communication (IHDC) and its local affiliates with the community-based approaches of the Community Media Trust (CMT) and the Southern Africa HIV and AIDS Dissemination Information Services (SAfAIDS). The primary objectives of the evaluation were: (1) to measure program reach and outcomes in the general population and in high risk populations; (2) to assess the marginal effect of each of the partners' communication activities controlling for prior and concurrent HIV/AIDS communications efforts; (3) to assess the value added of the combined interventions of the three partners; and (4) to calculate the costs per person reached of the behaviour change communication interventions of each of the partners.

Methods: Data on HIV/AIDS related health behaviours, attitudes, risk reduction strategies, and exposure to behaviour change communication programs were collected using multi-stage cluster sample surveys of randomly selected adults aged 15-49 years in each of the countries. Across the surveyed countries, sample sizes ranged from 3,000 to 12,000 respondents. In each of the countries, multivariate regression analyses tested for the effects of exposure to each of the partner's interventions on HIV/AIDS-related outcomes, while controlling for multiple sources of HIV/AIDS communication and non-random exposure. In order to provide a systematic and comprehensive indication of which media worked best across the different HIV/AIDS outcomes, a typology was developed that counted the number of countries (out of seven) for which a statistically significant association was detected in multivariate analyses between the outcome and measures of exposure to different media. The typology differentiated between evidence that was considered to be "strong," "moderate," "limited," or "no evidence." Data on the financial and economic costs of the partners' interventions were also collected and combined with the household survey data to determine the cost per person reached of different media types.

Results:

OneLove: The effects of the Regional Programme interventions varied greatly depending on the nature of the media mechanism and the outcomes examined. Radio and print media for Soul City had consistently measurable effects across indicators of knowledge, attitude, norms and interpersonal communication but to a lesser extent on indicators of behaviour change. Across all countries, the vast majority of surveyed populations – regardless of program exposure - demonstrated good knowledge of HIV and AIDS, transmission and prevention mechanisms, and treatment literacy. Print media was shown to have "strong" evidence in support of effectiveness, with measurable effects detected in five of nine countries, while the evidence to support the effects on knowledge indicators from exposure to OneLove television was categorized as "small."

The majority of respondents across countries and exposures disagreed with statements reflecting negative sentiments about HIV/AIDS and persons living with HIV and AIDS. However, there was "strong" evidence of associations between exposure to OneLove radio programming and improved HIV attitudes. Exposure to

OneLove radio media was consistently associated with greater frequency of discussions and other communication about HIV and sexual relations. The evidence in support of OneLove television programming on most indicators of attitudes, knowledge, norms and behaviours was “small or limited.”

In all of the countries surveyed, multivariate regression analyses indicated positive effects of exposure to the programmatic activities of Soul City and its partners on many of the key behaviours (e.g., HIV testing, condom use, sexual partnerships). The effects were most evident for HIV testing and condom use behaviours. Radio and print media appeared to be the most effective in achieving behaviour change. There was little evidence to support the effects of OneLove media, regardless of type, on a key programmatic goal – reductions in multiple and concurrent partnerships. Across all countries, there appeared to be limited effects of exposure to program media on outcomes related to the exchange of gifts or money for sex, although attitudes towards such exchanges were less favourable among certain groups.

SAfAIDS: There is clear evidence that SAfAIDS programs have affected HIV norms and attitudes in the areas in which they have operated but have had much more limited impacts upon HIV-related risk behaviours. Overall exposure to SAfAIDS interventions varied from 8.0% of respondents in Mozambique to approximately 86% of respondents in Malawi. HIV risk perceptions tended to be greater among those exposed to SAfAIDS interventions. Further, there are clear indications that SAfAIDS has contributed to improving the skills and resources of communities to respond to the HIV epidemic. Respondents exposed to SAfAIDS interventions were more likely to report that people in the community are joining together to help people with HIV, that people in the community are discussing multiple partnerships and the risk of HIV, and that leaders are speaking out against the risk of HIV from having multiple partners. In nearly all countries, there was limited evidence that individuals who were exposed to SAfAIDS interventions were more or less likely to have experienced physical or sexual violence. The evidence surrounding reporting of violence to authorities, friends or family was also mixed, though increased reporting was apparent in a number of countries.

Community Media Trust: Exposure to CMT interventions varied by country, from 7.8% of respondents who reported exposure to any CMT interventions in Lesotho, where Beat It! was accessible principally through treatment literacy sessions, to 25.1% in Malawi. Exposure to CMT interventions had clear effects on indicators related to HIV knowledge and treatment literacy, as well as on the behavioural indicators related to testing and treatment. Respondents exposed to CMT activities perceived themselves to be at higher risk for HIV than unexposed respondents, a likely reflection of the fact that CMT treatment literacy programs are targeted towards HIV positive individuals. CMT programs also had notable effects on norms and attitudes surrounding HIV risk behaviours, particularly with respect to the acceptability of negotiating condom use among partners.

Cost Analysis: Analyses of the full economic costs of the Regional Program indicated that the interventions of all of the partners have high levels of reach and low costs per person, at least relative to many alternative HIV prevention interventions. For OneLove, radio and television programming yielded the lowest per person costs, ranging from £0.10-£0.98 for radio and £0.03-£1.85 for television. Print media was more costly, ranging from £0.49-£2.32 per person. The IPC interventions of SAfAIDS were generally less than £1 per person, except in Swaziland. Similarly, the CMT interventions involving TLPPS cost less than £0.20 per person, with the exception of Lesotho. These unit costs are considerably lower than many other HIV prevention interventions. As a result, it is plausible that the SBCC interventions of the partners could be highly cost-effective if they have even a fraction of the impact on HIV risk behaviours as other HIV prevention mechanisms.

BACKGROUND

Since the onset of the HIV/AIDS epidemic, mass media and interpersonal communication have been standard tools in the fight against HIV/AIDS in nearly all afflicted countries. Health communication efforts have sought to increase awareness, provide essential information, promote transmission prevention behaviours, alter negative attitudes and stereotypes, alleviate stigma, and create an atmosphere conducive to behaviour change^{1,2} Entertainment–education media have worked to provide role models for new behaviours, including consistent condom use, testing and partner reduction, as well as introducing new ideas or values.¹ In several countries, sustained and concentrated mass media efforts have been linked with measurable reductions in the rate of new HIV infections.³ To date, however, evaluations of behaviour change communication efforts through mass media and other forms of health communication have often found mixed or even conflicting evidence.⁴⁻⁶

In 2007, the Soul City Institute for Health and Development Communication (IHDC) formed a partnership with the Southern Africa HIV and AIDS Dissemination Information Services (SAfAIDS) and the Community Media Trust (CMT) to implement the Southern Africa Regional Behaviour Change Communication Programme in eight countries of Sub-Saharan Africa (Malawi, Zambia, Zimbabwe, South Africa, Mozambique, Lesotho, Namibia, and Swaziland). The Regional Programme, funded by the British Department for International Development (DfID), aimed to increase health awareness and facilitate social and behaviour change related to HIV and AIDS through the use of mass media, community and social mobilization, and face-to-face interactions surrounding priority themes and messaging. Programme activities were developed to strengthen community and organizational capacity in the areas of sexual and reproductive health, HIV prevention, gender-based violence, and HIV treatment literacy. A regional approach was developed to ensure consistent, coherent messaging within the context of high inter-regional mobility. Messages were targeted at multiple groups: community-based organizations (CBOs), nongovernmental organizations (NGOs), social institutions, the general population, and specific vulnerable populations, including mobile populations, communities near border posts and along transport corridors, people living with HIV, hard to reach communities, and young women.

