Behaviour Change:
Attitudes, perceptions,and activities among partners implementing behaviour change programs in Madagascar

Executive Summary

The aim of this study was to understand how Water, Sanitation, and Hygiene (WASH) behaviour change interventions are conceptualized and delivered within and between various administrative levels of civil society organizations and government institutions in Madagascar.

Qualitative tools including interviews, focus groups and observations were used for data collection. Interviews were conducted with key staff members at national, regional and field levels. Focus groups were conducted with a mixture of regional and field staff, or with national staff alone and including ranking and listing exercises. Finally, observations occurred with field workers in order to understand how behaviour change was implemented. Data collection took place in three regions of Madagascar: Atsinanana, Aloatra Mangoro and Vatovavy Fitovinany. Six organisations selected by RANO-WASH participated in the data collection process. In total, 14 interviews, 6 focus groups, and 12 observations were completed.

Three key facets emerged from interviews when participants discussed behaviour change: sensitization, triggering and convincing. Many organisations spoke about sensitization as something they used to do, but have since changed their tactics. While others felt sensitization was still important for behaviour change. Those who had moved beyond sensitization discussed the need for triggering communities. Regardless of approach, sensitization or triggering, participants felt that the population needed to be convinced by the messaging to change their behaviour. Data from focus groups support these findings with participants often listing sensitization or education, and convincing as their top responses for how behaviour change occurs.

Interviews also showed a common understanding that policies were implemented from the top down, but some flexibility was given to field workers to allow for adaptions to local context. Results from focus groups differed slightly from this as the majority of organisations felt that those at local level had the most power when it came to policy implementation.

Observational data was analysed using the COM-B framework and aimed to classify observed field worker activities as effective behaviour change, or not. Using a list of criteria from the framework, only 1/12 observations met the minimum criteria required to be classified as effective behaviour change. All other activities 11/12, regardless of their theories or approaches (CLTS, sensitization, BCD) appeared similar in delivery, and were classified as sensitization – not behaviour change.

Overall, although there appears to be a deeper understanding that contextual factors such as culture or values can play a role in determining behaviour, this has failed to translate into the behaviour change policies or activities that are being delivered. This study has shown that there is a clear need for a more sophisticated and nuanced approach to behaviour change in order for programmes to be efficacious.

Introduction

Human behaviours play a key role in determining health outcomes; individual behaviours contribute to most of the leading causes of death worldwide (Davis et al., 2015). In order to improve health, it is necessary to change these individual behaviours. Although definitions differ, in simplified terms, behaviour change is when a person is faced with a familiar situation but performs a new – and preferably improved – behavioural response. Traditionally, efforts to change health behaviours have relied on educational and information-based approaches; teaching new people about the health risks associated with a specific behaviour and how they can adapt their own behaviour in a health positive manner (Janz and Becker, 1984). For water, sanitation, and hygiene (WASH) interventions, this is often seen in behaviour change efforts that focus on teaching people how and when to wash hands, how to handle or treat drinking, or to use a latrine in order to prevent diarrhoea or other related health outcomes. Recent evidence suggests that these approaches are largely ineffective (Kelly and Barker, 2016, De Buck et al., 2017). Recent advances in behavioural science place a much larger emphasis on the settings and context in which certain behaviours occur; the emotional and reactive drivers of behaviour, and the complex social and physical environment that shape behavioural outcomes (Aunger and Curtis, 2016, Dreibelbis et al., 2013, Michie et al., 2011, Mosler, 2012).

Many WASH interventions suffer from limited adoption and sustainability of health outcomes, resulting in attenuated or limited health impact (Clasen et al., 2014, Patil et al., 2014, Chard et al., 2018). Behavioural theory can be an integral part in the intervention design, implementation and evaluation process and may be associated with improved behavioural outcomes (Davis et al., 2015). However, evidence has also shown that even when organizations develop more nuanced and innovative approaches to behaviour change strategies, there is a disconnect between concept and execution of behaviour change interventions, and frontline health workers often default to simple didactic messaging (Baetings, 2012, Greenland et al., 2016, Venkataramanan, 2012). In a systematic review of approaches to hygiene and sanitation behaviour change, De Buck and colleagues identified that there is a need for further assessment of barriers and facilitators that influence behaviour change implementation (De Buck et al., 2017)

In Madagascar, the RANO-WASH (Rural Access to New Opportunities in Water, Sanitation and Hygiene) is working to improve key WASH behaviours and use of WASH services in three regions of Madagascar. In order to improve current behaviour change programming, RANO WASH has partnered with researchers at the London School of Hygiene and Tropical Medicine to research current attitudes, perceptions and activities related to WASH behaviour change in Madagascar and use findings to inform a theory and evidence-based approach to behaviour change.

