Article

Intervention design in public health: adaptive messaging in the Tanzanian National Sanitation Campaign

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Abstract

Few case studies exist in the public health or design literatures showing how to create national scale messaging campaigns in low-income countries using design processes. In this paper, we describe how we used Behaviour Centred Design to develop *Nyumba ni choo*, the Tanzanian National Sanitation Campaign. The process involved multiple iterations of ideation and filtration by professional creatives, government staff, academics and sanitation specialists to create a branded mass communication campaign, which was refreshed annually. The campaign was based on the insight that Tanzania is modernizing rapidly, with people upgrading their homes, but leaving their outside toilets in a 'traditional' state. Built around the 'big idea' that a household is not fully modern without a good-quality, modern toilet, the campaign employed reality TV shows, live engagements and mass and digital media postings, all targeted at motivating both the government and general population to improve toilets. The campaign we have notive to a major uptick in the rate of toilet building. Efforts to improve public health-related behaviour can be enhanced by using systematic approaches that build on available evidence, understand behaviour in its common settings, employ psychological theory and engage creative expertise.

Keywords: design for behaviour change, intervention development, public health, mass communication, Behaviour Centred Design

INTRODUCTION

Changing human behaviour in ways that will improve health is a complex and uncertain process, but the chances of success can be enhanced in a number of ways. The psychological and contextual determinants of the target behaviour can be explored by reviewing the literature and consulting experts. Formative research with potential target audiences and key informants can help to elucidate the local context and potential levers of change (Curtis *et al.*, 1997; Greenland *et al.*, 2016; Czerniewska *et al.*, 2019). Behavioural theory can be used to develop and organize such insights and to build putative theories of change (De Silva *et al.*, 2014). However, the process by which academic, practitioner and local knowledge about behaviour is translated into an intervention that engages the target audience, is feasible to deliver and is effective and cost-effective at changing behaviour, especially in resource poor settings, remains under-theorized.

Here, we describe how we coupled design thinking (Brown, 2008; Dorst, 2011) with the theoretical insights of Behaviour Centred Design (BCD) (Aunger and Curtis, 2016) to create, test and deliver a programme to mobilize the population of Tanzania to improve their toilets. This novel intervention is being delivered by the Tanzanian government through mass and social media and via direct consumer contact events. It reached more than 12 million people with

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Contribution to Health Promotion

- Provides rare example of description of sequence of steps involved in development of a communication campaign.
- Provides an example of a theory-based creative development strategy.
- Shows how creative professionals can be involved in a public health campaign.

some 20 000 pieces of communications content, and was associated with a major uptick in the rate of toilet improvement across the country.

Tanzania has a long history of struggle to improve its sanitation conditions. Whilst the country reached some level of latrine coverage during the government's first national sanitation campaign, *Mtu ni Afya*, of the 1970s [around 20% (Hall, 1978)], the country missed its Millennium Development Goal targets in 2000 and recent national campaigns had limited success in moving the population up the sanitation ladder from basic and unhygienic (unimproved) latrines to improved latrines. By 2017, only 43% of people in Tanzania had access to good-quality toilets (National Sanitation Management Information System data [https://nsmis. moh.go.tz]).

The Tanzanian government, with the support of the UK's international development agency Foreign, Commonwealth and Development Office, commissioned a consortium to design and support the delivery of a new national sanitation campaign on behalf of the Ministry of Health with the objective of reaching 100% good toilets (choo bora) by 2025. Led by the London School of Hygiene and Tropical Medicine (LSHTM), Project CLEAR is a consortium that includes Tanzanian management consultants, Innovex, a Tanzanian management agency, McCann Global Health, an advertising agency, and EXP, a local event management agency. Clouds Media Group, a Tanzanian broadcaster, joined the consortium later. This paper describes and discusses the creative process by which this behaviour change campaign was designed by a team composed mostly of Tanzanians professionally trained in specific aspects of creative development, as well as some Europeans with decades-long experience conducting health promotion campaigns in Africa, mostly with respect to sanitation and hygiene. This team helped the country achieve a significant increase in sanitation coverage, from the 43% coverage of improved in 2017, when the campaign began, to 73% of the country having access to improved sanitation by the end of the campaign in 2021 (National Sanitation Management Information System data [https://nsmis.moh.go.tz]).

