Jiving with Science: Small media, public transport and HIV knowledge in rural Africa

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Abstract:

Jiving with Science is a low-threshold public engagement project that applied principles of edutainment and small media to share evidence-based scientific results and health promotion messages with a rural community of high HIV-prevalence. The project was initiated by international population research facility based in South Africa, that actively engages the local public in an integrated communication strategy. *Jiving with Science* aims to build on this strategy by translating pertinent research findings and evidence based, health promotion messages into lay terms and delivering them to the public in everyday spaces. The project involved developing, distributing and evaluating 3 edutainment CDs over 2 years. CDs were distributed freely to community stakeholders including mini bus taxi drivers, for the entertainment of drivers and commuters. In this paper, we provide insight into the project's development and discuss the results of our summative survey, which was designed to measure its impact on HIV testing knowledge and reported testing behaviour. In summary, we found that while small media can empower researchers to create low cost, targeted products to engender social change, distribution remains a challenge with only half of local taxi drivers having received the CDs. Moreover, although the product inspired dialogue about HIV and health research in taxis, this does not seem to be linked to behavior change. In conclusion, further, more participatory measures will be needed to boost stakeholder uptake of the intervention and stronger partnerships with local taxi and health authorities should be formed to support driver uptake of local HIV testing services.

Introduction

South Africa has a prevalence of HIV higher than any other country in the world, with an approximate 5,6 million people living with the virus (UNAIDS, 2012, 7). While the large scale, antiretroviral (ART) treatment programme has led to a significant decline in new infections and an increase in adult life expectancy (Bor *et. al*., 2013; Tanser *et. al*., 2013; UNAIDS, 2014), levels of infection are still high and there is a need to mobilise behaviour change and increase uptake of HIV testing, prevention and treatment interventions (AIDS Foundation South Africa, 2014). A proliferation of health promotion material has been developed in response to the HIV epidemic, including the Soul City and LoveLife entertainment education (EE) programmes that target national populations through mass media channels (Aziz, L and V. Salvesen. 2008). The emphasis on the mass media in South African health promotion is well founded, since the national population has relatively high access to television (73%) and radio programming (64%) (Statistics South Africa, 2011). Nevertheless, there is also room for smaller, low-threshold programmes that can be made on more accessible budgets to meet the specific needs of target communities (Parker *et. al.*, 2000, 36-8).

In this article, we discuss the impact of a low-threshold public engagement project called *Jiving with Science* that applied principles of edutainment and small media to share evidence-based scientific results and inspire dialogue amongst a rural community of northern KwaZulu Natal, South Africa where the impact of the HIV epidemic is severe (Bärnighausen, Tanser, and Newell, 2009, 405). This region, the Hlabisa health district, is about 50 kilometres from the Indian Ocean coast and is 1400km^2. As in other national settings, minibus taxis are the primary mode of public transportation, transporting approximately 65% of the population (Arrive Alive 2011). *Jiving with Science* was funded by the Wellcome Trust through an International Public Engagement Grant and was coordinated by an international research centre that actively engages the community in an integrated communication strategy. In this project, the Centre engaged with a new, hard-to-reach community subgroup: local drivers of minibus taxis. Taxis have long functioned in South Africa as sites of community discussion, dialogue and informal education (Khosa, 1992; Hansen, 2006), and, in this project, we aimed to harness this culture of ‘Taxi Talk’ by encourages community discussions about health and HIV in the

taxi environment. Our primary target audience were the taxi drivers themselves, who, due to their transient lifestyles and long periods away from home have been identified as a high-risk group in the spread of HIV (Mchunu, 2012,210). Taxi drivers tend to be a hard community group to reach due to the fact that their 'awkward' working hours are not conducive to visiting clinics and there is a lack of health facilities along transport routes' (Mchunu *et. al.,* 2012, 211).

Methodology

Jiving with Science, involved creating, distributing and evaluating 3 audio edutainment CDs over 2 years. Each CD comprises an informational narrative presented in Zulu interspersed with popular music tracks, targeted health/HIV messages and calls to action. Scientists, clinicians and community engagement specialists from the research centre collaborated to develop the narratives and ensured that the stories were technically accurate, authentic, culturally sensitive and appropriate. Each CD features a celebrity and health information was presented in the form of a conversation between the characters, with the questions serving to promote critical thinking amongst listeners, encourage uptake of health services and inspire dialogue about HIV and health.