The aim of this study is to understand how Water, Sanitation, and Hygiene (WASH) behaviour change interventions are conceptualized and delivered within and between various administrative levels of civil society organizations and government institutions in Madagascar. Specific objectives were:

1. Investigate current WASH behaviour change interventions in the East, South East and Centre regions of Madagascar

2. Identify the implicit or explicit theoretical models that informed current behaviour change approaches

3. Identify differences between program inceptions and program execution

4. Understand perspectives, views and assumptions of key stakeholders in relation to behaviour change.

Methods

A series of qualitative tools were used for data collection, including interviews, focus group discussions and observations. Interviews were conducted with key stakeholders at national, regional and field levels in order to gauge their perceptions on behaviour change and policy implementation. Focus groups were conducted at regional and national level to gather data on individuals understanding of what behaviour change is and how it occurs. Finally, observations were conducted at field level with field workers of each organization to view how behaviour change policies were actually implemented on the ground. All research activities were approved by the Ethical Review Committee of the London School of Hygiene and Tropical Medicine. All individuals participating in data collection provided written consent in the form of a letter for their staff members to participate.

Study Site

Data collection took place in three regions of Madagascar - Atsinanana, Aloatra Mangoro and Vatovavy Fitovanany - and in Antananarivo at national level. These regions are the target region where RANO-WASH will be working and implementing activities. Figure 1 shows where these regions are located.

Sample Size and Sampling Strategy

Six organisations were selected by RANO-WASH to participate in this process. These organisations were a mix of government ministries and international non-governmental organizations (NGOs) working in the three key regions of RANO-WASH. All organisations worked either in WASH or nutrition or had active behaviour change programming. Table 1 shows which methods were used with which organisations.

Table 1: Methodology and Sample Size

Organisation	Method	Sample Size
ONN/ORN	Focus Group Discussion Interview @ Regional & Field levels Observations	• 4 people • 2 • 2 field workers
Water Aid	Focus Group Discussion Interview @ National, Regional & Field levels Observations	• 5 people • 3 • 2 field workers
FAA	Focus Group Discussion Interview @ Regional & Field levels Observation	• 3 people • 2 • 2 field workers
CRS	Focus Group Discussion Interview @ National, Regional & Field levels Observation	• 4 people • 3 • 2 field workers
Inter-Aide	Focus Group Discussion Interview @ Regional & Field levels Observation	• 3 people • 2 • 2 community agents
Asos	Interview @ National & Regional levels Observation	• 2 • 2 community agents

In addition to these activities one focus group was also conducted with national level staff from CRS, Water-Aid and ONN. In total, 14 interviews, 6 focus groups, and 12 observations were completed. Sample size numbers were limited by the availability of the organization staff, and by the limited amount of time in the field.

Data Collection

Data was collected between the 25th of July and the 9th of August 2018. During the first week of data collection, two teams with one member of LSHTM staff and 2 or more local RANO-WASH staff members worked to collect data in Regions 1 and 2 (Aloatra Mangoro and Vatovavy Fitovinany). In the second week one team worked in Region 3 (Atsinanana), and in the final week the team finished data collection at national level in Antananarivo.

Interviews

All interviews were semi-structured and lasted between 30-50 minutes. Interviews were conducted either in French or Malagasy depending on the preferences of the participant. Interviews in Malagasy were conducted by local staff members, and notes with direct quotes were taken and later translated to French. Interviews conducted in French were conducted by an LSHTM staff member, and notes with direct quotes were taken. All quotes used in this report were translated from French to English by a member of LSHTM staff.

Questions in interviews were separated into two sections: 1. Policy implementation and 2. Perceptions and understandings of behaviour change. In the first section participants were asked about their organisations policies and how they were implemented. Specifically, participants were asked who had more power when it came to policy implementation, and if policies were always implemented as they were envisioned at national level. In the second section participants were asked about how they thought before change occurred, and the importance of behaviour change in WASH programming. A full set of questions can be found in Annex A.