Few academic articles describe the ins and outs of developing a particular messaging campaign to address behavioural objectives. Most articles about intervention design are instead general guides to creative development from a design or advertising perspective (Pechmann and Reibling, 2000; Rice and Atkin, 2012), or simply describe the elements of a complex intervention (Heimendinger et al., 1996), but not how they were derived, or list lessons learned from engaging in the design process, rather than describing the process itself (Stevens, 1998). Others judge a collection of campaigns against some theoretical standard, such as expected utility theory (Jung et al., 2020) or the Elaboration Likelihood Model (Wilson, 2007). Even those that do focus on describing one campaign's development often have a particular issue in mind, such as how the target population can be actively involved throughout the design process (Thorn et al., 2020). The process details of one complex case study should provide useful lessons for others engaged in similar projects. What follows is therefore a detailed presentation of the steps taken to develop the creative materials behind the Tanzania National Sanitation Campaign.

METHODS

Behaviour Centred Design

BCD employs a theory of change based on reinforcement learning, evolved motives and behaviour settings theory coupled with a systematic process for the design, delivery and evaluation of behaviour change programmes (Aunger and Curtis, 2016). Developing a theory of change, with use of behaviour change techniques (Michie et al., 2015) or solution principles (Cash et al., 2020), can ensure sound planning and facilitate ideation. Behaviour change frameworks, not just theories, are needed to be able to generalize behaviour change processes and hence outcomes (Michie et al., 2011; Aunger, 2020; Cash et al., 2020). The diagram in Figure 1 shows the BCD theory of change across the middle. In order for the desired impact to occur (in this case, for the population to have improved toilets), the behaviour of the target audience must change (toilets are built). This will only happen if psychological changes occur (i.e. toilets are sufficiently valued by householders). Such psychological change can only happen as a result of changes in the settings of the target population (e.g. social norms change, toilets become cheaper to obtain or officials fine non-users). It is the job of the intervention to bring about such changes, for example, through communications or market facilitation. In this case, it was important to achieve impact at scale. Different levels of impacts (on attitudes, behaviours and even quality of life) are possible when interventions are effective (Fokkinga et al., 2020).

BCD has five steps, known as Assess, Build, Create, Deliver and Evaluate, shown around the outside of Figure 1. In the Assess step, literature and experts are consulted and existing knowledge about the target behaviour is compiled. In the Build step, rapid formative research is conducted with the target population using variety of tools to provide an in-depth understanding of the drivers and settings of the target behaviour. This is then used to build a theory of change. C is the 'Create' step, where creative professionals help to bring a campaign to life, ensuring that it is engaging and surprising, causes revaluation of the behaviour and assists in its performance. The campaign concepts and elements are tested, as far as resources allow, prior to roll out (the 'Deliver' step). Interventions are then evaluated according to the theory of change and the outcomes (providing new information which can in turn inform the 'A' step of a new intervention). Previous publications about this project cover the Build phase (Czerniewska et al., 2019), an evaluation of the processes by which it was implemented and achieved its results (Thorseth, submitted), and reflections on the generalizable lessons learned (Aunger, submitted).

During the creation of a new product there are expansion and contraction steps. At each expansion step new ideas are introduced, and at each contraction step, these are winnowed to a smaller, more promising set of ideas using a variety of filters. Here, we briefly describe the A and B steps as background, using the 'double diamond' approach (Design Council, 2007), but focus on the C step, which is rarely described in the academic literature (Figure 2).

Assess phase

The Assess phase for the design of the Tanzanian national sanitation programme involved an inception

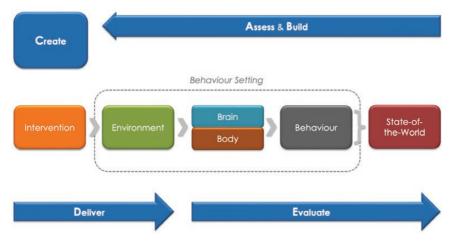
workshop, a knowledge review and a framing workshop. At the inception workshop with stakeholders in Dar es Salaam the project management team agreed to the objectives and a plan for the programme. We then reviewed existing knowledge about candidate target behaviours and their determinants based on theory, published and grey literature and the views of available experts. Data were organized using the categories of behavioural determinants recognized by BCD (the BCD 'checklist'). A framing workshop involving the design team and stakeholders winnowed our broad range of findings down to a smaller set by ranking them for their likely relevance and power to change behaviour in the current context.

