Producing and utilising community health education films in low- and middle-income countries

Stephen Sowa, Ian Warwick and Elaine Chase

Department of Education, Practice and Society, UCL Institute of Education, UK

Abstract

Objective: To examine the production and use of health education films in Kenya, Tanzania and Zambia.

Design: A review was undertaken of the community health education films produced by a film production company and their use by three partner organisations in lower- and middle-income countries.

Methods: A focused content analysis of 18 community health education films was conducted and three exemplar films were selected for review. Interviews were carried out with four film production personnel and seven project workers using the films within health education projects in Kenya, Tanzania and Zambia. Concepts drawn from the Ottawa Charter for Health Promotion and Anchored Instruction informed the study. Findings: The films, produced primarily for use in sub-Saharan Africa, mostly convey biological information and address behavioural issues related to specific maternal and child health topics. The predominantly low-literacy audiences reached by the projects may benefit from local content highlighting the social determinants of health and engaging communities in narrative format. While broader health education initiatives may provide opportunities to discuss the films after screening, linked problem-solving activities could raise community awareness of the multiple factors influencing health and help members formulate holistic action plans.

Conclusion: The production company responded to emerging findings, noting that more context-specific films should be produced with community members being more fully in the planning, production and evaluation. This should generate more relevant content and engage audience members more effectively in problem-solving related to health and wellbeing.

Keywords

Health education, films, Ottawa Charter for Health Promotion, anchored instruction, participatory approaches, sub-Saharan Africa

Corresponding author:

Stephen Sowa, Department of Education, Practice and Society, UCL Institute of Education, 20 Bedford Way, London WC1H 0AL, UK.

Email: stephen.sowa.15@ucl.ac.uk

Introduction

In recent decades, public health advance has enhanced disease control which, along with raised living standards, income and education has significantly helped to address health risks (Skolnik, 2016). However, risks to health are pervasive in areas affected by poverty or scarcity of resources (Rasanathan and Sharkey, 2016). According to the World Health Organisation (WHO, 2015), the African region alone experiences 64% of the global total number of maternal deaths and 47% of the global total number of under-five deaths. This study focused on one-lower and two lower-middle income countries in this region: Tanzania, Kenya and Zambia. As of 2015, their maternal mortality ratios stood at 510, 398 and 224 per 100,000 live births, and under-five mortality rates were 51, 58.8 and 66.1 per 1000 live births, respectively (WHO, 2015). The Sustainable Development Goal 3 and associated targets highlight the need for action to reduce the maternal and under-five mortality, along with tackling the epidemics of communicable diseases (including HIV, tuberculosis and malaria) and reducing premature mortality from non-communicable diseases (United Nations, 2015). Given the challenging and changing conditions impacting people's health, particularly in low- and middle-income countries, how can health education successfully enable communities to identify and respond to key health issues?

For effectiveness, health education activities in developing world contexts should go beyond dissemination of information alone to involve participants as active investigators of their health to help facilitate sustained change (Hosein et al., 2016; Hubley, 2006). Briscoe and Aboud's (2012) review of 24 high quality behaviour change communication interventions in developing countries indicates that successful programmes often draw upon a range of techniques – information, performance, problem-solving, social support, materials and media to engage participants in multiple domains of learning (behavioural, sensory, social and cognitive). Enduring health change is likely to stem from projects that incorporate social, institutional and/or policy-oriented approaches (Golden and Earp, 2012; Rasanathan and Sharkey, 2016). Changes come about when communities engage with the individual, interpersonal/community and institutional/structural determinants of health (Fry and Zask, 2016). With regard to this broader social-ecological approach, this study sought to explore ways in which a set of health education films engaged audiences in Kenya, Tanzania and Zambia.