Focus Group Discussions

Focus groups were conducted in all three regions and with national level stakeholders. Groups were conducted in French or Malagasy depending on the participant's preferences, and notes were taken throughout by at least 2 different staff members. Groups lasted between 1.5 – 3 hours and contained 3-6 participants. Groups consisted of two sets of activities: 1. Listing and ranking activities and 2. Opinion based activities.

For the listing and ranking activities, participants were given 4 questions and asked to come up with a list of 5 responses (individually). These responses would then be shared as a group, and the group would have to select 5 responses and rank them from 1 to 5. The questions were:

1. What are priority activities for improving outcomes in WASH programmes?
2. How do you think behaviour change occur?
3. Why do you think some people do not change their behaviours?
4. Who has the most power when it comes to policy implementation?

For the second activity participants were presented with 2 examples of WASH activities that had been implemented by a fictional organization. After each activity was explained participants were asked if they considered these activities to be an example of behaviour change communication or not. Participants had to justify their answers, but a consensus was not necessary. The 2 examples were:

1. A field worker conducts household visits on a weekly basis and tells families they must wash their hands with soap after going to the toilet. They also show families how to do this. No other activities addressing handwashing with soap are conducted by this organisation. Is this behaviour change?

2. After a hurricane, a local community group distributes soap and buckets to families affected by the disaster, and urges parents to wash their hands with soap so they do not get sick. Is this behaviour change?

Observations

Structured observations were completed of field-level behaviour change activities for all partner organizations. Permission from field workers was sought in advance and team members were able to accompany the workers in their daily tasks. Observations lasted between 2 minutes and 2 hours, and depended on the type of activity observed. Paper data collection forms were used to record data gathered during observations. Data was captured by 2 staff members and discussed at the end of the day in case of any discrepancies. Observations were targeted at behaviour change strategies used by field workers. Observations were then compared against criteria adapted from Michie et al. (Michie et al., 2011).

Data Analysis

Data collected from interviews were put through a rapid thematic analysis using NVivo to look at understandings related to behaviour change, and how policies are implemented. Data from ranking exercises in focus groups were synthesized into 1 list per question based on the number of mentions of a particular answer and its ranking. Opinion based responses were analysed by looking at trends in responses.

Behaviour change communications events were classified into meeting minimum criteria, partially meeting minimum criteria, and not effective based on the COM-B framework. Specifically – each event focused on behaviour change was categorized as effective if 1) a key behaviour was identified and 2) the delivery stimulated a reaction among the intended audience. In addition, behaviour change strategies were only classified as effective at least one of the following were answered in the affirmative:

1. Were skills related to the behaviour shared?
2. Was the context in which the behaviour occurs discussed or changed?
3. Were barriers discussed or reduced?
4. Were examples provided?
5. Were expectations of reward or punishment created?
6. Were rules or norms discussed or established?

Results

Interviews

Respondents identified three key strategies for changing behaviour that they believed were necessary for effective behaviour change: sensitization, triggering and convincing. Definitions of these concepts based on the information provided by participants is presented in table 2.

In many ways, sensitization was used and described as synonymous with education and raising awareness, and served the same basic function: making people aware of and responsive to new ideas or events. In contrast, triggering was seen as the initiation of the actual change – the point at which all strategies culminated in people adopting and following a preferred behaviour. Convincing served much of the same function as sensitization, but was framed more in terms of a longer term effort to replace existing views about a behaviour with new views or opinions.

Table 2: Key behaviour change definitions

Sensitization	Triggering	Convincing
An attempt to make people aware of and responsive to certain ideas, events or situations.	An event or circumstance causing a particular reaction or process to happen (ie. the target behaviour).	Using messaging to cause someone to believe that something is true, resulting in a change of behaviour.
ie. making the population aware that washing their hands with soap after defecating will prevent poor health	*ie. after messaging, the target population is now triggered after defecating to always wash their hands with soap*	*ie. the target population is convinced that handwashing with soap is good for their health and then decides to practice the behaviour*

Many organisations discussed sensitization as something that used to be done previously, but now their approaches have changed.

- 'Sensitization doesn't change behaviours at scale […] and you need to do this to change norms, otherwise it's not sustainable. '[National-level stakeholder 03]

- 'Generally speaking, other organizations use sensitization but not behaviour change […] we do not stop at sensitization anymore. Since 'World Learning' there has been an abandonment of sensitization.' [Regional staff 02]

- 'Until the design of our behaviour change strategy is complete, I think we will do house visits – sensitization – because that is what was done in previous projects.' [Field officer 02]

Although some organisations were able to recognize that sensitization was no longer sufficient to change behaviours, others still felt sensitization had an important role to play in behaviour change.