The Soul City partner in each country (Table 1) sought to: build local capacity for effective health communication, adapt South African Soul City media and methodology for use in the local context, and expand a regional network across Southern Africa for sharing best practices. With the Soul City Institute of Health and

Development Communication, local partners employed a combination of media, including a localized radio drama series, call-in radio talk shows, print materials, the regional film series *Love Stories in the Time of HIV and AIDS* and *Untold Stories*, the Meet Joe campaign, and other activities.

Messages sought to disseminate information on topics related to maternal and child health, HIV, and gender violence. In particular, the

Country	Soul City Partner	Radio Programme	Campaign
Lesotho	Phela	<i>Musa Pelo</i>	<i>OneLove</i>
Malawi	Pakachere	<i>OneLove drama, Maziko</i>	<i>OneLove</i>
Mozambique	Nweti	<i>Vidas Mascaradas</i>	<i>Amores a mais é demais</i>
Namibia	Desert Soul	<i>Tjitjikutuara kepepe kotjii</i>	<i>OneLove, Break the Chain</i>
Swaziland	Lusweti	<i>Kuncono Munye</i>	<i>OneLove</i>
Zambia	Kwatu/ZCCP	<i>Club Risky Business</i>	<i>OneLove Kwasila!</i>
Zimbabwe	Action IEHDC	<i>Yellow Dust</i>	<i>OneLove</i>

OneLove campaign, the principal component of each country’s strategy, had three primary objectives: 1) to increase risk perception of multiple and concurrent partners; 2) to alter social norms that are accepting of multiple and concurrent partnerships; and 3) to encourage HIV-risk related behaviour change that can decrease the likelihood of HIV transmission.

The partners of the Regional Programme, SAfAIDS and CMT, employed more localized and targeted strategies for achieving behaviour change in high-risk populations. Interventions were also designed and implemented independently from each other and from the local Soul City affiliate. The SAfAIDS approach to behaviour change communication centred on the Cascade Model for targeted HIV, TB, and gender based violence prevention and information using community-based information, capacity building of national HIV trainers, and community-based volunteers to disseminate key messages and information. A strategy of “cultural dialogues” sought to engage community members and leaders to identify practices that contribute to gender-based violence and transmission of HIV and to strengthen their capacity to develop community driven strategies to eliminate these cultural practices. Pamphlets, toolkits, and training packs were used by volunteers as informational tools in face-to-face meetings with community members. The *Changing the River’s Flow* campaign was designed to scale up health service delivery by using the inter-linkages between HIV, gender violence, and culture to create programs that target women, girls, boys, and men affected by HIV (SAfAIDS 2012). Home-based care reinforced these inter-linkages.

In the three countries in which it operated, the Community Media Trust (CMT) partnered with local organizations to implement the weekly Beat It! television program and/or community-based treatment literacy sessions involving the presentation of the Beat It! DVD series via mobile audio-visual kits and accompanying manuals (Table 2). The Beat It! program was intended to provide people living with HIV and AIDS, their partners, family, friends, and health workers with science-based, reliable information about HIV/AIDS using a call/text-in format, with weekly guests and special community interviews. Outreach programs involving Treatment Literacy

Prevention Practitioners (TLPPs) promoted and supported community preparedness for antiretroviral

Country	Geographic Regions	Partner	Media
Lesotho	National	Adventist Relief Agency (ADRA)	Beat it! HIV Prevention and Treatment Literacy series with manual and DVDs
Malawi	Thyolo	Medicins San Frontieres, NAPHAM	Tigonjetse! Beat It!
Mozambique	Maputo Gaza	MATRAM (Movimento Para Acesso Ao Tratamento Em Moçambique)	Desafio! Beat It! Ao Vivo

treatment. Treatment literacy sessions were conducted with numerous groups, including prisoners, schools, mobile clinics, youth groups, female support groups, local chiefs, and the police force (Soul Beat Africa 2010).

EVALUATION DESIGN AND OBJECTIVES

The evaluation of the Southern Africa Regional Behaviour Change Communication Programme, undertaken by the Tulane University School of Public Health and Tropical Medicine, in connection with local data collection firms, sought to measure the effectiveness of the Southern Africa Regional Behaviour Change Communication Program in affecting change in key indicators of HIV knowledge, attitudes, and individual HIV risk behaviours. Specific objectives of the evaluation included the following:

- **To measure program reach and outcomes in the general population and in high risk populations;**
- **To assess the value-added of the combined interventions of the three partners;**



- **To assess the marginal effect of the current round of communication activities relative to the cumulative impacts of HIV messaging over the duration of the HIV/AIDS epidemic;**
- **To investigate the extent to which relevant aspects of the intervention built the skills and resources of communities to respond to the HIV epidemic.**
- **To measure progress toward “increased health awareness and related social and behavioral change,” as per the DfID logframe.**

The evaluation of the Regional Programme utilized a post-only, cross-sectional design with data on outcomes and behaviours collected from randomly-selected, potential programme beneficiaries. Baseline data collected prior to the current programmatic cycle were deemed insufficiently comparable to be utilized in this evaluation. Data collection in the countries of Zimbabwe and South Africa was undertaken by separate teams of evaluators following similar methodologies as employed here. Full results for each of the country evaluations have been reported elsewhere.⁷⁻¹²

DATA AND METHODS

Sample: In each country, information was collected from a nationally representative, randomly selected sample of adults between the ages of 15 and 49 years. A stratified, random sample of enumeration areas (EAs) was drawn with the assistance of each country’s national statistical office, using the most recently collected or updated census sample frame. Border post areas and transportation corridors were identified as containing high risk populations and were targeted by program interventions. Over-sampling of these areas was done to ensure sufficient samples of these populations. As a result, each country was stratified into urban, rural and border post areas, and, where possible, further stratified into programme and non-programme areas. Information on areas served by SAfAIDS and CMT was provided by the Programmes themselves and then cross-referenced with existing EA information from each country’s national census sample frames. SAfAIDS and CMT programme areas were sampled in roughly 2:1 proportion to non-programme areas. Households were randomly selected for interviewing within selected EAs, and subsequent respondents within households were randomly selected using Kish grids. The intent was to interview one adult (aged 15-49) male and female in each selected household.

Questionnaire: A structured, interviewer-administered questionnaire was employed to document respondent’s personal experiences with HIV/AIDS, sexual behaviours, HIV testing and treatment, and gender-based violence. Interviews lasted approximately 30-45 minutes. Ethical approval for the study was obtained from each country’s appropriate Research and Ethics Board and by the Institutional Review Board of the Tulane Human Research Protection Program.

Country	N
Lesotho	4,026
Malawi	5,149
Mozambique	5,056
Namibia	4,326
Swaziland	3,972
Zambia	3,026
Zimbabwe	16,771

Statistical Methods: To assess the effects of the programme, outcomes for individuals who self-reported exposure to program interventions, as determined by their responses in the interview, were compared with outcomes from individuals who did not report such exposure. For the evaluation of Soul City interventions, several measures of exposure to media were created, differentiating by type of exposure (e.g., radio, print or television) but also including a multimedia exposure variable that tested whether exposure through multiple media had synergistic effects. For CMT and SAfAIDS, however, binary measures of exposure (e.g., yes or no) were created.