The growth of mass media and information and communication technologies in lowerand lower middle-income countries suggests that health workers are more frequently using media in an effort to improve health (Bull et al., 2016). Audio-visual media such as videos or films can be used to stimulate discussion and help people learn about health issues. Health education films can adopt a narrative (story) and/or a non-narrative (direct fact/instruction) format to convey ideas – with evidence indicating that narrative formats generally aid comprehension among audiences with low rates of literacy (Moran et al., 2016). Although some research alludes to the benefit of media technologies when appropriately included within health education programmes (Bertrand et al., 2006; Briscoe and Aboud, 2012; Hosein et al., 2016), questions remain as to whether health education films are being optimally produced and utilised in lower-income countries.

To examine how a set of health education films have been produced and used in a selection of sub-Saharan African countries, a review was undertaken of community health education films produced by a UK-based production company and their partners' use of them within health education projects in Kibera, Kenya; Same District, Tanzania; and Serenje District, Zambia. In Kenya, the project provided information and training to low-income ethnically and religiously diverse urban youth to address HIV and sexual and reproductive health. In Tanzania and Zambia, educational projects were linked to local health service provision and sought to support low-income rural communities, particularly female members, to improve maternal and child health. In Tanzania, the project worked with members of the Maasai community – a patriarchal, semi-nomadic tribe – whereas the project in the Serenje District, Zambia supported communities across the region who were mostly involved in subsistence agriculture, with some having an organised leadership based around chiefdoms.

A key focus of the review was whether community health education films enabled a consideration of personal, contextual and material factors – in line with the action areas and strategies outlined in the Ottawa Charter for Health Promotion (Fry and Zask, 2016; Golden and Earp, 2012; WHO, 1986). The review of films additionally referred to often cited steps in the health promotion planning cycle (Hubley et al., 2013): from assessment and planning, to the film design/production, through implementation, to monitoring and evaluation. Consideration was given to power relations at each stage (that is, to whether community members participated in the development and use of films).

A particular pedagogical approach – namely, that of anchored instruction - informed the review. Notwithstanding its limited application in health-related contexts, anchored instruction provides useful guidance on how films might be designed and used to assist learners in solving multifaceted problems. Anchored instruction specifies the use of a piece of media (the anchor) to provide a shared learning experience and facilitate further exploration of a given subject (Bransford et al., 1990). Centred around problemsolving, anchors such as videos/films can support learners and teachers to solve complex and realistic problems, facilitating the active construction of propositional and procedural knowledge (Zydney et al., 2014). For success, a film should be concise enough to succinctly depict a case study or problem situation, while including foundational content and key terms to facilitate discussion and critical enquiry. Audiovisual content should be engaging (story/narrative-based), comprehensible and relevant to the learners (knowledge and culture) so they are supported to review the content and extract clues for problem-solving (Shyu, 2000). While the approach emphasises the process of thinking, the knowledge of content is also considered important to enable learners to discern practical applications (Bransford et al., 1990).

Methodology

Data collection and analysis

To develop an overview of the company's collection of 18 community health education films released prior to May 2016, a focused content analysis was conducted to identify the film content and format elements (Neuendorf, 2016): the number of narrative (story-based) and non-narrative films developed; the most common type(s) of health information conveyed in the films (biological, behavioural, social, cultural, political and/or environmental); the film character(s) communicating the health information (health expert(s), community member(s) and/or voiceover artist(s)); the primary setting(s) and main racial group(s) on-screen in the films; available languages for the films; and the range and median duration of the films.

Following this, three contrasting films were selected for more focused review – the first on puberty and sexual health; the second on prevention and management of postpartum haemorrhage; and the third on the nutrition of babies aged 6-24 months. These three films were selected for review using the following criteria: prospective interviewees had direct involvement in producing these films; they exemplified key themes/topics addressed by the production company (maternal health, child health and sexual and reproductive health); they targeted different age groups (youth and adult viewers/parents); and included animated and live-action films.