- 'There is no change without sensitization….. Sensitization is the most important part of the process.' [National-level stakeholder, 01]

- 'Behaviour change is caused by sensitization and monitoring, as well as the empowerment of local authorities.' [Regional staff - 04]

- 'Thanks to diverse activities and sensitization households have become more resilient when faced with natural disasters.' [Field officer 05]

Many organizations said they had "moved on" from sensitization and educating, and focused efforts on triggering the population in order for behaviour change to occur. Some of these organisations discussed triggering through the use of CLTS (R05, F02).

- 'You have to change something in their heads – what [organisation name] is doing is different to everyone else. You need to trigger people with personal communication.' [National level stakeholder -03]
- 'We are there to trigger the community [...] you must leave them sleeping to awaken them – so triggering is awakening.' [Regional staff -05]

Regardless of the approach used (sensitization or triggering) participants felt that in order for behaviour change to occur, people needed to be convinced by the messaging.
- 'You change behaviour by communicating – you have to try to convince the people.' [National level stakeholder -02]
- 'The people who change their behaviour are convinced.' [Field officer -05]

Additionally, research participants agreed that behaviour change communication (BCC) was an important part of WASH strategies, and that it should be integrated into all programming.
- 'All of [organisation name] projects include behaviour change – there is a cross-cutting communications strategy across all of our programming.' [National level stakeholder -02]
- 'Yes, WASH strategies should include behaviour change. For example, even if we build infrastructure, and there is no behaviour change, the people will not take good care of these infrastructures.' [Regional staff -04]

While most participants agreed that behaviour change was an integral part of WASH programming (N01, N02, R01, R02, R04, R05, F01, F02, F04, F05), opinions on the efficacy of behaviour change were mixed. While some participants felt that their implementation of BCC was clearly effective, others felt there was still room for improvement.
- 'But in my opinion, our project has seen some palpable behaviour changes in each component of our interventions, in health, nutrition, agriculture, marketing, and savings. I see that it is more or less good, but not yet perfect.' [Regional staff -06]
- 'It's effective. Before, the inhabitants near us […] consumed river water, and now they rush to the [water] fountains.' [Field officer -05]

When asked about how policies were implemented, and who had the most power to implement organizational policies, many organizations discussed a top-down approach.
- 'The field level follows exactly what is written in the project documents that were elaborated at national level.' [National level stakeholder -02]
- 'Policies come from above, and after, the implementation.' [Regional staff -01]
- 'In my opinion, implementation occurs according to how it is directed at national level.' [Field officer -01]

Another participant felt that implementation was more nuanced:
- 'Implementation depends on the context – there is no set formula, it's dynamic.' [Regional staff -05]

However, most recognized that policies needed to be adopted at local level to take into consideration the realities on the ground.

- 'At the moment of implementation, there are always little changes – you have to take into account local context and local actors.' [National level stakeholder -01]
- 'There is some freedom to adapt the policy in relation to the on the ground realities.' [Regional staff -01]
- 'In my opinion, the policies define the messages to transmit but the field workers are free to adapt the messages according to the realities on the ground.' [Field officer -02]

In general although implementation strategies and BCC approaches differed by organization, most agreed that policies needed to be adapted at the ground level, and that BCC was an important part of WASH programming and strategies.

Focus Groups

Ranking and Listing

Participants were asked to make a list of their thoughts related to three questions, and then to rank the answers as a group from 1 to 5. The main results from these activities can be found in Table 3. A synthesis of answers for each group was conducted, and answers that ranked higher (overall), and had more responses were given a higher final ranking. The top three answers for each question are presented here, except for question 3 where there are 4, as two responses were tied in rank and number of mentions.

Table 3: Ranking and listing results

Question 1: How does behaviour change occur?

1. Education, sensitization or messaging
    a. Stimulating the population with education messaging in an attempt to get them to change their behaviours
2. Interest, conviction or awareness
    a. If people are interested, convinced or made aware that their current behaviours are bad for them (by messaging), then they will change their behaviour
3. Trying the new behaviour
    a. If someone tries out the new behaviour and sees the benefits, then they will change their behaviour

Question 2: What are the priority activities necessary to improve WASH programming.