A fundamental issue for the evaluation was ascertaining whether differences in outcomes between exposed and unexposed individuals could be attributed to program activities, or whether they instead reflected differential characteristics or history. Multivariate statistical methods were used to test for significant differences in key programmatic outcomes between individuals who self-reported exposure to program interventions relative to those individuals who did not report such exposure, controlling for observable characteristics of those respondents. Two different estimation methods were used to calculate the magnitude of program effects: (1) multivariate regression analyses, and (2) propensity score matching (PSM). Only the multivariate regression results are presented here, largely because they better incorporate the population sampling weights but also because the effects were similar regardless of analytic method. The multivariate models were used to estimate effect sizes – the adjusted differences in mean outcomes for exposed relative to unexposed respondents, controlling for their measurable characteristics. Only results that were statistically significant at the 5% level or better were reported. All regression models contained the following controls : 1) socio-demographic variables (including age, ethnicity, religion, marital status, etc.); 2) variables that capture access to media (primary language, English fluency, literacy, ownership of radio, radio and television listenership and viewership); 3) variables capturing relevant life experience (national/international travel and whether the respondent knew someone who was HIV positive). Probit models were estimated for all binary outcomes, while linear regression models were estimated for continuous outcomes. Models that controlled for selection bias attributable to self-reported exposure found little evidence that such self-reports confounded estimates of program effects.

For all of the quantitative analyses, the Stata 12.0 statistical software package was used. To address the multistage sample design described previously, Stata’s *svy* commands were utilized, since these account for the differential probabilities of selection of EAs, households within EAs and respondents within households. The *svy* commands also address the sample stratification and the intracluster correlation associated with the multistage sample design and greater homogeneity of households within EAs relative to simple random sampling.¹³

FINDINGS: ONELOVE/SOUL CITY

Exposure to OneLove campaign components varied considerably across the seven countries in the study.

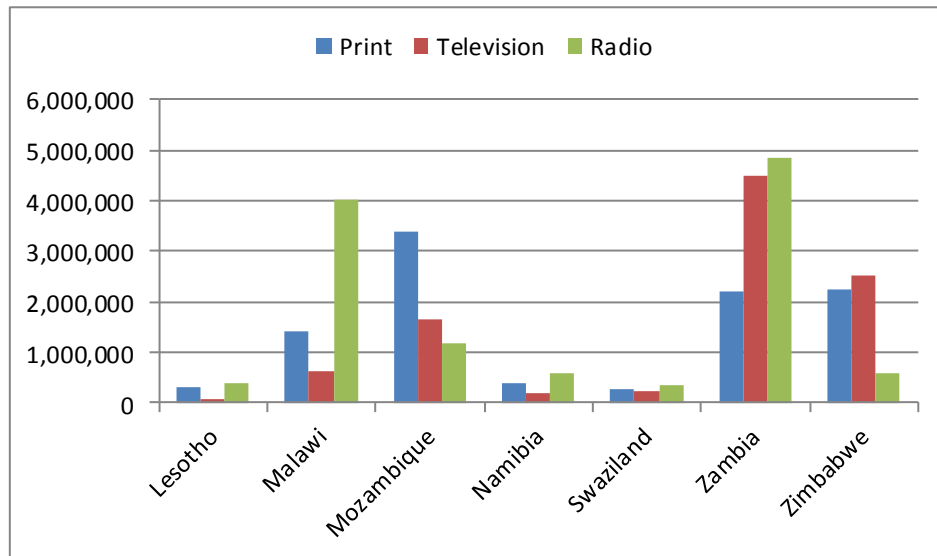
Exposure to any OneLove radio – either the radio drama, advertisements or call-in shows – was highest in Zambia (74.2%) and lowest in Mozambique (9.9%). Print media – pamphlets, brochures and other materials – had a much narrower range of coverage, from one-quarter to one-half of respondents. Similarly, coverage with any OneLove television ranged from 10.1% in Lesotho to 59.4% in Zambia. The inter-regional series *Love Stories in a Time of HIV and AIDS* and *Untold Stories* ranged from 4.2% to 38.7% and 1.4% to 31.7% respectively. Across all of the countries, an estimated 17.2 million people were calculated to have seen, heard or read any OneLove materials, or otherwise know of the OneLove logo.

Table 5: Exposure to OneLove materials

	Lesotho	Malawi	Mozambique	Namibia	Swaziland	Zambia	Zimbabwe
Radio	58.9%	73.4%	9.9%	24.9%	67.4	74.2	10.1
Print	49.6%	26.1%	28.4%	39.9%	50.1	29.6	39.3
Any Television	10.1%	11.5%	14.0%	21.3%	40.8	59.4	31.0
Love Stories in a Time of HIV and AIDS	11.8%	4.8%	4.2%	11.1%	26.2	15.8	38.7
Untold Stories	10.3%	1.4%	3.7%	9.4%	25.4	10.4	31.7
Total Reached (approx.)	466,623	4,026,211	3,760,960	478,691	466,101	4,236,419	~3,800,000



Figure 1: Number of persons reached by media, all countries



The Soul City Theory of Change that guided the OneLove campaign was tied to multiple, intertwining theories of behaviour change, including Bandura’s Theory of Social Learning, Lewin’s Theory of Change which links learning to action and reflection, and Paulo Freire’s Critical Consciousness. These theories highlight the role in behaviour change of social norms, of the larger socio-cultural environment in which individuals act, and of a cognitive component which shapes beliefs, consciousness, knowledge and awareness. ¹⁴

Following this theoretical approach, the synthesis created a typology to assess the preponderance of evidence in achieving behaviour change across the different media types, behaviours and precursors to behaviour change. The typology was based on the number of countries in which a statistically significant association in the multivariate analysis was detected between a specific indicator (e.g., condom use at last sex) and a specific media type (e.g., exposure to a OneLove radio drama). The number of countries in which effects were detected was chosen as the measure of the strength of evidence because of the regional focus of the programme. Significant effects by media type across countries were taken as indicative of common elements in strategies and programming, with potential implications for future programming and decision-making. “Strong evidence” was considered to be a statistically significant effect registered in five or more (of seven) countries, “moderate evidence” was an effect registered in four countries, “small evidence” was an effect registered in one to three countries (for several indicators), while “limited or no evidence” was an effect registered in only one or no countries (for only one indicator or no indicators). Figures 2 and 3 present this typology of evidence, showing the effect sizes from exposure to different OneLove media on key precursors of behaviour change (Figure 2) and on key behavioural outcomes (Figure 3) in percentage points (pp). As noted above, effect sizes represent the adjusted differences in mean outcomes for exposed relative to unexposed respondents, controlling for their measurable characteristics. The number of significant associations – rather than the size of effects – was used for the typology because of the potential for effect sizes to depend upon overall levels of outcomes; for outcomes, such as knowledge, for which a high percentage (>90%) of respondents already had high levels, incremental improvements may be harder to achieve than for other indicators, such as those related to norms and attitudes, for which the marginal returns from increased exposure may be higher. Specific indicators presented in these bubble diagrams include the following:

- Knowledge: Agreement with statements that: (1) People on ART need to take treatment for the rest of their lives, (2) the risk of contracting HIV decreases for a circumcised man, and (3) having more than one partner increases one's risk of contracting HIV.
- Attitudes: Agreement with the statement that one's sex life can improve with communication with a partner and disagreement with the statement that HIV/AIDS is punishment for sinning and that life is over if you learn you are HIV positive.
- Interpersonal Communication: Have you discussed HIV/AIDS with your spouse?
- Social Norms: Leaders speak out about the risk of HIV from having multiple sexual partners.
- Behaviours: multiple sexual partners in the last month and last twelve months; condom use at last sex with a casual partner or with any partner; HIV test in the last twelve months; and willingness to care for someone on ART.