To learn more about the film production and evaluation process, semi-structured interviews were conducted with four key individuals involved in producing all three films (the content coordinator, an animator and two producers). Additionally, to better understand how the films had been used in different contexts, semi-structured interviews were carried out with all project staff members (management staff and project workers) from non-governmental organisations who had used the company's films within health projects including: two project staff members from Kibera, Kenya; three from the Same District in Tanzania; and two from the Serenje District in Zambia. Interviews with the content coordinator and animator took place in-person near the office of the film production company. Due to the international location of the other interviewees, interviews were conducted remotely via Skype, and where two project workers had only limited Internet access, through email dialogue to clarify answers to the interview questions posed (King and Horrocks, 2010). Interview questions and subsequent analysis were structured around the stages of the health promotion planning cycle and informed by a number of the concepts outlined in anchored instruction and the Ottawa Charter (related to the five action areas and the three key strategies). After completing data analysis, findings and possible implications were presented to the production company and staff members' responses are included in the discussion.

Findings

Community health education film collection overview

Content analysis of the production company's community health education film collection revealed that 14 out of the 18 films were of non-narrative format and 4 films incorporated a narrative/central story. Film topics include: warning signs in pregnancy; antenatal care; safe childbirth; postpartum haemorrhage; newborn care and treatment; signs of diarrhoea, malaria and pneumonia in children; breastfeeding; maternal nutrition; child nutrition; puberty; sexual reproduction; family planning; cervical cancer prevention; Ebola. Biological and behavioural health information was the only content in 14 films and comprised more than 95% of health information in each of the other 4 films (breastfeeding; puberty; cervical cancer prevention; Ebola), with less than 5% of health information relating to social, cultural and/or political factors. Health information was predominantly communicated by medical/health specialists in 15 of the films and via voiceover or unvoiced animation in 3 of them.

African settlements (mostly undisclosed) and/or health centres are used as settings in all 18 films, with Black Africans (or individuals of African descent) making up most of the people/animated characters on-screen. While all 18 films were originally filmed in English, dubbed versions are also available in French (16 films), Swahili (15 films), Somali (15 films), Bemba (7 films), Luganda (6 films) and Amharic (3 films). The films' runtimes range from 5–15 min, with a median duration of 9 min, 10s. The three exemplar films selected for more detailed review addressed puberty and sexual health, the prevention and management of postpartum haemorrhage, and child nutrition.

The puberty and sexual health film

This film, set in Kibera, Kenya, shows a young female community health worker describing her job experience. Information on the main physical and emotional changes girls and boys experience during puberty was directly communicated by reproductive health specialists. The film lasts for 4 min, 54 s and is available in English.

During the interview with the company's content coordinator, the goals of the film were described.

So, films we have produced are basically for anyone to access and most partners who are using them are based in sub-Saharan Africa. The aim of this film [on puberty and sexual health] was to reach anyone in sub-Saharan Africa who might want to use the film. ... We wanted it to be educational; to show what happens during puberty as the kind of bare bones of the film.

It was stated that the film was meant to be 'not so didactic' and to feel 'quite youthful' and 'inspirational'. The production company worked with a partner in Kibera who suggested the film topic and helped to arrange the film shoot. While the production team filmed in English 'because that is actually what they speak in the community [along with Swahili]', it was suggested that they will dub the film into additional languages for their partners.

With regard to the health topic addressed, the content coordinator explained:

We started with a fact sheet on puberty. Sexual health experts fed into that document to make sure the key points were right ... We wanted it to feel like it was story led. So, we had a character of a community health worker who is helping to deliver that information, supported by other characters who are slightly more experienced health professionals. ... After interviewing people for the film, it became apparent to include the emotional changes too. ... It does touch on risk taking behaviour, so perhaps it's about showing that they [teenagers] don't have to bow to peer pressure as much.

The content coordinator also confirmed that community members 'weren't involved [in the filming process] more than featuring in it'. To facilitate discussion and problemsolving, it was suggested that although there were 'no kind of pause points in the films', 'generally after watching the films there will be discussion afterwards to ensure quality information and practice'.