Build phase

The report of the framing workshop set out the task for the next phase, where a field team carried out formative research to understand the determinants of the target behaviours in their context. In two regions of Tanzania a team of social scientists carried out a rapid field study employing a variety of novel methods such as taking toilet histories, mapping motives, playing games, identifying touch points and personifying toilets.

Create phase

Seven main activities were carried out in the Create phase. To get an early start on the creative aspects of the project we held a first creative workshop in London in June 2017 with the Tanzanian, New York and London team members (what we will call the 'C1 step'). The team reviewed the findings of the Assess work, agreed on the target behaviour (building a good toilet, which had to be defined), discussed the profiles of the target audience and sketched out the consumer journey



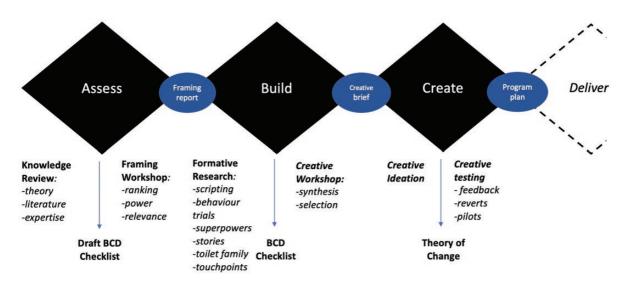


Fig. 2: The BCD process with a 'double diamond'.

required to acquire a good toilet. All attendees then generated a range of 10–20 ideas on pieces of paper, which were laid on the floor. Attendees together sorted these ideas into about 40 clusters, which were each given a sentence to describe them; these labels we call 'themes'. Themes were then filtered down by ranking them against two parameters: (i) Relevance to the target behaviours; and (ii) Changeability (i.e. the potential influence our campaign could have in this area).

McCann took the top three themes back to New York to develop into 'adlobs' ('ad-like objects') and preliminary executional ideas for videos, logos, slogans and posters for each concept area. These were then tested in 10 focus group discussions, 2 with fathers, 4 with mothers, 3 with a mix of fathers and mothers and 1 with boys (girls were reticent to participate in exercises with strange adults) (C2 step). Alongside, participants were shown campaigns ads produced by the same team for previous sanitation campaigns in other countries to provide further insight into possible drivers of target behaviours and appreciation for certain styles of presentation. Participants were asked to describe what they saw, to explain their understandings, to recall their emotional responses and to rank the concepts according to their persuasiveness.

The next step was a 2-day multi-stakeholder creative workshop, held in Dar es Salaam in mid-August 2017, immediately following completion of the formative research (C3 step). The task of this second creative workshop was to develop our ideas and then narrow them down to a single 'big idea' to guide campaign development. Attendees included members of the relevant government ministries, funders, representatives of the CLEAR consortium members and media/creative companies. The aim of this workshop was to develop ideas and then narrow them down to a single 'big idea' to guide campaign development. Participants again reviewed the target behaviours and audiences, the findings of the formative research and the concept testing, and then generated a large range of novel ideas, which were then filtered by clustering and ranking. After reviewing the findings of the formative research and the early creative territory testing, all attendees wrote 10-20 ideas on pieces of paper, which were laid on the floor. Attendees sorted these ideas into about 40 groups, each with a sentence describing them. Attendees then grouped these insights based on similarity to each other. This resulted in 11 'themes', nine of which were considered to be candidates for the 'big idea' that would underpin the campaign. These were then ranked for relevance and changeability by the participants. The highest ranked idea was the one that would eventually inform the final campaign. McCann took the winning ideas back to New York and developed them into a set of four concepts (see below). These were rapidly tested in six focus groups in three regions by EXP, where two lead concepts emerged (C4 step).

The next filter to be applied was political (C5 step). Our two concept areas were presented formally to the Minister of Health in Dar es Salaam in September 2017. She gave her agreement to one, which became the 'big idea'. The creative team then began to develop the actual campaign materials. First, McCann involved Exp, together with the campaign team, to help devise a locally appropriate, and resonating slogan. Options for a brand identity and logo were generated by McCann and EXP and again filtered by the Ministerial team down to one, politically acceptable, choice (C6 step). The final development of the campaign components was again an iterative process, with EXP leading creative development of elements of the campaign, which were filtered again through an extensive series of reverts with the design team and the Ministry. Clouds Media Group, a large Tanzanian broadcasting company, were brought on board, and soon became an active creative partner in the programme (C7 step). Roll out of the campaign (the Deliver phase) finally began in February 2018.