1. Understanding context and working with local actors
    a. Local actors: religious and traditional leaders, or community organisations
    b. Context: cultural practices, traditions, taboos and norms
2. Education and sensitization
3. Construction of infrastructure
    a. Ensuring appropriate infrastructure is in place (ie. water supply system) or constructing more (ie. household latrines)

Question 3: Why do certain people not change their behaviour?

1. Mentality
    a. Their mentality inhibits them from changing their behaviour: being lazy, rebellious or stubborn
2. Culture, customs or norms
3. Lack of means
    a. Lack of finances or physical means to conduct the behaviour
4. Level of knowledge, or not being convinced by the messaging
    a. They are unware of the benefits of the new behaviour, or the messaging has not convinced them of the benefits

Participant's responses on how behaviour change occurred (Question 1) varied markedly by organization and focus group. As a result, responses from these responses were difficult to synthesize. However, all groups put a significant emphasis on education, sensitization and messaging. In question two, responses varied from group to group, but 5 out of 6 groups identified the need to understand the local context or work with local authorities as the top priority.

In question three, four out of six groups identified an aspect of the beneficiaries' mentality as the top reason why behaviour change does not occur. Aspects of mentality included: having a rebellious attitude, being lazy, not interested, thinking that behaviour change is hard, and stubbornness. Numbers 3 and 4 had an equal amount of mentions and therefore are both presented here.

For the final question participants often did not provide a list, but instead described how they felt policies were implemented, or the position of the person who has the most power in policy implementation. These results are synthesized in Table 4.

Table 4: Question 4 listing results

Who has the most power in policy implementation?
Local Level: 3/5 organisations felt that those **doing** the policy implementation had the most power
National Level: 2/5 organisations felt that those **creating** the policies had the most power

What is behaviour change?

In the second part of the focus group participants were asked to provide their opinions on two examples of WASH programming and weather, they felt these were examples of BCC. The first example discussed an organization conducting weekly household visits, and handwashing demonstrations with families. Participants in two FGDs felt this was an example of BCC. They argued that because the activity was repeated every week, and handwashing is a behaviour that takes time, that this qualified as behaviour change. Participants in the other two groups who disagreed stated that no results were offered, and as such there was no evidence to suggest this activity resulted in behaviour change.

For the second example – an NGO distributing soap and water after a hurricane – 3 organisations felt this was not BCC, while 1 felt it was. The organization who agreed this was an example of BCC stated that the activity responded to the needs of the community and provided sensitization, and therefore was considered as BCC. For the organisations who disagreed, they stated that because there was no follow-up or additional support they do not believe this was BCC.

Observations

Out of the 12 activities observed only one met the minimum criteria to qualify as effective behaviour change communication, and one partially met the criteria. Nine out of 12 observed activities identified a key behaviour that needed to be changed, and half (6/12) shared skills related to the key behaviour. Two out of the 12 resulted in visible reactions from the beneficiaries during the activity- in both cases, laughter. None of the interactions observed discussed the context in which behaviours occur, and only one addressed potential barriers to the discussed behaviour. Two activities addressed social norms or rules, and two provided an example for inspiration. More information can be seen in table 5.

Table 5: Observation Data Analysis

Criteria	Observation											
	1	2	3	4	5	6	7	8	9	10	11	12
Necessary												
Identify a target behaviour	orange	green	orange	green	orange	green	green	green	green	red	red	red
Stimulate a reaction	red	red	red	red	green	red	green	red	red	red	red	red

Criteria	Observation											
	1	2	3	4	5	6	7	8	9	10	11	12
Atleast one of the following												12
Skills sharing	green	green	green	green	green	red	red	green	red	red	red	red
Discuss or change context	red	red	red	red	red	red	red	red	red	red	red	red
Reduced or discussed barriers	red	red	orange	red	green	red	red	red	red	red	red	red
Provide an aspirational example	red	red	red	red	red	red	red	red	red	red	red	red
Create an expectation of reward of punishment	red	red	green	red	red	red	green	green	red	red	red	red
Discussed rules or norms	red	red	red	red	red	red	orange	orange	red	red	red	red
Ranking : Effective BC or not	red	red	red	red	orange	red	green	red	red	red	red	red

Legend

green	clearly met the criteria
orange	partially / potentially met criteria
red	clearly did not meet the criteria
grey	data not available

Discussion

Overall, many actors had differing views about the nature and processes of behaviour change. Some felt that sensitization and education was the appropriate way to change behaviours, while others felt that triggering the population led to change. Regardless of approach, participants believed that the target populations needed to be convinced by the messaging in order to change their behaviour. Almost all participants felt that behaviour change was an integral part of WASH programming, but opinions on the efficacy of behaviour change interventions was mixed. At the ground level, behaviour change intervention delivery was often ineffective – failing to provide engaging or aspirational communication with the target population and rarely utilizing common behaviour change strategies.