The prevention and management of postpartum haemorrhage film

This animated film depicts a rural African village and centres on a female community health worker and her management of a female villager going through a home labour. A narrator describes the event and the subsequent signs of postpartum haemorrhage. The film lasts for 7 min, 35 s and is available in English, French, Swahili, Somali and Amharic.

The film animator noted that the film aimed to:

... help communities in rural villages to identify and manage the condition. ... The primary audience was countries in sub-Saharan Africa and especially rural communities. ... It was important for the film to show the information, but to also include names and have a story.

With regards to the setting, the animator noted that this was deliberately generic and intended to be applicable 'across multiple African cultures'. Animation within the film illustrates health information and procedures using simple movements and colourful graphics that 'people can identify with it' and so it can be 'viewed on fairly small mobile screens as well'. To ensure the film was accurate and appropriate, the animation and

health information were reviewed by 'medical experts' and 'people working on the ground [in sub-Saharan Africa]'. The animator also suggested the films could be 'viewed three or four times to make sure people take in all the information' and lead viewers to ask questions.

The child nutrition film

This film shows various mothers feeding their children around undisclosed settlements and inside homes, with some parents sharing brief personal feeding examples. During the film, a public health expert directly communicates information on when and what to feed a child aged 6-24 months. The film lasts for 13 min, 14 s and is available in English, French, Swahili, Somali, Bemba and Luganda.

During interview, two of the film producers outlined the process of producing the child nutrition film. Film producer 1 explained:

[The production company's] partners in sub-Saharan Africa had mentioned that nutrition topics were important issues to be addressed in their health programmes. ... Experts were involved in reviewing the content to ensure the nutritional information included in the film was accurate.

Film producer 2 stated that the settings and characters included in the film were intended to be relevant 'across cultures and countries in sub-Saharan Africa'. Furthermore, the nutritional information contained in the film was directly communicated by an expert because they 'needed to communicate a range of information on the topic' which could not 'easily fit within a story'. By filming a public health expert and showing various parents, it was hoped the film could be 'seen as a reliable source' and 'relatable'. Film producer 2 added:

The films are meant to lead onto group discussion. ... We did not consider including specific elements within the films for discussion, but expected community presentations to include activities to build on the films. ... Communities in sub-Saharan Africa were not involved in producing the films, but some people have featured in them.

The use of community health education films in Kenya

During interviews conducted with two members of staff in a health programme in Kibera, Kenya, they explained how they incorporated the maternal health, child health and sexual and reproductive health films into their projects. Health worker K1 explained:

The programme was started in April 2006 to address the HIV pandemic in Kibera through promoting general adolescent sexual and reproductive health awareness and prevention of the spread of HIV/AIDS. ... It also builds the capacity of youth in the community to provide accurate information on reproductive health ... Since its inception, the project has reached out to approximately 6000 youth and adults through dual HIV testing and counselling and family planning services. ... [Also,] a group of 10-15 volunteer community health workers regularly meet with staff for training and supervision... each volunteer then visits 10-15 of her neighbours to share what she has learned... During the training sessions, the films are used to promote understanding on maternal, newborn and child health issues.

Health worker K2 thought the films were 'high quality', 'medically accurate' and in line with their 'own curriculums and teachings'. It was also suggested that 'using visuals to communicate the material makes it more engaging' as community members enjoyed viewing the films. Health worker K1 stated that the films are used to facilitate discussion and problem-solving:

... in a manner that makes it easy for the volunteers to comprehend and relate with the topics that are being shared and discussed. After each film, the participants get the opportunity to provide constructive feedback and share any questions from the films. This enables the participants to share the same information.

Health worker K1 explained that a recent survey conducted by an external monitoring and evaluation team showed that 'there had been an increase in understanding of the maternal and child health information in terms of knowledge, skill, and attitude among the volunteers and community members'.