To maintain interest, the programme was revised and refreshed annually. These creative refreshes had to reflect changing circumstances (particularly the arrival of COVID-19 in 2020), while keeping with the established brand, and maintain political viability throughout. After the switch to COVID-related messaging, the idea was to ensure that all COVID-19 preventive measures were addressed, signalling that everyone should continue to practice frequent hand washing with soap, face hygiene by using face masks and physical distancing. The campaign also aimed to ensure that everyone feels the responsibility, with a role to play, to continue taking action on combating the pandemic.

RESULTS

The initial assessment suggested that the general population already knew about the health benefits of toilets, but that people might not know where to get materials or a mason to construct them. It seemed that a good toilet might confer status and be an opportunity to create additional capital value to the house, but that people might regard a basic toilet as 'good enough'. We noted that houses themselves were being modernized, but that the toilets outside were being 'left behind'. Fieldwork showed that rural Tanzania was undergoing rapid modernization of the housing stock, but that toilets were not included, thought about, or discussed in this process. People agreed that a poor toilet was disgusting, but then they put it out of their minds [a common consequence of disgust (Curtis, 2013)]. The availability of materials and masons was not seen to be a major problem, as many people were in the process of improving their houses. However, rebuilding a toilet to a good standard was still seen as a significant investment. Motives for building a good toilet ('choo bora' in Swahili) included status, fear of falling in, physical comfort during use and the chance to create an attractive addendum to the house.

In the first creative workshop in London (C1 in the creative timeline), the team generated a large number of potential ideas which were ranked by their likely relevance and changeability. The three 'territories' were: 'Better progress for yourself and your family',

'Rising together as a society' and 'The modern, urban lifestyle'.

The field testing of these three territories (C2) produced useful learnings. 'Better progress' was represented by a poster with a picture of single stem of wheat, symbol of the ability of a small thing to grow into something big. The idea of taking tiny steps forward to a goal resonated strongly in the FGDs. The concept acknowledged that life is hard, but one should not give up. It spoke to the resilience and optimism of the poorest and the 'spirit of Tanzania'. However, participants thought that the concept related to farming and financial savings. Linking it effectively to the target behaviours of building a good toilet was seen as a problem.

'Rising together' suggested to audiences that moving forward as a group required all to become more hygienic. This concept was seen as being relevant for sanitation associated with institutions such as schools and government offices, but less so for private households, who were the main target of the campaign.

The third territory, which involved extending the urban, 'modern' lifestyle to include good-quality sanitation (not just fancy clothes and mobile phones), was seen as attractive and fun. However, the examples of well-dressed people with high status in the ad-lobs were disliked. This was because the individuals portrayed were suspected of showing off, and of being irrelevant to the largely rural audience we were targeting. However, such lifestyles were seen as strongly desirable.

The second creative workshop (C3) produced a small group of amalgamated ideas, such as 'Experience of a better toilet can make a person want one more'. Further analysis led to 'Reduce the gap between the quality of the toilet and the house' becoming the final winning idea.

Following this meeting, McCann Global Health went back to New York and conducted brainstorming to develop more focused implementation concepts from the workshop themes. Four were developed:

- 1. *Kesho Inaanza Leo* ('Someday begins today'). Being a modern person means having plans, a vision, dreams. It means looking for tomorrow to be better than today. Imagining your children living better lives than you do. But you have to start somewhere.
- 2. Utaenda'api? ('Where do you want to go?'). Parents worry about what's best for their children. Their own dreams become intertwined with the potential of their children. Which is why they need to provide them with a good toilet and encourage proper hand washing—so that their children can go further in life.

- 3. *Chagua kilicho bora* ('Make the right choice'). Your life may be limited—by the harvest, by struggling to just make ends meet—but that doesn't mean that you can't, or shouldn't, strive for more. A better life starts with making the choice to have one.
- 4. *Maisha Swaafi Kabisa* ('Lead a carefree life/ Life's good'). The right branding can add perceived value to almost anything. To increase desire for good toilets and hand washing with soap, we will imbue them with a bit of relatable glamour. This wasn't about persuading anyone with a logical argument, but by connecting to their existing desire to be someone who is coming along in life and planning for a brighter future.