600 copies of each CD were duplicated and freely distributed to appropriate project stakeholders. The local taxi association of Mtubatuba was a key partner in Jiving with Science facilitating engagement with drivers and assisting with the distribution of the CDs. The product was made on a relatively low budget with each CD costing approximately R20 ($2 US dollars) to produce (this is exclusive of salaries and other running costs). For a more detailed process evaluation of the project and the application of edutainment methodologies please refer to our earlier publication in Critical Arts (Treffry-Goatley *et. al.,* 2013).

The project was evaluated in 3 low-threshold, quantitative surveys. The first formative survey occurred in May 2010 when 37 randomly selected staff members of the research were interviewed to suggest local musical preferences. The results were triangulated with desktop research into current trends in the South African music industry and with informal discussions with taxi drivers. The formative survey results were used to guide the selection of music content for CDs 1 and 2. In April 2011, 2 months after the

first 2 CDs had been distributed, a second monitoring survey was conducted at 4 local taxi ranks. A total number of 207 people were interviewed (81 taxi drivers and 126 members of the public). The aim of this survey was to assess the community's initial response to *Jiving with Science* and to get feedback to inform the development of the third CD. The survey consisted of 22 closed-ended questions with 12 common questions between drivers and listeners that concerned demographics, response to CD content or health knowledge.

A final summative survey was conducted in December 2011 to evaluate the third CD, which had been released in September 2011. This quantitative survey was designed to test the coverage and penetration of the intervention, the impact on information recall and to assess whether the CDs had inspired dialogue about HIV or the Centre in the taxi. In total, we interviewed 422 people over 5 days. The participants comprised 126 taxi drivers, 5 Hair salon operators and 289 members of the general public.[1] 5 fieldworkers, posted at 5 local taxi ranks approached all taxi drivers and as many members of the public as possible on a given day and asked them to participate in the survey.

The survey comprised 30 closed and open-ended questions designed by the project team. There were 2 separate questionnaires for drivers and members of the public/listeners. These questionnaires had a set of 4 common demographic questions and 16 common health information recall/behavior change intention questions and 10 driver and listener specific questions that were designed to test cover and penetration and the level of exposure to the CD. The focus of the information recall and behavior change questions was on HIV testing since this was the key subject of CD 3. With regards to the driver-specific questions, 3 of these were designed to measure the impact of the CD on inspiring dialogue about HIV or Africa Centre in the taxi, because this is one of the main objectives of the project. For example, Questions 9 and 10 ask whether the driver had ever heard a passenger talk about Africa Centre/HIV when the CD was playing and Question 14 asks whether the driver had ever engaged in a discussion with a passenger about HIV.

[1] We had intended on interviewing more hairdressers. However, when went to distribute the CD we found that only 5 of the local salons had CD players. We decided not to include this group in our analysis because the sample size was too small.

Results

While the focus of this article is on the summative results of the third survey, we will briefly outline the results of the second survey, of April 2011, so that reference can be made to these data in the discussion below. These results revealed that 40 (32%) of the passengers had heard the CDs being played in a taxi and 30 (38%) drivers had received the CDs. Of these drivers, 28 (93%) reported that they encouraged dialogue about health issues in the taxi. We found, that while most participants (78 drivers and 122 passengers) were able to identify antiretroviral drugs (ARVs) as medicines to fight HIV, and almost all of them knew that condoms protect one from HIV, testing levels in this community still appear to be low, with more than half of the all participants (119/207) reporting that they had never tested for HIV.

For the final survey, the demographic questions revealed that mean age of the drivers was just slightly more than the listeners and that while the listeners consisted of an almost equal proportion of male and female respondents, there was only 1 female driver (see Table 1 below). The large majority of drivers (84%) drivers and public (74%) were local and resided within the Hlabisa sub district.