The use of community health education films in Tanzania

During interviews with three members of staff in a health programme in Same District, Tanzania, staff outlined how the Swahili dubbed maternal and child health films were being utilised. Health worker T1 stated:

The community health programme began in 2014 with the purpose of integrating 21 remote underserved Maasai villages with the formal health system to reduce the significant disease burden and high mortality rates in the communities. Thirty Maasai women were each selected by their village leaders and trained as community health workers. ... Another programme began in 2012 and has trained 33 women as community health educators... These women use interactive presentations as well as the educational videos in Swahili to provide information on basic topics

such as hand washing, purifying water and use of mosquito nets to prevent malaria.

Health worker T2 explained the project team decided to use the films because they saw them as an 'efficient way to widely distribute evidence-based health information in a consistent, documentable fashion'. It was said that 'approximately 45,000 people in the general community' have seen the films via 'projectors and speakers in groups ranging from 20-60'. Health worker T3 indicated the presentations include 'discussions of the topic' and 'demonstrations' take place following the screenings. Although 'open dialogue' was encouraged between staff and project participants, it was also acknowledged that they did not specifically 'create scenarios or problems to solve'. In outlining the available programme evidence, health worker T1 explained:

District wide surveys have demonstrated the effectiveness of the presentations in improved health topic knowledge and attitude change. Comparative data with surrounding districts also showed improvements in the prevalence of preventable diseases.

The use of community health education films in Zambia

During interviews with two members of staff operating health projects in the Serenje District, Zambia, health worker Z1 explained how they have incorporated the production company's maternal and child health films into the projects:

We work in partnership with a local hospital... and the initial training for community health workers was extended to include health education screenings at the hospital's antenatal care clinic and during outreach sessions at rural health outposts in the community. Health education was previously done only verbally, so we felt that visual aids like the films would help to communicate important health information to community members. Over 2000 people have attended the screening... and the audience size has ranged from seven people at some sites, to over 100 at others.

Health worker Z2 explained that while the community health workers selected the films they thought were 'the most relevant to the community' to fill any 'knowledge gaps', community members who attended the screenings would not necessarily find out what films would be shown until they reached the outreach sites. After the film screenings, it was stated that the 'health messages are discussed with the women' to 'clarify the information'. However, health worker Z1 indicated they 'do not specifically plan for problem-solving activities' to build on the film screenings. Referring to an independent evaluation that was commissioned, health worker Z1 stated:

Completed questionnaires pre- and post-screening showed that after viewing the films there was a general increase in health knowledge. ... The women enjoyed seeing the images and felt the films showed practices they could follow in their daily lives.

From the 90 questionnaires completed as part of the evaluation, results showed an overall increase in correct answers given by participants from pre- to post-screening on multiple choice questions concerning family planning, pregnancy, breastfeeding and child nutrition. However, evidence also showed that many participants' knowledge did not significantly improve on topics such as postpartum haemorrhage.

Discussion and implications

Producing community health education films: assessment and planning

As explained by the production staff interviewees, the company's community health education films released prior to May 2016 (including the films on puberty and sexual health, postpartum haemorrhage and child nutrition, but excluding the film on Ebola) were made for use in low- and middle-income countries and primarily sub-Saharan Africa where most of their partners operate. The films aim at increasing knowledge and educating communities to address various maternal and child health issues. Such aims to provide accessible audio-visual health information for lower-income communities are consistent with the Ottawa Charter's action area on developing personal skills (WHO, 1986: 2).

Having previously focused on producing films for use across the whole sub-Saharan Africa region, staff from the production company noted in follow-up discussions they have started to produce more context-specific films by working closely with individual country partners throughout the planning and production process – so adopting a more localised approach to assessment (Hubley et al., 2013). Producers said they were now moving to a closer collaboration with individual country partners to identify salient topics and develop local film content. In planning for and designing such films, principles of anchored instruction suggests that the media should succinctly and engagingly depict a realistic problem situation (e.g. specific community health issue(s)) and relevant foundational content, while highlighting clues needed to solve the problem through subsequent individual and/or group exploration (Bransford et al., 1990; Zydney et al., 2014). Given the relatively low literacy levels of the individuals and communities viewing the films, including contextual information and visual clues can help audiences readily identify, decipher and translate health issues in ways appropriate to their own locality (Shyu, 2000). A comprehensive assessment of contextual factors, health issues, needs and capabilities of intended audiences can reveal the commonalities and differences across such contexts addressed here: multicultural urban youth in Kenya; gender relations in Tanzania; and low-income parents/communities and health workers in rural Zambia.