Four was perceived as too many, so 'Where do you want to go?' was dropped. These concepts, again embodied in prototype slogans, draft television commercials, posters and logos, were then tested (C4) in six FGDs in three regions by EXP. Two concepts came out most strongly. These were *Kesho Inaanza Leo* ('Tomorrow starts today'; a development of the 'tiny steps' idea) and *Maisha Swaafi Kabisa* (an expression of the 'modern style' idea).

These two concepts were presented formally to the Tanzania Minister of Health in Dar es Salaam in September 2017. The Minister thought both were of value, but was more enthusiastic about *Kesho Inaanza Leo*. However, she noted that this concept was too general, and could motivate any desired behaviour. Hence the 'Modern style' concept emerged as the big idea to take forward.

On this basis, McCann and EXP devised a locally appropriate, resonating slogan: 'Usichukulia Poa, Nyumba ni choo'. Usichukulie Poa is an informal phrase associated with urban, modern audiences, which translates loosely as 'Don't take it easy/lightly'. Nyumba ni choo means 'it's not a (proper) home without a toilet'. The first part of the slogan is a slight revision of the 'Tomorrow begins today [act now]' idea. The second half expresses the central insight that homes have been significantly improved in quality around the country in the past decade or two, but sanitation has been left behind. The idea was for toilets to be included in a household's self-concept, as part of the drive for a modern lifestyle.

The final stage of the create phase (C7) was the development of the campaign materials. Based on reviewing the reach and likely cost-effectiveness to reach our two target audiences of government officials and general population, we selected mass media and Direct Consumer Contact or 'roadshow' events as our main channels of communication. Clouds Media Group was invited to become a partner following a media market analysis which showed Clouds having the highest reach among target audiences in Tanzania. It is also the media outlet favoured by decision-makers, including the President of Tanzania.

Following our brief, and with guidance from EXP and McCann, Clouds developed scripted spots for radio and TV. They also mentioned the campaign during other regular programming, such as news-oriented morning shows and entertainment segments.

Clouds was also responsible for organizing the roadshow events. These roadshows were led by an internationally famous Tanzanian singer, Mrisho Mpoto, and included singing, dancing, drumming and acrobatics, all on the topic of modernity, as well as messaging about the importance of good toilets. Local officials were always involved in these events, during which Mpoto whipped up the population to demand action from their officials. These events provided material for radio and TV and clips posted on social media outlets.

Clouds personnel who were in the field documenting these events independently began developing additional materials around the idea, related to Nyumba ni choo, of 'catching people out' for not having a good-quality toilet. These became 'reality-TV'-style segments and were broadcast on national TV. Further development, with a change in host and longer format, documented how households 'caught out' in this fashion, then agreed to upgrade their toilets, and the process this required. Such 15-min episodes were rebranded as instalments of a 'Toilet Makeover Show' called Mr Nogesha ('Mr Fixit'). These became additions to the brand-consistent, fully produced television commercials and radio spots. These developments were in keeping with the Clouds brand of live broadcasts from around the country, reflecting trending events or issues, and had a 'modern, youthful' flavour, while also being an innovative and effective means of carrying the campaign message to our two main audiences, the general population and government officials.

To these communications activities a rolling programme of support to government officials was added to help them to monitor sanitation progress and redouble their on-the-ground activities to promote sanitation improvement in their districts. We also engaged with the private sector to cooperate in the promotion of low-cost toilet components, and with other development partners who had existing or planned sanitation programmes.

The National Sanitation programme was finally launched in a high energy event hosted by the country's vice president in the capital, Dodoma, in March 2018. Many TV and radio broadcasts, some of which were then posted onto social media as well, acquainted the whole country with this new, branded public health campaign. Awareness became nearly endemic. Message 'refreshing' was achieved by keeping message content consistent, sticking to the same style and colour pallet and ensuring governmental backing. The essential brand message remained the same: *Nyumba ni choo* ('It's not a (proper) home without a toilet'). However, over the period of the campaign our secondary messaging ('annual themes') changed:

- 2017: Nipo tayari ('I'm ready'): A new campaign is beginning, and I'm behind it (primarily for government officials)
- 2018: Usichukulie poa ('Don't take it easy/ lightly'): Time to start thinking about upgrading your toilet!
- 2019: *Tumetoka mbali* ('We've come a long way'): Everyone is doing it (upgrading their toilet)
- 2020: *Vunja kibubu* ('Break open your piggybank'): It's time for action now, or you'll be left behind

This progression of themes can be seen as reflecting the campaign's own journey, but also as the journey taken by the Tanzanian householder, moving through stages of preparedness to take action, and identifying who now needs to act (if they haven't already), or risk being left out.

