

Behavior change interventions on Baby Wash related behaviors





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**Contents**

[**Introduction 3**](#_Toc44417760)

[Intervention strategies on baby WASH and nutrition related behaviors 3](#_Toc44417761)

[Intervention strategy for handwashing before feeding the baby 5](#_Toc44417762)

[Intervention strategy for controlling mouthing of a baby 8](#_Toc44417763)

[Intervention strategy for exclusive breast feeding for the first 6 months 11](#_Toc44417764)

[Intervention manuals on baby WASH and nutrition related behaviors 13](#_Toc44417765)

[Intervention manual for handwashing with soap before feeding a child 13](#_Toc44417766)

[Community group meeting 1 13](#_Toc44417767)

[Household visit 16](#_Toc44417768)

[Phone messaging or call (if you use a call, please combine all steps together) 18](#_Toc44417769)

[Community meeting 2 19](#_Toc44417770)

[Intervention manual for controlling mouthing 20](#_Toc44417771)

[Caretakers meeting 21](#_Toc44417772)

[Household visit 1 23](#_Toc44417773)

[Household visit 2 25](#_Toc44417774)

[Phone messaging or call (if you use a call, please combine all steps together) 26](#_Toc44417775)

[Intervention manual for exclusive breastfeeding for the first 6 months 27](#_Toc44417776)

[Household visit 1 27](#_Toc44417777)

[Household visit 2 29](#_Toc44417778)

[Evaluation procedure 31](#_Toc44417779)

[Annex A: General Results 32](#_Toc44417780)

[Annex B: Results on handwashing with soap and water before feeding the baby 34](#_Toc44417781)

[Annex C: Results on controlling the baby to not pick up food or item from the floor and put it into the mouth 39](#_Toc44417782)

[Annex D: Results on exclusive breastfeeding for the first six months 43](#_Toc44417783)

[Annex E: The RANAS behavior change techniques 49](#_Toc44417784)

[Annex F: Quantitative questionnaire baby WASH 52](#_Toc44417785)

[Annex G: Intervention-check questionnaires for baby WASH interventions 76](#_Toc44417786)

[Intervention-check questionnaire for handwashing with soap 76](#_Toc44417787)

[Intervention-check questionnaire for controlling mouthing 77](#_Toc44417788)

[Intervention-check questionnaire for exclusive breastfeeding for the first 6 months 78](#_Toc44417789)

# Introduction

The aim of this formative research was to develop behavior change strategies based on quantitative data for the behaviors handwashing with soap before feeding a child, controlling and inhibiting mouthing of food by a baby, and exclusive breastfeeding for the first six months.

In this research project we used the RANAS (Risk, Attitudes, Norms, Abilities, Self-Regulation) approach because this approach derives the interventions strictly form population data thereby assuring that the interventions are exactly tailored to the target population. The approach comprises the most important behavioral factors that influence the performance of health behaviors. The RANAS approach implies the following steps:

1. By using a short qualitative pre-survey (approx. 10 interviews), a quantitative questionnaire is developed;
2. This quantitative questionnaire is applied in a survey of approx. 600 households; the questionnaire contains questions about the performance of the behaviors and the behavioral determinants of the RANAS model: health risk perceptions, attitudinal beliefs, norm factors, ability beliefs, and self-regulation factors.
3. Using the data of the survey, a doer/non-doer analysis is conducted by comparing those people who perform the behavior frequently with those who do not or only irregularly perform the behavior;
4. Those behavioral factors where doers and non-doers differ significantly have to be tackled by behavior change techniques. The RANAS approach provides a catalogue of 36 behavior change techniques that are matched to the behavioral factors;
5. The selected behavior change techniques are translated into messages and activities for a behavior change campaign.

In this report we first present the results of the quantitative survey together with a draft of the interventions. Second, these drafted interventions were refined and harmonized together with all involved parties in the project resulting in an implementation manual for the interventions. This manual provides tangible instructions about how the developed interventions should be implemented. Third, an evaluation procedure is presented in which it is demonstrated how the effectiveness of the interventions could be assessed.

# Intervention strategies on baby WASH and nutrition related behaviors

Lao Social Research conducted 616 household interviews in the 4 WB target provinces of Lao PDR – Xiengkhouang, Houaphan, Phongsaly and Oudomxay. Questions regarding the RANAS behavioral factors were asked during the face-to-face interviews, and spot check observations regarding context factors were conducted during the household visits. The answers were analyzed using a doer/non-doer analysis, meaning that the mean values in the answers of those people who already perform the behavior to those people who do not were compared. Those behavioral factors in which differences reach or exceed a certain value are considered as relevant to be tackled by interventions aiming to change the behavior. However, for handwashing before feeding a child and for controlling mouthing data show a nearly normal distribution therefore a cut in the response scale separating doers from non-doers would have been artificial. Therefore we used correlation analysis (Pearson r). A significant positive correlation between a behavioral factor and the behavior means that the more distinct the factor is the more likely the person will perform this behavior. Given that we have a big sample size nearly all factors showed a significant correlation with the behaviors (see Tables B 1, C1 in Annex B and C), we decided to define only those factors as relevant for behavior change with a correlation coefficient near or above 0.3. However for handwashing we could be stricter and define only those factors as relevant for behavior change with a coefficient near or above 0.4.