For the knowledge and attitude indicators, a single effect size was presented if a statistically significant association was detected for only one of the indicators, while ranges were presented if more than one statistically significant association was detected.

Overall, the evidence to support the hypothesis that OneLove activities influenced the precursors to behaviour change – norms, attitudes, knowledge and interpersonal communication – was stronger than that supporting the effects of program exposure on HIV risk behaviours themselves, though the evidence for achieving change in the latter was clearly noted as well. Radio and print media showed the strongest evidence for achieving change while television tended to show the weakest evidence.

Community norms and leadership: As one of the key objectives of the Regional Programme was to build the skills and resources of communities to respond to the HIV epidemic, an important element of the evaluation was determining the impacts of OneLove activities on community norms and leadership. **In this respect, there was ample evidence that the OneLove campaign has helped to shift norms, at least through radio.** In Swaziland, for example, individuals exposed to multiple forms of media (e.g., 1 radio program, two or more booklets, two or more media channels) were more likely to agree that people in their community join together to help people with HIV (Appendix Table 1). Further, respondents exposed to OneLove radio were 9.2 percentage points more likely to agree that leaders speak out about the risk of HIV from having multiple sexual partners (Figure 2). No such effects were observed for OneLove television. Similarly, in Lesotho and Namibia the effect sizes from exposure to OneLove radio for this indicator were 6.5 and 11.1 percentage points respectively. In contrast, the evidence of effects from exposure to print and television media on HIV/AIDS attitudes was categorized as “small.” In Namibia, 48.1% respondents exposed to OneLove television reported that leaders spoke out about the risks of HIV from having multiple partners versus 33.3% of unexposed respondents (effect size = 14.8 pp) but no such effects were found in the remaining countries. A 7.2 percentage point effect on the same indicator was noted in Swaziland from exposure to OneLove print. Similar effects of print media were noted for other indicators of change in community norms. In Mozambique, individuals exposed to any OneLove print messages were 8 percentage points more likely to agree that people in their community speak openly about the risk of HIV from multiple partnerships (31.3% versus 22.9%). Similarly, respondents exposed to any OneLove print media and a single OneLove media channel were more likely to agree that *community leaders encourage HIV testing*.

HIV Knowledge: Across all countries, the vast majority of surveyed populations – regardless of program exposure - demonstrated good knowledge of HIV and AIDS, transmission and prevention mechanisms, and

treatment literacy. **In many cases, however, exposure to OneLove programming – particularly print and radio media - contributed to further improving HIV knowledge indicators.** For nearly all media channels, those exposed to OneLove were more likely to know that STIs increase the risk of HIV infection, to know that the risk of HIV infection decreases for circumcised men, and to know of a place to get HIV information. Across several indicators of knowledge, respondents in Lesotho who had heard OneLove radio programming were 3.2 to 3.7 percentage points more likely to agree that people on ART need to take treatment for the rest of their lives, that the risk of contracting HIV decreases for a circumcised man, and that having more than one partner increases one’s risk of contracting HIV (Figure 2). Slightly larger effects were evident in Malawi (2.0-8.1 percentage points), Mozambique (5.5 percentage points), and Namibia (5.0 percentage points), thereby rendering the evidence in support of OneLove radio on knowledge indicators as “moderate.” Print media was shown to have strong evidence in support of effectiveness, with measurable effects detected in five of nine countries, while the evidence to support the effects on knowledge indicators from exposure to OneLove television was categorized as “small.”

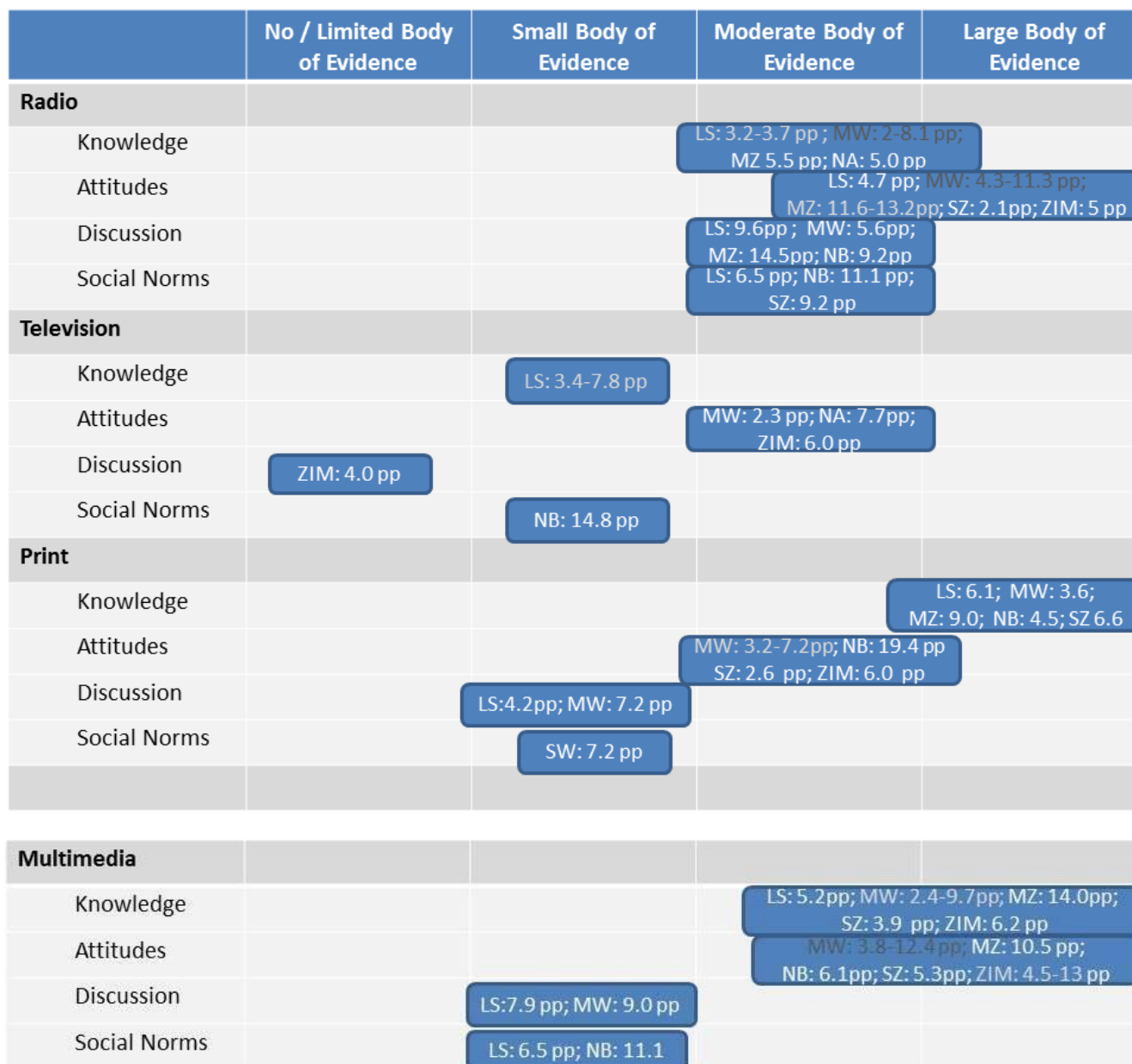
HIV Attitudes: The majority of respondents across countries and exposures disagreed with statements reflecting negative sentiments about HIV/AIDS and persons living with HIV and AIDS. However, there was strong evidence of associations between exposure to OneLove radio programming and improved HIV attitudes. For example, in Malawi, respondents exposed to medium levels of Pakachere radio were 11.3 and 8.0 percentage points respectively more likely to disagree with the statements that HIV/AIDS is punishment for sinning and that life is over if one is HIV positive. These effects were mirrored in Lesotho, Mozambique, Swaziland and Zimbabwe. The evidence in support of print media was also strong, with effects noted in five of the seven countries. The strength of these results for print and radio led to similarly “strong” evidence of the effects of multimedia – a combination of all OneLove media – on HIV/AIDS attitudes. For example, in Zimbabwe 60% of respondents exposed to three forms of media disagreed that HIV/AIDS is punishment for sinning relative to only 47% of respondents not exposed to any OneLove media. Across all countries, there was only “moderate” evidence that exposure to OneLove television altered attitudes related to HIV/AIDS. In Namibia, respondents exposed to OneLove television were 7.7 percentage points (86.7% versus 79.0%) more likely to disagree that one’s life is over with a positive HIV test.