Producing community health education films: production phase

Findings from the content analysis revealed that all 18 films predominantly conveyed biological and behavioural health information on distinct maternal and child health topics. In addition to the biological and behavioural information of health topics, forthcoming context-specific film productions could also capture the social, cultural, political, economic and/or environmental factors that can also influence individual communities'/societies' health and wellbeing (WHO, 1986: 1). For instance, the company's film on puberty and sexual health very briefly refers to the social dimensions of the topic by filming a reproductive health specialist state that patient decision-making can help avoid the undesirable consequences of peer pressure. Perhaps instead, a scene using young people's own accounts could address ideas related to the influence of peers, and also identify the range of interacting factors that affect sexual health (Aggleton et al., 2012). Although the multiple influences on the health of community members cannot necessarily be easily captured in concise, comprehensible films, further educational value could be added to the films via a consideration of individual and wider sociocultural, environmental and/or policy-related factors that shape experiences of health and wellbeing.

Of the 18 films in the company's collection, four films utilised a narrative format and 14 films adopted a non-narrative format. While a non-narrative format can present information directly to viewers, health information woven into a narrative or story may be more useful for learning, particularly in low health literacy populations (Moran et al., 2016). Given that the production company is seeking to produce more narrative-based films, principles of anchored instruction may provide a useful framework to encourage viewers to critically engage with and discuss the depicted content, potentially equipping them with a tool to formulate solutions to the health issues affecting the contexts in which they live and work (Bransford et al., 1990). Including settings/locations, characters/people, information/stories and other features that are more closely tailored to specific communities and subgroups may help viewers consider and discuss the multiple factors influencing their health; it may even lead to the formulation of activities associated with the action areas and strategies in the Ottawa Charter (WHO, 1986: 2).

While production staff interviewees recognised the importance of the films stimulating group discussion and problem-solving, they acknowledged there were no 'pause points' or other elements to facilitate active problem-solving. To help remedy this, future productions could draw directly on the knowledge of community members during the production process in order to ensure that suitable and context-specific visual clues are used in films, and that community's issues and perspectives are more fully represented (Gaventa, 2006). By taking part in the film/storytelling process (with training/support), community members could explore, input and learn about the practices and policies that influence community health and wellbeing. Although research is needed in this area (Hosein et al., 2016), learners' active participation in the production of audio-visual

media may serve as a valuable application of anchored instruction by introducing learners to the elements needed to accurately depict and solve complex issues such as those related to individual and community health and wellbeing.

Utilising community health education films in low- and middle-income countries

As the interview findings indicate, despite the lack of context-specific health information the production company's films have been used within a variety of settings, such as with low-income urban youth in Kenya and with poor rural women and communities in Tanzania and Zambia. Staff members from the local projects claimed the audio-visual content has been well received by the different audiences. Nevertheless, the use of the films had limitations. For instance, while the maternal and child films used by the Tanzanian partner conveyed important biological/medical and behavioural information, the failure to consider other important factors likely to influence practices, such as gender, social norms and economic practices may limit the relevance of the content to female Maasai viewers and undermine their potential for finding solutions to multilevel health problems. Interviews with local staff suggested that the films could be used in slightly modified ways to enhance learning. For example, staff from the Kenya, Tanzania and Zambia based projects stated that after using the films for training there could be opportunities for discussion, enabling viewers to 'clarify the messages' and 'share the same information'.