Table 1: Demographics of respondents

	Public (n=290)	Drivers (n=127)
Mean Age	28 years	32 years
Gender		
Male	128	126
Female	162	1
Place of Residence:		
Hlabisa sub district	215	107
Outside the sub district	66	17

Table1: Demographics of respondents

The response rates in this survey were 289/346 (83.5%) and 131/173 (75%) for civilians and drivers respectively. 68 of the 127 (54%) drivers that we interviewed had been given the CDs. The CDs were relatively well used with 35 drivers reporting that they played them between 0-10 times, 26 (38%) reporting that they played them more

than 10 times and just 5 (4%) reporting that they had never played them. 17 (25%) of the drivers also indicated that they were still using the CDs at that time and 19 (28%) indicating that they had stopped using them the previous month. In terms of public exposure, we found that 73 of the 289 listeners could recall hearing a CD about the Centre on the taxi and 64 about HIV. In total, 81 (28%) individuals had been exposed to the CD. 5 (6%). Of those exposed to the CD, 5 (6%) reported having heard it frequently (> once a week), 40 (49%) reported hearing it occasionally (> once a month), and 24 (30%) said that they heard it rarely (> once a year).

Although 40/68 (59%) of the drivers that received the CDs and 34/81 (42%) of passengers that heard the CDs reported having changed their behavior as a result of exposure, when one compares the knowledge, attitudes and reported behavior between the drivers and passengers with exposure to those with no exposure, there is no significant impact to report (please refer Table 2). Indeed the knowledge of HIV testing is relatively high across both groups (Items 1 to 4 in Table 2), with drivers having a slightly better knowledge of good HIV testing practice. However, when one refers to reported behaviour (Items 4 to 7 in Table 2), one finds that drivers are significantly less likely to know their status, to have done an HIV test or to intend on testing again. With regards to inspiring conversations about health in the taxi, 48 of 68 (70%) drivers reported hearing dialogue about AC or HIV in taxi when the CD was playing. Moreover, 38 of 68 (55%) drivers reported having engaged in a discussion about HIV with a passenger in comparison to 14 of 58 (24%) drivers who were not exposed to the CD.

Table 2: Impact of exposure on driver and public knowledge of HIV testing and reported behavior

	Driver NO exposure	Driver with exposure	Public NO exposure	Public with exposure
Knowledge/attitude questions	**58**	**68**	**210**	**81**
1. Stable partners (SP) should test for HIV.				
Yes	44 (76%)	50 (74%)	136	51 (63%)
No	13 (22%)	15 (22%)	55 (26%)	19 (23%)
Refuse	1 (2%)	3 (4%)	19 (9%)	11 (14%)
2. SP should discuss their HIV test results.				
Yes	48 (83%)	64 (94%)	168	60 (74%)
No	7 (12%)	2 (3%)	17 (8%)	3 (4%)
D/K	1 (2%)	0	22 (10%)	16 (19%)
Refuse	2 (4%)	2 (3%)	3 (1%)	2 (2%)
3. SP should test for HIV regularly.				
Yes	53 (91%)	59 (87%)	168	65 (80%)
No	5 (9%)	3 (4%)	18 (9%)	3 (4%)
D/K	0	6 (8%)	22 (11%)	13 (15%)
4. HIV testing is beneficial.				
Yes	39 (67%)	54 (79%)	154	66 (81%)
No	9 (16%)	8 (12%)	27 (13%)	7 (8.6%)
Refuse	1 (2%)	2 (3%)	20 (10%)	5 (6%)
Don't know	5 (9%)	4 (6%)	3 (1%)	2 (2%)
Missing	4 (7%)	0	6 (3%)	1 (1%)
Reported Behaviour Questions	**58**	**68**	**210**	**81**
5. Knowledge of HIV status.				
Yes	32 (55%)	31 (46%)	137	53 (65%)
No	24 (41%)	35 (51%)	65 (31%)	25 (31%)
Refuse	1 (2%)	1 (1%)	2 (0.9%)	12 (15%)
Don't know	1 (2%)	1 (1%)	6 (2%)	2 (2%)
6. Had an HIV test & received results.				
Yes	23 (40%)	27 (40%)	126	52 (64%)
No	33 (57%)	40 (59%)	79 (39%)	28 (35%)
Refuse	1 (2%)	1 (1%)	2 (0.9%)	1 (1%)
Missing	1 (2%)	1 (1%)	3 (1%)	0
7. Plan to test in the future.				
Yes	32 (55%)	32 (47%)	165	60 (74%)
No	21 (36%)	26 (38%)	27 (13%)	10 (12%)
Don't know	5 (7%)	9 (13%)	13 (6%)	10 (12%)
Missing	0	1 (1%)	5 (1%)	1 (1%)

Table 2: Impact of exposure to CD on driver and public knowledge of HIV testing and reported behaviour.