HIV Interpersonal Communication: Exposure to OneLove radio media was consistently associated with greater frequency of discussions and other communication about HIV and sexual relations. In Malawi, for example, exposure to Pakachere radio programs and exposure to print materials were found to be significantly associated with the discussion of HIV/AIDS within sexual partnerships or with friends/community members; treatment effects ranged between six and nine percentage points. In Zambia, exposure to *Kwatu* media had strong effects on HIV communication for women aged 15 to 24 years. Women exposed to any *Kwatu* TV programs were more than twice as likely to have discussed HIV/AIDS with their children (57.3% versus 25.2%). Those exposed to any booklets were 19 percentage points more likely to have discussed HIV/AIDS with a spouse, children, and/or friends (87.3% versus 78.3%).

A common theme across countries was the belief that sexual communication between partners improves one’s sex life. In Malawi, for example, exposure to the radio programs or to television programs was positively associated with this belief (effect sizes of 3.3 and 4.3 percentage points, respectively). This belief was also evident in Swaziland, where individuals exposed to print media (men, 94.3% versus 90.4%) and multimedia (total 94.5% versus 89.6%; men, 93.5% versus 89.0%) were more likely to say that one’s sex life improves with

communication. There, too, exposure to OneLove radio had a positive effect on the likelihood of discussing sexual dissatisfaction with a partner among the total population (81.7% versus 72.0%) and among women (72.7% versus 60.0%).

Figure 2: Evidence of Impacts for Knowledge, Attitudes, Interpersonal Communication and Social Norms, all countries†



†Values represent the treatment of effect – estimated via multivariate regression models - in percentage point units for those exposed to Soul City media relative to those unexposed. Ranges of values reflect the ranges of treatment effects across several indicators.

HIV treatment: In Swaziland, willingness to care for a person on ART was significantly associated with exposure to both levels of radio (2+ radio programs 91.9%, 1 radio program 92.9%, no exposure 86.3%) and multimedia (2+ channels 90.8%, 1 channel 92.3%, no exposure 85.1%) (Appendix Table 1). This pattern was also evident in

Zambia, where men exposed to Kwatu television were 5.2 percentage points more willing to care for someone on ART (96.3% versus 91.1%). Respondents exposed to *Kwatu* print materials were 4.8 percentage points (95.5% versus 90.7%) more likely to be willing to care for someone on ART.

HIV risk behaviours: In all countries in which the study was undertaken, multivariate regression analyses indicated positive effects of exposure to the programmatic activities of Soul City and its partners on many of the key behaviours (e.g., HIV testing, condom use, sexual partnerships) (Appendix Table 1). **The strongest effects were evident for HIV testing and condom use behaviours, with much less of an impact evident for outcomes related to multiple and concurrent partnerships. Radio and print media appeared to be the most effective in achieving behaviour change (Figure 3).** In Lesotho, for example, where the radio drama was heard by almost 60% of adults, higher levels of exposure to the drama yielded greater effects on *condom use at last sex with any partner*. Respondents with high levels of exposure were 11.3 percentage points more likely to use condoms at last sex (59.5% versus 48.2%) than those with no exposure to the radio programs. Similarly, in Namibia, 60% of those who had heard *Tjitjikutuara kepembe kotjii* radio programme used a condom at last sex as compared with less than half of respondents who had not heard the programme. Television had a lesser impact; only in Mozambique was exposure to OneLove television programming associated with increased condom use at last sex (20.6% for exposed respondents versus 16.7% for unexposed respondents).

Figure 3: Evidence of Impacts for HIV risk and prevention behaviors, all countries†

	No / Limited Body of Evidence	Small Body of Evidence	Moderate Body of Evidence	Large Body of Evidence
Radio				
MP		SZ: 4.8 pp (Females) ZA: 2.3 pp		
Condom Use			LS: 9.3 pp ; NB: 12.0 pp; SZ: 6.9 pp; ZA: 5.8 pp (MP)	
HIV Testing		LS: 6.2 pp SZ: 12.8 pp		
Television				
MP	ZIM: 3.0 pp (Untold Stories)			
Condom Use	MZ: 3.9 pp			
HIV Testing	SZ: 8.4 pp			
Print				
MP	NB: 5.1 pp			
Condom Use			MW: 5.6 pp ; MZ: 5.4 pp; NB: 6.6 pp; SZ: 8.4 pp	
HIV Testing			LS: 9.4 pp ; MW: 5.4 pp; NB: 2.4 pp; SW: 10.0 pp	
Multimedia				
MP	ZIM: 6.0 pp			
Condom Use		LS: 8.0 pp ; MW: 4.5 pp; MZ: 7.3 pp;		
HIV Testing		LS: 12.7 pp ; SZ: 19.2 pp; NB: 2.4 pp; (Males)		

†Values represent the treatment of effect – estimated via multivariate regression models - in percentage point units for those exposed to Soul City media relative to those unexposed. Ranges of values reflect the ranges of treatment effects across several indicators. The abbreviation “pp” denotes the treatment of effect in percentage point units for those exposed to Soul City media relative to those unexposed.

A similar pattern was also evident for the indicator *HIV testing in the past 12 months*. In Swaziland, respondents with high exposure to *Kuncono Munye* radio were 12.8 percentage points more likely to have received an HIV test in the past year than unexposed respondents, while those with low exposure were 5.9 percentage points more likely. Both print media and television were almost as effective, increasing testing rates by 10 percentage points and 8.4 percentage points, respectively. However, for the indicator *multiple partnerships in the past month*, there were no statistically significant associations with exposure to any OneLove media in any of the countries, except in the opposite direction to that hypothesized. In Zambia, however, exposure to any booklets was associated with later initiation of sex by almost a full year (17.0 years versus 16.2 years) among women aged 15-24 years. **Across all countries, however, there was a very limited impact on outcomes related to HIV treatment.**

Transactional Sex: The evaluation also examined aspects of monetary and non-monetary influences on multiple and concurrent partnerships and the role that OneLove has played in tempering norms surrounding the acceptability of intergenerational sex and exchanges of sex for gifts. **Across all countries, there appeared to be limited effects of exposure to program media on outcomes related to the exchange of gifts or money for sex, although attitudes towards such exchanges are less favourable among certain groups.** For example, among women in Swaziland, exposure to one booklet (49.8% versus 33.8%) and one media channel (41.4% versus 28.8%) was associated with higher reports of receiving gifts in exchange for sex with their last partner. Similarly in Zambia, over half of women exposed to one radio show had received gifts in exchange for sex relative to only one third of those not exposed. On the other hand, in Zambia, gift giving in exchange for sex among men was less frequent among those exposed to *Kwatu* messages than for those unexposed. Further, in Swaziland men exposed to OneLove media were more likely to disagree with the statement that *men have the right to get sex for gifts*: television (80.4% versus 68.7%), two or more booklets (77.0% versus 69.5%), or any multimedia channels (2+ channels 77.9%, 1 channel 74.0%, versus 60.0% unexposed).. In Namibia, women aged 15-24 years who had been exposed to Desert Soul radio were 18.2 percentage points (38.7% versus 20.5%) less likely to have received gifts in exchange for sex relative to unexposed women.