However, in 2020, the COVID-19 pandemic arose, and the government gave the coalition the job of addressing this new issue as well. The first programme amendment, introduced in March 2020, was to produce a secondary theme to call for frequent hand washing with clean water and soap: Mikono Safi, Tanzania Salama ('Clean hands makes for a peaceful Tanzania'). This first move combined the WASH programming so familiar from earlier iterations of the National Sanitation Campaign with the need to begin educational messaging around COVID-19. However, in April, this was modified to Usichukulie Poa, Unategemewa-combining a previous tagline Usichukulie Poa ('Don't take life for granted'), with a new call to action: Unategemewa ('You are depended upon'). The programme continued to the end of 2021 with a combination of WASH- and pandemic-oriented messaging.

DISCUSSION

According to Egger *et al.* (Egger *et al.*, 1993), creating effective communications requires two steps: 'getting the right message' and 'getting the message right'. The first step involves some kind of market or formative research in order to identify the content of the message. The second involves finding ways to present the message that attract attention, are believable, relevant, understandable and arouse appropriate emotions (Donovan and Henley, 2003). BCD suggests that creativity is needed to make audiences pay attention to the message (surprise), imagine the benefits of the product or behaviour (revaluation) and make the behaviour feasible to carry out (performance). Materials still need to be created, produced, tested and disseminated through appropriate channels of communication, all of which require specialist skills.

In this paper, we have described the creative process used to design the Tanzanian national sanitation programme, now known as *Nyumba ni choo*. First, we generated and filtered insights, themes, ideas and concepts, based on formative research, until we arrived at the Big Idea (the 'right message'). The team then went through a further process of designing a rolling campaign of events, mass media activity and support to Government's on-the-ground promotional efforts, so as to 'get the message right'.

At each step of the way we used a Darwinian process of generating variety and then combining and selecting the resulting ideas based on their likely fitness to achieve our task. This is a development of the well-known 'double diamond' approach, commonly employed by designers (Design Council, 2007). A key feature in the success of this method was the involvement of a large range of concerned individuals, whether from government, donors, communities, academia or professionals from the world of marketing. To Marshall their experience and creativity required a series of well-organized and facilitated workshops, where all were encouraged to contribute equally, and solutions were arrived at via consensus process.

The creative process embodied some further innovations. Instead of going through this process only once, generating one set of intervention materials-for example, scripted and highly produced TV ads to be shown to a particular, paid-for schedule-we went into partnership with a local media house whose job it was to continually fashion new creative content (while following the overall brand and brief). This proved prescient, as Clouds Media became a committed partner, producing far more 'live' content than we would have been able to develop, oversee or fund as more fully produced material. For example, by the end of the second year of activity they had logged some 20 200 pieces of varied communication content for various channels and audiences. The traditional model of creation of content by 'experts' in an office in the capital city could not have produced these kinds of situationally relevant, nuanced and continually refreshed creative outputs.

The 8- to 10-month process of generating and winnowing ideas, concepts and themes was complicated, and, at times fraught, involving, as it did, teams from six institutions and five countries on three continents. These actors included companies, consultancies and academics, all guided by agencies from the Tanzanian and UK governments. The Tanzanian government had the ultimate say as they were the primary client of the campaign, and secondarily, everything done required approval by the funder, Foreign, Commonwealth and Development Office, as well. There was little conflict among coalition members, however, at major decision-points about the direction of the campaign, even though members had different backgrounds (mostly English or Tanzanian), due to a deeply shared concern for the success of the programme, and shared experience in sanitation promotion and behaviour change. This effort finally produced a compelling campaign based on the 'Big Idea' that people in Tanzania cannot live a truly modern lifestyle unless their house has a good toilet. The campaign is well known and popular across Tanzania and has coincided with an acceleration of toilet building (https://nsmis.moh. go.tz/; Thorseth, submitted). There was, inevitably, some impatience in government with the time it took to complete the Create phase and to reach the launch date. However, we argued that the substantial investment being made to redesign the whole national sanitation campaign represented value for money, in the sense that the campaign would be more likely to be effective, if properly designed, rather than continuing with standard approaches, with poor results, as elsewhere.