Discussion

Jiving with Science is an example of how small media can be applied by health researchers to create an edutainment product for a rural target community. Since we are operating in a community of relatively low literacy levels we opted for an audio product, which featured songs and stories since storytelling is part of 'everyday life of rural communities and as such is a natural means to convey developmental messages' (Fourie, 2011, 327; Leach, 1999,710). We also viewed this CD as a good opportunity to promote engage with drivers who value music and rarely visit health services. Indeed, the affordability and versatility of small media products have made them popular amongst HIV researchers and they have also been applied in other South African contexts to target high-risk groups including sex workers and commuters (Guenther *et. al.*, 1995; Parker *et. al.*, 2002, 1; Parker *et. al.*, 2000, 36-8).[2] Nevertheless, a lack of durability and effective distribution structure remain a challenge and with less than half of the respondents of the interim survey (38% of taxi drivers and 32% public) reporting exposure to the product (Parker *et. al.*, 2000, 14). Working closely with the local taxi association in the distribution of CD 3 allowed us to marginally improve this rate amongst drivers for CD 3 (54%). However, public exposure remained low (29%).

Although the sample size of this survey lacks statistical power, and it would be good to test these findings further with a larger sample group, our results suggest that exposure to the CD did not have any significant impact on driver or public knowledge of HIV testing practice. Indeed, both groups, and drivers in particular, seem to have a good knowledge of HIV. This is in line with previous research that revealed that minibus taxi drivers understand the dangers of HIV (Mchunu *et. al.*, 2012, 214; Orisatoki and Oguntibeju, 2010). However, as other studies have found, this knowledge does not seem to have translated into practice. A similar theme arose in study with minibus drivers, where drivers reported a great fear of testing and many preferred to use traditional medicines for prevention rather than getting tested (Mchunu *et. al.*, 2012, 213).

[3.] A few examples of national HIV campaigns that incorporate small media products include: The National HIV/AIDS taxi campaign, The Action Office-Beyond Awareness HIV/AIDS campaign and the Reproductive Health materials package.

While our results indicate that the CD did not have any impact on driver knowledge of HIV, drivers exposed to the CD were more than twice as likely to have engaged in a conversation with a passenger about HIV than those with no exposure. Those that were exposed also repeated high rates of passenger dialogue about HIV or health research. This might be important since 'dialogue represents a primary resource for transforming how we understand ourselves and others and the organizational worlds we inhabit (Papa and Singhal, 2009,190). Since communities 'rarely initiate a dialogue about a problem spontaneously' (Figueroa *et. al*., 6), media products such as the *Jiving with Science* CDs can play a pivotal function: and spark dialogue which, 'when effective, leads to collective action and the resolution of a common problem' (Figueroa *et. al*., 6). It is important to note, however, that while dialogue might have the ability to lead to change, individual and social change is rarely a simple, linear process and listeners and viewers of edutainment programmes may confront powerful forces of resistance as they attempt to change power dynamics in a community (Fourie 2011, 321).

Conclusion

In conclusion, *Jiving with Science* is an innovative project that engaged with taxi drivers and commuters in a region of high HIV prevalence. While this is not the first time that that this industry has been targeted to raise HIV awareness, to our knowledge it is the first project to work with a small, rural community and to partner with the music industry to make the product more appealing and affordable. As discussed above, there is certainly a need for health interventions in this sector because taxi drivers are a high-risk group in HIV transmission and results imply that HIV testing levels are low. In terms of future research, we suggest that a qualitative study and perhaps, a larger quantitative study, be performed to further explore the link between the CDs and dialogue stimulation in taxis and to better understand the nature of this dialogue. We also propose that future initiatives should be more participatory in nature and actively include local stakeholders since only 'when the community starts to participate in the planning and production of entertainment education programmes can power start to shift away from the producers and sponsoring companies to the communities themselves' (Fourie, 2011, 321). Future research should also move beyond the informal 'ad-hoc' trend of HIV interventions in

this sector and work with local taxi authorities and the state to understand and alter the structures that are making HIV testing so challenging for this subgroup (Parker et al, 2002, 1). This change in stance would be more in line with action media or 'Third Generation' edutainment' approaches which recognise that 'that information alone does not guarantee development, but that power and structural imbalances and societal problems also impact on successful; sustainable development' (Fourie 2011, 323).

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