Vulnerable Populations: The patterns of effectiveness observed in the full samples in each country were largely mirrored in one of the key vulnerable population groups targeted by the programs – young women aged 15-24 years. Among this group, there was evidence that exposure to OneLove media, particularly radio and print, was associated with increased condom use and HIV testing and modestly associated with fewer sexual partnerships. For example, in Lesotho, young women exposed to OneLove print media were 14 percentage points more likely to have been tested for HIV in the past year. In Namibia, women exposed to OneLove radio had fewer lifetime partners, were less likely to have concurrent partners, and were more likely to use condoms and to have been tested for HIV in the past year. Amongst border populations, there was little evidence of strong and consistent effects of exposure to OneLove media on key outcomes, although it should be noted that the sample sizes of exposed individuals in border populations were often quite small in spite of oversampling these areas.

FINDINGS: SAFAIDS

Exposure: Overall exposure to SAfAIDS interventions varied from 8.0% of respondents in Mozambique to approximately 86% of respondents in Malawi. In Malawi, however, only a small percentage of respondents reported ever having heard of SAfAIDS (6.6%), though the vast majority of respondents reported knowing at least one of the slogans associated with its activities.

Table 6: Exposure to SAfAIDS materials

	Lesotho	Malawi	Mozambique	Namibia	Swaziland	Zambia	Zimbabwe
Exposure to any SAfAIDS materials, messages, slogans	20.5%	86.0%	8.0%	22.3%	11.9%	40.1%	33.8%
Knows SAfAIDS logo	3.0%	6.6%	1.8%	3.1%	5.6%	6.7%	16.4%
Heard of Changing the River's Flow?	0.5%	-†	0.7%	-†	0.6%	2.9%	-†
Participated in a community dialogue, meeting	1.5%	-	3.0%	0.2%	0.6%	1.2%	-

†The question about having heard of Changing the River's Flow was not asked in Malawi, Namibia or Zimbabwe.

Multivariate Results: There is clear evidence that SAfAIDS programs have affected HIV norms and attitudes in the areas in which they have operated but have had much more limited impacts upon HIV-related risk behaviours, including multiple and concurrent partnerships, condom use, and HIV testing. For example, in Lesotho exposed individuals were five percentage points and six percentage points respectively more likely to agree that *condom use in marriage is acceptable* and that *women can ask a regular partner to use a condom* but no more or less likely to report using condoms at last sex with any partner.

Nonetheless, there are notable impacts of exposure to SAfAIDS interventions on some HIV-related behaviours. For example, in Swaziland, exposed respondents reported a higher number of lifetime HIV tests on average, particularly among exposed women (3.7 tests versus 2.7 tests). In Zambia, those exposed to SAfAIDS were more likely to have been tested for HIV in the past 12 months (51.7% versus 44.3%) and were more likely to believe that it is important to know one's HIV status. Further, in Zambia, men and women exposed to SAfAIDS programs reported older ages at first sex, and women exposed to SAfAIDS were less likely to report multiple partnerships in the past 12 months than unexposed women.

HIV risk: Variables associated with risk perception were higher among those exposed to SAfAIDS interventions. In Namibia, men were more likely to report being worried about HIV infection (76% versus 57%), while women were more likely to report that they are likely to be HIV positive (47% versus 30%). This pattern was also evident in Zambia, largely due to the greater perceived likelihood of infection among women.

Community Effects: There are clear indications that SAfAIDS has contributed to improving the skills and resources of communities to respond to the HIV epidemic. For example, in Lesotho respondents who had been exposed to any SAfAIDS materials were more likely to report that people in the community are joining together to help people with HIV relative to unexposed respondents, (56.1% versus 48.5%), a finding shared as well in Namibia, where exposed respondents were also more likely to report that people in the community are discussing multiple partnerships and the risk of HIV. In Namibia, people exposed to SAfAIDS were also more likely to agree that leaders in their communities speak out against the risk of HIV from having multiple partners (76.8% versus 68.6%) and that leaders discourage people from having multiple partners (54.5% versus 42.3%), although these results appear to be limited to males.

Gender-Based Violence: In nearly all countries, there was limited evidence that individuals who were exposed to SAfAIDS interventions were more or less likely to have experienced physical or sexual violence. **The evidence surrounding reporting of violence to authorities, friends or family was also mixed, though increased reporting was apparent in a number of countries.** For example, in Swaziland, the likelihood of reporting such violence (to family, friends or authorities) was more than 20 percentage points higher – 85.3% versus 64.1% - among those exposed to SAfAIDS materials. Community norms surround GBV also seemed to have changed as a result of SAfAIDS, though there is evidence of differential impacts across genders. In Swaziland, 79.5% of men agree that *community leaders speak out against gender-based violence* as compared with 69.8% of unexposed, but this difference was not apparent among women. In Lesotho, this effect was only evident with young women aged 15-24 years, among whom nearly three-quarters of respondents exposed to SAfAIDS materials agreed that community leaders speak out against GBV relative to roughly half of unexposed young women.

FINDINGS: COMMUNITY MEDIA TRUST

Exposure: Exposure to CMT interventions varied by country, from 7.8% of respondents who reported exposure to any CMT interventions in Lesotho, where Beat It! was accessible principally through treatment literacy sessions, to 25.1% in Malawi. Exposure to CMT media was lower in Lesotho where only 2.1% of respondents had been exposed to the Beat It! audio-visual kits.

Multivariate results: In the areas of testing and treatment, CMT programs appear to have had some notable effects. In Lesotho, for example, males

	Lesotho	Malawi	Mozambique
Any CMT Exposure	7.8%	25.1%	15.6%
Ever Heard of Community Media Trust	2.5%	9.7%	1.6%
Heard Beat It!	Rea-e-hlola 2.1%	Tigonjetse 49.0%	Desafio 14.4%

exposed to CMT activities were more likely to have been tested in the past year – 53.7% versus 40.4%. Further, exposed males had approximately 1.3 more tests in their lifetime on average than unexposed males. In Malawi, 65.7% of respondents exposed to both the radio program and community activities had an HIV test in the past year as compared with 59.1% of those unexposed. In Mozambique, there were no statistically significant associations between exposure to CMT materials and testing behaviours. Nonetheless, respondents exposed to any CMT activity or any *Desafio* episode were more likely to report discussing their most recent HIV test results with someone.

HIV Risk: Respondents exposed to CMT activities perceived themselves to be at higher risk for HIV than unexposed respondents, a likely reflection of the fact that CMT treatment literacy programs are targeted towards HIV positive individuals. In Lesotho, approximately 55% of exposed respondents - relative to 45% of unexposed respondents - were worried about becoming infected with HIV, while approximately 30% of exposed respondents (versus 19% of unexposed respondents) believed that they are currently infected. This was true as well for women aged 15-24 years; 23.5% of exposed women aged 15-24 believe that they were likely to be currently infected as compared with 11.1% of unexposed women.