For exclusive breastfeeding we could not use the behavioral question because nearly all people stated that they perform this behavior (see Annex D, Table D 6). Therefore we used the intention to perform exclusive breastfeeding for the first 6 months (see Annex D, Table D 8). Using this measurement we were able to perform an ‘intentioner/non-intentioner’ analysis and compare the mean values between these two groups. We calculated effect sizes (according to Cohen, 1972) and defined those behavioral factors as relevant for behavior change which had an effect size of equal or more than 0.8 (large effect size according to Cohen’s d).

We also calculated whether context factors were significantly and of sufficient effect size correlated with the behavior. If this was the case then we included these context factors in the design of the interventions.

All the original results are displayed in the annex (Annex A: General results; Annex B: Handwashing before feeding the baby; Annex C: Controlling mouthing; Annex D: Exclusive breastfeeding).

In the following we display different intervention strategies for the three behaviors. Each intervention strategy contains one communication channel (e.g. household visit) and several behavior change techniques (BCTs) according to the RANAS catalog of BCTs (see Annex E). In each table of an intervention strategy it is shown, based on which result concerning one behavioral factor the BCT is selected. For each BCT activities and messages are described. The intervention strategies are a first draft and have to be adapted to the cultural habits of the local population but also to the resources of the implementing organization.

As communication channels we propose group meetings, household visits, and mobile phone messaging.

# Intervention strategy for handwashing before feeding the baby

Our findings (Figure B1 and Table B1, Annex B) reveal that we have to change two beliefs (effort, prevention), several feelings (liking, disgust, clean), household and village norm, the approval by others, the personally felt obligation, the confidence in performance, the planning of overcoming barriers, the felt commitment and forgetting. Additionally we found that caretakers wash more frequently their hands before feeding the baby if soap is available in the household and if they have a tippy tap (Tables B 3 and B 5, Annex B).

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| **Caretaker group meeting**: convincing, helping to put into practice, and to publicly commit to handwashing before feeding a baby |
| *Targeted behavioral factor and result*Caretakers who perform handwashing less frequently… | Behavior change technique | Activities and messages |
| **Belief certain** (prevention)… are less certain that washing hands with soap and water prevents the baby from getting diarrhea | BCT 5: Inform about & assess costs and benefits | The health promoter demonstrates how the baby is eating dirt (or even feces) when feeding it with dirty hands. This can be done by using illustrations or by a live demonstration, e.g. the promoter puts his hands in flour dust, wipes the hands off the clothes, and shows that there is still dust just like when touching any dirt. The promoter starts a discussion about how effortful and expensive it is when a baby is ill and compares this effort to the easy performance of handwashing. |
| **Belief effort**… think that washing hands with soap and water before feeding the baby is effortful | BCT 5: Inform about & assess costs and benefits | To make handwashing even easier the advantages of a fixed handwashing station like a tippy tap are demonstrated |
| **Feelings (like)**… like it less to wash hands with soap and water before feeding the baby**Feelings (disgust)**… feel less disgusted if they do not wash hands with soap and water before feeding the baby**Feelings (clean)**… feel less clean when they wash hands with soap and water before feeding the baby | BCT 8: Describe feelings about performing and about consequences of the behavior | The health promoter performs a show to demonstrate that washing hands with soap and water makes you feel clean, less disgusted about dirty hands, and that you really like it. |
| **Others approval**… think that important people like family members and friends only somewhat want that they wash hands with soap and water before feeding the baby | BCT 11: Inform about others’ approval / disapproval | Convince an important person of the community to state in front of the caretakers that handwashing before feeding the baby is important for the baby’s health, is easy to perform, and beneficial for the whole family and community |
| **Confidence in performance**… are only somewhat confident that they can wash hands with soap and water before feeding a baby, even if the baby is crying and needs attention | BCT 16: Provide infrastructure | Demonstrate how easy a handwashing station (e.g. tippy tap) can be built. Tell caretakers that babies need to learn how to wait even when they are crying. This is nerve racking for caretakers but babies learn fast that soon enough caretakers are ready to tend to them.Declare that some materials can be given to those who want to build a handwashing station. If no materials can be given then ask how they would build a handwashing station to make handwashing easy and joyful. |
| **Other's behavior village**… think that only some people of their village wash hands with soap and water before feeding a baby | BCT 10: Prompt public commitment | Ask who would like to build their own handwashing station. Ask who in the family will help to build it. Request a public commitment to build a handwashing station and to always wash hands before feeding a child. Note down who will build the handwashing station and when it will be completed. |