Group discussion with project staff and peers following the showing of a film can be an important way for viewers to strengthen their understanding of a health topic (Briscoe and Aboud, 2012). However, beyond clarification of biological and behavioural health topic information, project staff indicated the films had not been followed up with linked participatory learning activities or 'problem-solving activities' about the context-specific health factors facing communities. For instance, in the Serenje District, Zambia, project workers had identified a local issue with child malnutrition and in consequence, screened the child nutrition film regularly across the region to increase nutritional knowledge. Yet, without additional learning activities promoting critical reflection on wider factors affecting child nutrition, and without the formulation of an action plan to create a nutritious and sustainable food supply, health concepts from such films are less likely to be understood and applied by community members.

A broader understanding of the community health problem(s) will aid viewers in advocating for equitable changes in community health resources and opportunities (Fry and Zask, 2016; Golden and Earp, 2012). Currently, the health projects in Kenya, Tanzania and Zambia are seeking to reach large numbers of people (over 6000, 45,000 and 2000 respectively), and some film screenings may be to over 100 individuals at a time. As a result, it may become more difficult to make use of Anchored Instruction in its traditional form, with learners intimately reviewing the media content and undertaking related problem-solving activities. Nevertheless, a jigsaw approach could be adopted by dividing a community health topic/problem into its constituent parts,

enabling smaller groups to investigate a manageable portion and suggest solutions, thus collaboratively responding to the wider problem (Huang et al., 2014).

Monitoring and evaluating community health education films

To monitor and evaluate the impact of their films, the production company had sought feedback from local partners concerning the projects within which the films might be used. Staff managing the health education projects in Kenya and Tanzania provided survey findings indicating how both projects (that is the film showings combined with additional project activities) have brought about some changes to knowledge and attitudes among community participants. In Tanzania, comparative data from surrounding districts also indicated improvements in the prevalence of preventable diseases resulting from the film showings and additional project activities. During an independent evaluation commissioned by the production company in Zambia, questionnaire responses pre- and post-screening showed an overall increase in participants' short-term recollection of health messages. However, on some topics, such as postpartum haemorrhage, health knowledge did not significantly improve. Moreover, while data collection before and after the film screening may yield useful evidence, it is unlikely to generate an understanding of audiences' long-term effects and cannot by itself tell us which elements of the films – or associate activities – contributed to change.

To assist with this, Bonell et al. (2012) propose that the constituent parts of an intervention or programme (in this instance, the films and connected activities) should be evaluated collectively, seeking to highlight the interactions between components or elements and with regard to broader contextual factors. As audience members are already engaged with the film, some may be well placed to act as investigators through participatory evaluation approaches to generate understandings of the relevance of content, whether and how a film contributes to learning, and whether associated activities informed the development of action plans (Scott et al., 2016).

In conclusion, by developing more contextually relevant films using concepts from anchored instruction and a social-ecological approach, and by integrating participation more fully into planning, production, implementation and evaluation, the film production company and its partners may be able to better facilitate contextually informed health problem-solving among community members in low- and middle-income country contexts.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Acknowledgements

We thank all the participants and the film production company with whom this research took place.

Notes

1. The action areas were: healthy public policy, supportive environments, community action, personal skills and health services. The strategies were: enable, mediate and advocate.