Within organisations the view of policy implementation seemed consistent from national to field level. Those at regional, field, and national level (where data is available) had the same understanding of how their policies were implemented and who had the most power to change this. Although implementation strategies differed amongst organisations almost all felt that adapting policies at local level to reflect the norms and local context was important.

Despite the wide range of approaches used by organisations (including sensitization, CLTS, and BCD) implementation of activities appeared more or less homogenous, and reflected opinions expressed in the focus groups on how to change behaviour (ie. sensitization). Even though it has been well documented that education and sensitization are insufficient approaches to change behaviour (Biran et al., 2014, Kelly

and Barker, 2016) only one of the observed activities met the minimum criteria for effective behaviour change, and the rest appeared to be sensitization. Furthermore, many research participants still seemed to assume that here was a lack of knowledge, and that with more information people would change their behaviours. These assumptions persisted even amongst organisations whose approaches had moved beyond sensitization. Additionally, there also seemed to be a common belief that the mentality of the people played a role in behaviour change. In particular, that the people were stubborn or lazy and that this inhibited them from adopting new behaviours. This is a very cognitive understanding of behaviours that is entirely based on how people think about a new behaviour. Not only does this understanding contrast current thinking about behaviour change (ie. that a wide range of determinants influence behaviour) (Aunger and Curtis, 2016, Dreibelbis et al., 2013, Michie et al., 2011, Mosler, 2012). , it also completely ignores all external factors that shape behavioural outcomes.

Despite this cognitive understanding, many participants, at all levels, were able to hint at a deeper understanding of behaviour change by discussing culture or values. However, this understanding did not appear to be translated into the national strategies or activities that took place on the ground. This suggests that there may be a disconnect, not only between national and field levels, but also between internal understanding of behaviour change and how this actually translates, externally, into a policy. Overall, there was a clear need for more sophisticated and nuanced approaches that looked beyond education, in order to improve health outcomes. This idea is supported by the literature, as the development and implementation of theory-based approaches has been shown to improve programme efficacy (Davis et al., 2015, De Buckppp and et al., 2017).

Limitations

There were quite a few limitations related to the availability of participants for data collection, and therefore our sample size was smaller than anticipated. Time at the regional sites was limited, so we worked within these constraints to collect as much data as possible during the allotted timeframe. We were unable to conduct interviews with all organisations at national level – only 3 were conducted. Additionally, focus groups were conducted with 5 out of 6 organisations at regional level, and only 3 out of 6 organisations were available for the national level focus group. For observations the COM-B framework was selected as a generic framework for understanding behaviour change, but as the organisations participating in data collection used a variety of BC strategies this framework may not be appropriate. In a few cases, field activities were implemented simply because the research team was there to complete the observations, which may have resulted in activities not reflective of usual strategies. However, the high degree of homogeneity in activities suggests that this had minimal impact on the nature of the events. Regional level focus group participants were often a mix of field level and regional level staff. In these cases the field level staff appeared to defer to the answers provided by the regional level staff in order to provide the socially desirable answer.

Conclusions

Overall, understandings of behaviour change appeared to differ among and within organisations. Stakeholders identified a range of behaviour change approaches that they viewed as effective, although a mixture of approaches were used, including sensitization, CLTS, BCD and community leaders, the implementation of these approaches on the ground appeared to default to sensitization. Even though some policies and organizational approaches appeared to be informed by theory, field-level activities appeared very similar and focused primarily on didactic messaging.

Based on these results, we propose the following recommendations:

- Many organizations are relying on old or outdate models of behaviour change. This is particular noted in the transition from national to regional level field staff. Concerted efforts are needed to ensure that not only are behaviour change strategies informed by more nuanced understanding of behaviour change theories, but regional staff should be provided with the appropriate training and capacity building to understand and employ more nuanced approaches to behaviour change.