CMT had clear effects on indicators related to HIV knowledge and treatment literacy. In Mozambique, for example, exposure to any CMT material was significantly associated with knowing that the risk of contracting HIV is reduced for a circumcised man. In Malawi, respondents exposed to *Tigonjetse* were more likely to know that *TB can still be cured if a person is HIV positive* (63.3% versus 48.5% among unexposed) and that *people on ART need to take treatment for rest of their lives* (85.8% versus 76.4% among unexposed). They were also more

likely to disagree with the statement *when you learn that you have HIV, your life is over* (89.8% versus 80.4%), an indication that exposure to CMT interventions was associated with greater self-efficacy.

CMT programs also had notable effects on norms and attitudes surrounding HIV risk behaviours. For example, among women aged 15-24 years, the acceptability of condom use with a regular partner in Lesotho was considerably higher for exposed women relative to unexposed women (76.9% versus 56.7%). Women in Mozambique exposed to at least one *Desafio* episode of the program were more likely to agree that women can ask a regular partner to use a condom (37.8% versus 28.4% among unexposed). Exposure to at least one *Desafio* episode was also significantly associated with respondents disagreeing that they need someone to fill the gap.

FINDINGS: EFFECTIVENESS OF THE COMBINED APPROACH OF THE PARTNERS

A key programmatic goal was a combined multi-partner approach in which the national and regional messaging of Soul City and its affiliates was supported at community-level by the outreach and other programmatic activities of SAfAIDS and CMT. In statistical models using interaction terms between different combinations of partner exposures (e.g., OneLove only, OneLove plus SAfAIDS, OneLove plus CMT), **there was little evidence to support the effectiveness of the combined approach.** But such analyses faced tremendous challenges because the sample sizes for comparison groups (e.g., those exposed to SAfAIDS but not OneLove) precluded a thorough review of all possibilities. **Nonetheless, evidence of interregional mobility and cross-border exposure provide some reason to believe that a multi-country approach may be beneficial. For example, in Namibia, 11.8% of respondents reported that they had seen the OneLove Logo in a country other than Namibia.** Future studies may explore these aspects by pooling the data across all of the countries.

FINDINGS: EFFECTIVENESS OF ONELOVE IN THE CURRENT ROUND – MARGINAL VERSUS CUMULATIVE ANALYSIS

An additional focus of the evaluation was on ascertaining the marginal effects of OneLove programme activities from the most recent campaign cycle relative to previous efforts, while controlling for other concurrent and previous programmes. This component of the evaluation was done by classifying respondents based on the timing of exposure to Soul City activities: (1) never, (2) prior to the past 3 years of programme activities only, (3) within the past 3 years only (marginal exposure), or (4) both recently and prior to the past 3 years (cumulative exposure). Multivariate regression analysis was then used to determine whether there were differential effects of programme activities on outcomes related to sexual behaviour, HIV testing, knowledge, attitudes, and self-efficacy for prevention and treatment by the timing of exposure. The hypotheses were that recent exposure would be most effective if it was supported by longer term cumulative exposure (dose-response), while exposure that had occurred previously but then ceased would have deteriorating effects over time but would still be better than no exposure at all.

The evaluation in Malawi provided an interesting case study of these hypotheses. In that case, **there was consistent support for the cumulative effects of Pakachere radio programming on desired outcomes over longer (> 3 years) periods of time.** Specifically, longer-term, cumulative exposure to Pakachere radio yielded higher dose-response effects with indicators related to community norms and attitudes, which tend to change slowly. For example, respondents who had more cumulative exposure (over both recent and longer time periods) were nearly half as likely (5.9%) to agree that men who have sex with many women are real men relative to those who never heard OneLove messages (10.3%) and two-thirds as likely as those who only heard recent messaging (8.5%). Other findings were also noteworthy:

- Cumulative exposure to Pakachere radio messaging was positively associated with empowerment of respondents, who reported lower levels of fatalism regarding HIV. For example, 86.9% of those exposed to Pakachere radio both before and during the current cycle disagreed that life is over if you are HIV+ as compared with 78.8% of those only exposed previously or 73.4% of those never exposed to Pakachere radio (Figure 1).
- Greater cumulative exposure increased dialogue surrounding HIV/AIDS – in particular disclosure of HIV status - among family, friends and members of the community. For most knowledge indicators, the effects of cumulative exposure over longer periods were not substantively different from the effects of short-term or prior-term exposure. For example, regardless of the timing of exposure, similar percentages of exposed respondents disagreed that having an HIV positive spouse means that the partner is also HIV positive: 42.8% (>36 months), 44.1% (< 36 months), and 44.1% (both) (Figure 1). In short, once programs achieved widespread gains in knowledge, those gains did not appear to deteriorate substantively.

- However, for most behavior indicators (e.g. HIV testing, condom use with regular or casual partners, multiple or concurrent partnerships), there appeared to be little marginal or cumulative effect of exposure to Pakachere relative to prior exposure or no exposure (Table 7 and Figure 1). The likelihood of getting an HIV test in the 12 months prior to the survey was higher among those with greater cumulative exposure (55.9%) or more recent exposure (55.0%) relative to both no exposure (52.1%) and earlier exposure (46.1%) (Figure 1). No effects were apparent on partnerships nor on condom use (Table 7).

Table 7: Adjusted proportions, by timing of exposure

Indicator	None	> 36 months	<36 months	Both
Pct. who disagree that telling people you have HIV does not help anything	65.2%	71.3%*	70.8%*	76.8%**
Pct. who disagree that HIV is punishment for sinning	53.0%	68.1%**	65.4%**	66.1%**
Pct. who agree that men who have sex with many women are real men	10.3%	10.7%	8.5%	5.9%*
Multiple partnerships in last year	7.4%	7.0%	9.7%	12.7%
Condom use at last sex, any partner	15.2%	14.4%	13.6%	14.6%
Condom use at last sex, regular partner	7.7%	7.3%	8.5%	8.5%

These results support the importance of on-going, consistent messaging in HIV prevention, particularly for precursors to behaviour change such as norms and attitudes. In many cases, marginal effects were smaller from additional (cumulative) exposure for the previously exposed relative to the recently exposed, but evidence of potential slippage also existed should communication efforts cease. Even so, the evidence indicated that the timing of Pakachere radio messaging had a limited impact on key behavioural outcomes (e.g., condom use, testing, partnerships).

COST ANALYSIS

As part of the overall evaluation, an analysis of the costs of developing and implementing the mass media and community-based activities of the partners was undertaken for the period from 2008 to 2011 - corresponding to the period starting from the approximate onset of the partnership and covering the recent campaign activities for each partner. Standard costing methods were used to determine the total value of economic and financial programmatic resources used in the development and delivery of the mass media and community-based interventions of the three partners.

Because of similar fixed costs across countries, the costs per person reached for the Soul City media interventions tended to be most significantly affected by the numbers of people reached for each media. In general, the highest reach was achieved by the radio programs, followed by print media and television. The more populous countries of Zambia, Zimbabwe, Malawi and Mozambique had higher reach for nearly all media, while costs were more homogenous across the countries. As a result, the larger countries achieved substantial economies of scale. For example, print media – which was generally the most costly of the Soul City media – cost £2.32 per person in Lesotho, but was 50-80% less costly per person in the countries of Malawi (£0.90/person), Zambia (£0.78/person), Mozambique (£0.49/person), and Zimbabwe (£0.49/person). The costs of radio varied from a low of £0.10 per person in Malawi and Zambia to a high of £0.98 per person in Lesotho. A similar pattern was evident for television. The cost per person reached in Lesotho was £1.85 but only £0.03 per person in Zambia and £0.06 in Zimbabwe.