References

- Aggleton P, Boyce P, Moore HL, et al. (eds) (2012) *Understanding Global Sexualities:* New Frontiers. Abingdon: Routledge.
- Bertrand J, O'Reilly K, Denison J, et al. (2006) Systematic review of the effectiveness of mass communication programs to change HIV/AIDS-related behaviors in developing countries. *Health Education Research* 21(4): 567-597.
- Bonell C, Fletcher A, Morton, M, et al. (2012) Realist randomised controlled trials: A new approach to evaluating complex public health interventions. *Social Science & Medicine* 75(12): 2299-2306.
- Bransford JD, Sherwood RD, Hasselbring TS, et al. (1990) Anchored instruction: Why we need it and how technology can help. In: Nix D and Sprio R (eds) *Cognition, Education and Multimedia: Exploring Ideas in High Technology*. Hillsdale: Erlbaum Associates, pp.115-141.
- Briscoe C and Aboud F (2012) Behaviour change communication targeting four health behaviours in developing countries: A review of change techniques. *Social Science & Medicine* 75(4): 612-621.
- Bull SS, Domek G and Thomas D (2016) eHealth and global health promotion. In: Zimmerman RS, DiClemente RJ, Andrus JK, et al. (eds) *Introduction to Global Health Promotion*. San Francisco: Jossey-Bass, pp.145-172.
- Fry D and Zask A (2016) Applying the Ottawa Charter to inform health promotion programme design. *Health Promotion International* 22: 1-12.
- Gaventa J (2006) Finding the spaces for change; a power analysis. *IDS Bulletin* 37(5): 23-33.
- Golden SD and Earp JAL (2012) Social ecological approaches to individuals and their contexts: Twenty years of "health education & behavior" health promotion interventions. *Health Education & Behavior* 39(3): 364-372.
- Hosein EN, Kennedy MG and Buffington SDC (2016) Two health communication approaches: Communication for Behavioural Impact (COMBI) and entertainment education. In: Zimmerman RS, DiClemente RJ, Andrus JK, et al. (eds) *Introduction to Global Health Promotion*. San Francisco: Jossey-Bass, pp.99-128.
- Huang YM, Liao YW, Huang SH, et al. (2014) Jigsaw-based cooperative learning approach to improve learning outcomes for mobile situated learning. *Journal of Educational Technology & Society* 17(1): 128–140.
- Hubley J (2006) Patient education in the developing world—a discipline comes of age. *Patient Education and Counseling* 61(1): 161-164.
- Hubley J, Copeman J and Woodall J (2013) *Practical Health Promotion*. 2nd edn. Cambridge: Polity Press.
- King N and Horrocks C (2010) Interviews in Qualitative Research. London: SAGE.
- Moran MB, Frank LB, Chatterjee JS, et al. (2016) A pilot test of the acceptability and efficacy of narrative and non-narrative health education materials in a low health literacy population. *Journal of Communication in Healthcare* 9(1): 40-48.
- Neuendorf KA (2016) The Content Analysis Guidebook. London: SAGE.

- Rasanathan K and Sharkey A (2016) Global health promotion and the social determinants of health. In: Zimmerman RS, DiClemente RJ, Andrus JK, et al. (eds) *Introduction to Global Health Promotion*. San Francisco: Jossey-Bass, pp.49-64.
- Scott S, D'Silva J and Hernandez C (2016) The tribal tobacco education and policy initiative: Findings from a collaborative, participatory evaluation. *Health Promotion Practice* 18(4): 545-553.
- Shyu HYC (2000) Using video-based anchored instruction to enhance learning: Taiwan's experience. *British Journal of Educational Technology* 31: 57–69.
- Skolnik R (2016) The state of global health. In: Zimmerman RS, DiClemente RJ, Andrus JK, et al. (eds) *Introduction to Global Health Promotion*. San Francisco: Jossey-Bass, pp.1-30.
- United Nations (2015) Sustainable Development Goals. Available at: www.un.org/sustainabledevelopment/health/ (accessed 8 August 2017).
- World Health Organisation (WHO) (1986) *The Ottawa Charter for Health Promotion*. Geneva: WHO. Available at: www.who.int/healthpromotion/conferences/previous/ottawa/en/ (accessed 4 February 2016).
- World Health Organisation (WHO) (2015) Global Health Observatory data repository. Available at: apps.who.int/gho/data/node.home (accessed 2 February 2016).
- Zydney JM, Bathke A and Hasselbring TS (2014) Finding the optimal guidance for enhancing anchored instruction. *Interactive Learning Environments* 22(5): 668–683.