- Specific behaviour change strategies – such as the use of motives (Aunger and Curtis, 2013), environmental cues / nudges (Dreibelbis et al., 2016), and social norms – are under-represented in current strategies. Within the largely cognitive-based approaches that policy makers prefer, additional psychological factors – such as self-efficacy and self-regulation (Mosler, 2012) – are also absent from existing strategies. Efforts are needed at all levels to ensure that policy makers and frontline staff are familiar with the broad range of potential behavioural determinants and provided adequate support and training to effectively utilize these determinants in behaviour change programming.

- There is a gap between knowledge and action – organizations still rely heavily on sensitization as a means to changing behaviour. Providing more concrete examples or tools that will help regional offices move beyond simple education and communication could potentially improve the effectiveness of behaviour change programming.

- There is a need to try and shift the mentality of behaviour change stakeholders away from cognitive understanding, towards a more nuanced approach, and to ensure that this is translated to policy.

- More resources and support are needed for field-level staff to provide effective behaviour change communication to regional and local field staff. Currently, these groups default to simple education and didactic messaging. Field level staff require greater support and oversight from regional officers. Field staff should be provided with tools and resources to deliver more effective behaviour change intervention.

WASH / Photos : DAHERY BAZAKA RAFENOMANANA

References

AUNGER, R. & CURTIS, V. 2013. The anatomy of motivation: An evolutionary-ecological approach. Biological Theory, 8, 49-63.

AUNGER, R. & CURTIS, V. 2016. Behaviour Centred Design: towards an applied science of behaviour change. Health Psychol Rev, 10, 425-46.

BAETINGS, E. 2012. End-of-Phase Review of the Sustainable Sanitation and Hygiene for All Programme in Lao PDR. The Hague, the Netherlands: IRC International Water and Sanitation Centre.

BIRAN, A., SCHMIDT, W.-P., VARADHARAJAN, K. S., RAJARAMAN, D., KUMAR, R., GREENLAND, K., GOPALAN, B., AUNGER, R. & CURTIS, V. 2014. Effect of a behaviour-change intervention on handwashing with soap in India (SuperAmma): a cluster-randomised trial. The Lancet Global Health, 2, e145-e154.

CHARD, A. N., TRINIES, V., MOSS, D. M., CHANG, H. H., DOUMBIA, S., LAMMIE, P. J. & FREEMAN, M. C. 2018. The impact of school water, sanitation, and hygiene improvements on infectious disease using serum antibody detection. PLoS neglected tropical diseases, 12, e0006418.

CLASEN, T., BOISSON, S., ROUTRAY, P., TORONDEL, B., BELL, M., CUMMING, O., ENSINK, J., FREEMAN, M., JENKINS, M. & ODAGIRI, M. 2014. Effectiveness of a rural sanitation programme on diarrhoea, soil-transmitted helminth infection, and child malnutrition in Odisha, India: a cluster-randomised trial. The Lancet Global Health, 2, e645-e653.

DAVIS, R., CAMPBELL, R., HILDON, Z., HOBBS, L. & MICHIE, S. 2015. Theories of behaviour and behaviour change across the social and behavioural sciences: a scoping review. Health Psychology Review, 9, 323-344.

DE BUCK, E., VAN REMOORTEL, H., HANNES, K., GOVENDER, T., NAIDOO, S., AVAU, B., MUSEKIWA, A., LUTJE, V., CARGO, M. & MOSLER, H.-J. 2017. Approaches to promote handwashing and sanitation behaviour change in low-and middle income countries: a mixed method systematic review. Campbell Systematic Reviews, 7, 1-447.

DE BUCKPPP, E. & ET AL. 2017. Approaches to promote handwashing and sanitation behaviour change in low- and middle-income countries. In: COLLABORATION, C. (ed.).

DREIBELBIS, R., KROEGER, A., HOSSAIN, K., VENKATESH, M. & RAM, P. 2016. Behavior change without behavior change communication: nudging handwashing among primary school students in Bangladesh. International journal of environmental research and public health, 13, 129.

DREIBELBIS, R., WINCH, P. J., LEONTSINI, E., HULLAND, K. R., RAM, P. K., UNICOMB, L. & LUBY, S. P. 2013. The Integrated Behavioural Model for Water, Sanitation, and Hygiene: a systematic review of behavioural models and a framework for designing and evaluating behaviour change interventions in infrastructure-restricted settings. BMC Public Health, 13, 1015.

GREENLAND, K., CHIPUNGU, J., CURTIS, V., SCHMIDT, W.-P., SIWALE, Z., MUDENDA, M., CHILEKWA, J., LEWIS, J. J. & CHILENGI, R. 2016. Multiple behaviour change intervention for diarrhoea control in Lusaka, Zambia: a cluster randomised trial. The Lancet Global Health, 4, e966-e977.