Low prevalence of exposure to many of the community-based interventions of the remaining two partners necessitated the development of composite exposure measures that also included their radio and other media activities. For CMT, broadcast media for the Beat It! program meant that far more people were reached in Malawi and Mozambique than in Lesotho. The lower levels of reach in Lesotho led to much higher costs per person reached (£3.56 per person reached) than in Malawi (£0.20 per person reached) and Mozambique (£0.11 per person reached). Inclusion of economic costs increased the overall cost per person slightly.

For SAfAIDS interventions, a similar pattern to that observed for Soul City was evident. The larger countries afforded larger numbers of persons reached across which to spread the fixed costs of interventions. The lowest costs per person reached were in the countries of Malawi (£0.20 per person reached), Mozambique (£0.27 per person reached), and Zambia (£0.38 per person reached). The highest cost per person reached - £5.35 per person reached - was in Swaziland, where reach was the lowest. This was followed by Lesotho (£1.11 per person reached) and Namibia (£1.05 per person reached).

CONCLUSION

The effects of the Regional Programme interventions varied greatly depending on the nature of the media mechanism and the outcomes examined. Radio and print media for Soul City had consistently measurable effects across indicators of the antecedents to behaviour change - knowledge, attitudes, community norms, stigma and interpersonal communication - but to a lesser extent on indicators of behaviour change. In contrast, the evidence in support of OneLove television programming on most indicators of attitudes, knowledge, norms and behaviours was small or limited. That effects were more frequently detected among the precursors to behaviour change – rather than actual behaviours – is in line with the majority of behaviour change theories. In this respect, the three years of the Regional Programme may have been insufficient to have achieved broad behaviour change, though the research design cannot tell us whether longer periods of exposure would have yielded more statistically significant effects or larger effect sizes.

There was limited evidence that the combined approach of the partnership substantively improved overall effectiveness. Even so, alternative assessments of the regional approach that make use of pooled analyses of the evaluation country data may yield more robust findings regarding the common messaging of the regional approach. Other topics which have only been touched on in the current evaluation – such as the complicated

economic relationships surrounding intergenerational sex and gift-giving, the effects of differential timing of exposure, and the combination of effects of different media – are likely to require more extensive analysis.

The results of this evaluation should be taken within the context of the existing knowledge base surrounding the effectiveness of health communication. To date, there have been numerous efforts to characterize and categorize the effectiveness of HIV communication campaigns in affecting changes in HIV behaviours and their precursors.^{4,5,15-17} These reviews have focused principally on message content, the overall effects of combined campaigns, and the research designs used to determine effectiveness. However, they have rarely focused on identifying effect sizes by media type, as this evaluation has done. Nonetheless, while citing limitations of many existing studies, reviewers have been cautiously optimistic about the effectiveness of BCC. Noar et al,⁴ for example, found 8 of 10 studies using quasi-experimental designs detected statistically significant effects on behaviours and behavioural intentions. Bertrand et al⁵ found that the majority of HIV prevention campaigns had achieved positive effects across a variety of indicators, although the effect sizes tended to be fairly low. Further, they found little evidence of the effectiveness of behaviour change communication on partner reduction, as noted in this study as well. In all cases, reviewers have called for more rigorous outcome evaluation designs in the manner conducted here.

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APPENDIX TABLES
Summary of OneLove Results for HIV Risk Behaviours, All Countries

Country	Multiple Partnerships – past 12 months	Multiple Partnerships – past 1 month	Condom Use at Last Sex – Any Partner	Condom Use at Last Sex among Those with Multiple Partners	HIV Test in Last 12 months	Willing to Care for Someone on ART
Lesotho						
Radio	NS	NS	59.5% (High) 56.0% (Low) 48.2% (None); 58.4% (any) 51.6% (none)	NS	56.2 (High) 55.0 (Low) 50.4 (None)	NS
Television	NS	NS	NS	NS	NS	NS
Print	NS	12.4% (any) 8.1% (none)	NS	NS	58.1% (any) 48.7% (none)	83.2% (any) 78.5% (none)
Multimedia	NS	NS	55.5% (High) 56.3% (Low) 47.5% (None)	74.8 v. 65.3 (1)	59.1 (High) v 52.8 (Low) v 46.4 (none)	NS
Malawi						
Radio	NS	NS	NS	NS	NS	NS
Television	NS	NS		NS	NS	NS
Print	NS	NS	11.2% (any) 6.6% (none)	NS	59.2% (any) 53.8% (none)	NS
Multimedia	NS	NS	10.5 % (High) 6.9% (Low) 6.0% (None)	NS	NS	NS
Mozambique						
Radio	NS	NS	NS	NS	NS	NS
Television	NS	NS	20.6% (any) 16.7% (none)	NS	NS	NS
Print	NS	NS	19.0% (any) 13.6% (none)	NS	NS	NS
Multimedia	NS	NS	18.6% (high) 19.6% (low) 12.3% (none)	NS	NS	NS
Namibia						
Radio	NS	NS	60.3% (any) 48.3% (none)	NS	NS	NS
Television	NS	NS	NS	NS	NS	NS
Print	All: 20.1% (any) 15.0 (none); Female: 3.6% (any) 7.9% (none)	Females: 0.0% (any) 1.1% (none)	62.8% (any) 56.2% (none)	NS	54.5% (any) 52.1% (none)	NS
Multimedia	NS	NS	NS	NS	Males: 60.6% (high) 44.4% (none)	NS
Swaziland						
Radio	Females: 7.5% (high) 3.8% (low) 8.4% (none)	NS	67.3% (high) 62.2% (low) 60.4% (none)	NS	56.8% (high) 49.9% (low) 44.0% (none)	91.9% (high) 92.9% (low) 86.3% (none)
Television	NS	NS	NS	NS	55.1% (any) 46.7% (none)	NS

Country	Multiple Partnerships – past 12 months	Multiple Partnerships – past 1 month	Condom Use at Last Sex – Any Partner	Condom Use at Last Sex among Those with Multiple Partners	HIV Test in Last 12 months	Willing to Care for Someone on ART
Print	NS	NS	63.6% (high) 69.2% (low) 60.8% (none)	NS	54.8% (high) 55.7% (low) 44.8% (none)	NS
Multimedia	NS	NS	NS	NS	55.4% (high) 48.0% (low) 36.2% (none)	90.8% (high) 92.3% (low) 85.1% (none)
Zambia						
Radio	4.4% (high) 6.6% (low) 6.7% (none)	NS	NS	40.8% (high) 49.2% (low) 35.0% (none)	NS	NS
Television	NS	NS	NS	NS	NS	Males: 96.3% (any) 91.1% (none)
Print	NS	NS	NS	NS	NS	95.5% (any) 90.7% (none)
Multimedia	NS	NS	NS	NS	NS	NS
Zimbabwe						
Radio	NS	NS	NS	NS	NS	NS
Television	13.0% (any Untold) [†] 16.0% (none)	NS	NS	NS	NS	NS
Print	NS	NS	NS	NS	NS	NS
Multimedia	10.0% (any) [†] 16.0% (none)	NS	NS	NS	NS	NS

[†]Concurrent partnerships