Indeed, when the government realized that the creative process would require time, they asked what could be done in the interim. This gave birth to an innovative 'quick win' PR programme entitled *Nipo Tayari*, where EXP, our event management team, appeared at regularly scheduled government events. Officials were shown their districts' own sanitation coverage statistics, were interviewed on TV or radio, and were asked to pledge their commitment whilst standing inside a circle representing the campaign logo. During this pre-campaign phase we realized that a strong and attractive national campaign would provide many opportunities for politicians to align and gain credit from the programme. As a result, they became a major focus of our efforts.

Nipo Tayari achieved its objective of high-level commitment to the National Sanitation Campaign among political and social leaders by creating opportunities for these individuals to gain status and recognition with the public and their superiors, through public pledges to champion the campaign. Previous sanitation campaigns had been less successful at generating such support: for example, between 2005–9 and 2011–15, development partners in Tanzania spent at least USD 5 million on enabling assessments, workshops, staff time and writing a (never-enacted) sanitation policy. While these efforts improved sector-level structures and dialogue, they did not achieve high-level political commitment.

The approach that finally emerged for the national sanitation campaign is very different from standard approaches to sanitation promotion in Africa and Asia. These typically employ a method known as Community Led Total Sanitation (CLTS) to 'trigger' communities via disgust of faeces (Kar and Chambers, 2008). By contrast we suggest that the 'cool', attractive and surprising tone of *Nyumba ni choo* contributed to both population and politicians wanting to have a national conversation about the hitherto avoided topic of toilets. Indeed, the *Nyumba ni choo* slogan is now so well recognized it has become a cultural meme (i.e. in use on social media in various guises).

The perennial campaign refreshes, with new content supported by novel secondary taglines, have also ensured continued interest in sanitation. The shift to programming around COVID-19 in 2020 was achieved by maintaining the brand logo, sponsorships, outreach events, media channels and keeping the same management and creative teams throughout.

CONCLUSION

The creative process underlying the development of a public health campaigns is rarely documented. In this paper, the extensive and iterative process of creative development that took place to design the Tanzanian government's Nyumba ni choo campaign to promote improved household sanitation has been described. These developments have throughout been guided by the active involvement of the Tanzanian Ministry of Health, as well as the UK funder, the Foreign, Commonwealth and Development Office. For a public health programme around sanitation, the level of innovation has been exhilarating, with constant changes to the content of the intervention, changing roles of the consortium members in generating programme activities, an evolving relationship with government and a swing in the general 'culture' of sanitation in the country.

The central involvement of a media company whose role was to adaptively respond to ideas generated in the field, as well as current events, were key to overall success. That the government acquiesced in allowing this way of working was also helpful. Another fascinating aspect has been the fact that the government has been both the client and a major target of the programme.

While a full evaluation is difficult to design, given the importance of mass media in the campaign and the adaptive nature of the programme content, a number of indicators of success are evident:

- The government is keen to play a role on the international stage, seeing themselves as having a top-quality programme to show other countries.
- Active involvement from the highest level public figures has been secured: major celebrities (Mrisho Mpoto, a singer, Masoud Kipanya, a political cartoonist, and Kelvin 'Mbappe' John, a footballer), and government officials (Prime Minister, Minister of Health).
- Major international corporations have sought to become partners: Lixil, an international sanitation supplier, has moved into the country in a big way, in parallel to this campaign, and Unilever, with its Lifebuoy brand, has recently become affiliated with it.

The Nyumba ni choo programme has achieved recognition throughout the country. A social taboo has been broken; people can now talk about, and show, toilets on TV. Cultural phenomena have sprung up related to the campaign, such as various memes on social media (e.g. use of the slogan in unintended ways by independent communities in the country). Other social institutions such as churches and women's groups, are getting involved, even in areas the campaign has yet to reach directly. All of this indicates that our creative process helped, not just to get the right message, but also to get the message about toilets right.

FUNDING

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CONFLICT OF INTEREST

The authors declare they have no conflicts of interest.

ETHICAL APPROVAL

Participants were informed about the study and that their opinions would be anonymized at an individual and organizational level. Written consent was provided by each participant. Ethical approval for the study was provided by the London School of Hygiene and Tropical Medicine (Document ref: 17832) and the National Institute of Medical Research Tanzania (Document ref: NIMR/HQ/R.8a/Vol IX/3364).

DATA AVAILABILITY

Requests for access to creative materials and process notes by interested parties can be sent to the corresponding author.

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