JANZ, N. K. & BECKER, M. H. 1984. The health belief model: A decade later. Health education quarterly, 11,

1-47.

KELLY, M. & BARKER, M. 2016. Why is changing health-related behaviour so difficult? Public Health, 136, 109-16.

MICHIE, S., VAN STRALEN, M. M. & WEST, R. 2011. The behaviour change wheel: a new method for characterising and designing behaviour change interventions. Implementation science, 6, 42.

MOSLER, H.-J. 2012. A systematic approach to behavior change interventions for the water and sanitation sector in developing countries: A conceptual model, a review, and a guideline.

PATIL, S. R., ARNOLD, B. F., SALVATORE, A. L., BRICENO, B., GANGULY, S., COLFORD JR, J. M. & GERTLER, P. J. 2014. The effect of India's total sanitation campaign on defecation behaviors and child health in rural Madhya Pradesh: a cluster randomized controlled trial. PLoS medicine, 11, e1001709.

VENKATARAMANAN, V. 2012. Testing CLTS Approaches for Scalability: Systematic Literature Review. Chapel Hill, NC.

Annexe A: Interview Guides

All research questions will be slightly adapted once we know the specifics of the key stakeholders we will be interviewing. These questions will act as a general guide. Questions will be asked in all interviews unless otherwise noted with an N, R or F to indicate national, regional or field level. Other questions may be asked to probe for further details.

Policies and Implementation

-   How much variance do you think there is between field level implementation of this policy and the inception of this policy? (ie. Is this policy implemented exactly as dictated from national level?)
-   In your policies, what types of behaviour are targeted? Why?
    -   Who decides this?
-   What strategies are used to address behaviour change?
    -   Who decides this?
-   Does your organisation implement these strategies? If yes, how? If not, who does?
    -   How do you ensure that policies are implemented as planned?
    -   Is this done in a linear way? ie. The government or organization creates policies and dictates how they should be implemented?
-   Who is responsible for ensuring implementation occurs in line with policies?
-   What communication channels are used?
    -   Who decides this?
-   In your opinion how much freedom or power do implementers have to interpret and adapt these policies as they wish?
-   N: What policies exist in your organization which pertain to behaviour change?

- N: If policy does not address behaviour change: Why is behaviour change not a part of your current policy / strategy?

- R: From interviews with your organization at the national level we learned that xx policies exist in your organization related to behaviour change. Once these policies reach regional level what happens to them?

- R: From the regional level how are policies implemented?

  • How are messages delivered? Who delivers them? How often?

  • Who creates these messages?

- F: Do field staff receive any training? If so, what?

- F: What messages are disseminated? To who? How?

Behaviour Change Perceptions

- What assumptions do you think underlie your behaviour change strategies? Why?

- Are policies adapted to meet local needs, customs or capabilities?

- Should behaviour change be a part of all WASH strategies? Why?

- How would you define behaviour change?

- What role should behaviour change play in WASH programming?

- How do your behaviour change policies compare to those of other organizations'?

- What is the view on behaviour change amongst WASH organisations in Madagascar?

Enumerator Name	Date:	FW ID #:

Lenght of Observation :	Total Number of Activities Observed :

Activity	Message	Duration	Audience
1. Household Visit	1. Handwashing with Soap	1. > five minutes	1. General Public
2. Community Meeting	2. Water Treatment	2. five - ten minutes	2. Elders / Community Leaders
3. Other (specify)	3. Menstrual Hygiene	3. ten - twenty	3. Women / Mothers
	4. Food Hygiene	4. Twenty - thirty	4. Families
	5. Construction and Use of Latrines	5. Thirty - One hour	5. Children
	6. Other (Specify)	6. < One hour	6. Other (specify)

FW Checklist - Did the field worker :

☐ Identify a specific behaviour to change (what, who when and how). Specify:

_____

☐ Impact skills. Specify:

_____

☐ Use communication to stimulate a reaction related to the behaviour. Specify:

_____

☐ Change the physical or social context. Specify:

_____

☐ Reduce barriers. Specify:

_____

☐ Provide an example for people to aspire to. Specify

_____

☐ Create an expectation or reward, or of punishment or cost. Specify:

_____

☐ Introduce rules or norms related to the behaviour. Specify:

_____