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| **Household visit:** committing and remembering the whole family, discussing how to overcome barriers, and enforcing the personal obligation. Before entering the household check, whether the handwashing station was built, if yes whether there is soap and water, and whether the station looks used (water on the ground, soap is wet) |
| *Targeted behavioral factor and result*Caretakers who perform handwashing less frequently… | Behavior change technique | Activities and messages |
| **Barrier planning**... are less confident that they can wash hands with soap and water before feeding a baby, when they have to cook and clean | BCT 30: Prompt coping with barriers | If there is no handwashing station ask the household why not, what the problems are, how they can be resolved, and who could help. Make a plan about how to overcome these problems.Do the same if the handwashing station does not seem to be used. If the handwashing station seems to be used, ask the caretaker how frequently they managed to wash hands before feeding the child today, yesterday, and the day before yesterday. Ask about problems arising and make a plan about how to overcome these problems. |
| **Personal obligation**…feel only somewhat a personal responsibility to wash hands with soap and water before feeding the baby | BCT 12: Prompt anticipated regret | Discuss with the whole family that it is in their personal responsibility that the baby grows up healthy. They should imagine that the baby falls ill because they did not wash hands with soap and water before feeding the baby and how they would feel then. |
| **Other's behavior HH**… think that only some people of their household wash hands with soap and water before feeding a baby**Commitment** … feel only somewhat committed to wash hands with soap and water before feeding the baby**Remembering** (forgetting last 24h)…forget quite a lot to wash hands with soap and water before feeding the baby. | BCT 36: Prompt to agree on a behavioral contract BCT 10: Prompt public commitment BCT 34: Use memory aids and environmental prompts | Ask all members of the household to commit that before feeding the baby hands are washed. Make a poster with a pictorial or painting expressing the statement ‘We all care for our babies and wash hands before feeding it’. All household members should be represented on the poster (photo or painting, fingerprint). Fix the poster in the household where the baby is normally fed.  |

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| **Phone messaging:** reminding of the caretaker of handwashing, the behavioral contract, overcoming barriers, and the regret by sending spoken messages. If the caretaker does not use the phone (about 60%, see Annex A) then the owner of the phone has to be trained to replay the message to the caretaker. Several combinations of the messages could make them more attractive to avoid boredom and inurement. The messages should be send during the morning, in the first week daily, in the second week every other day, and in the third week two times a week. In the following we phrase the messages according to the BCTs. |
| *Targeted behavioral factor and result*Caretakers who perform handwashing less frequently… | Behavior change technique | Activities and messages |
|  |  | Three different types of introduction: “Hello this is a message of …….” |
| **Commitment** … feel only somewhat committed to wash hands with soap and water before feeding the baby**Remembering** (forgetting last 24h)…forget quite a lot to wash hands with soap and water before feeding the baby. | BCT 36: Prompt to agree on a behavioral contract BCT 34: Use memory aids and environmental prompts | “We would like to remind you to our contract in which you agree to always wash your hands before feeding your children.” |
| **Barrier planning**... are less confident that they can wash hands with soap and water before feeding a baby, when they have to cook and clean | BCT 30: Prompt coping with barriers | We hope that you succeeded. If it was not possible then reflect on the reasons why you did not wash your hands and how you can do it better for the next time.” |
| **Personal obligation**…feel only somewhat a personal responsibility to wash hands with soap and water before feeding the baby | BCT 12: Prompt anticipated regret | “Please imagine that your baby falls ill because you did not wash hands with soap and water before feeding the baby. How bad would you feel then?”  |
| **Confidence in performance**… are only somewhat confident that they can wash hands with soap and water before feeding a baby, even if the baby is crying and needs attention | BCT 22: Use arguments to bolster self-efficacy | “We are sure that you will succeed in washing your hands before feeding your child. You are so a great mother/caretaker.” |
|  | BCT 21: Organize social support | “If you have difficulties to wash your hands before feeding the baby then agree with somebody in your family to help you to realize handwashing.” |

# Intervention strategy for controlling mouthing of a baby

Our findings (Figure C1 and Table C 1, Annex C) disclose that we have to change three beliefs (effort, prevention, healthier), one feeling (liking), household and village norm, the approval by household members and village authorities, the personally felt obligation, the confidence in performance, the planning of overcoming barriers, the felt commitment and forgetting. With regard to context factors (Table C 2, Annex C) we found that in 81% of the houses there were animal feces just outside the house, in 23% animal feces inside the house, and in 29% there are animals inside the house. Therefore the health promoter should check whether there are animal feces around. The promoter asks whether the baby gets some food when it is crawling on the ground. As controlling mouthing cannot be performed during the whole day the behavior to be introduced should be to give the baby food only on a clean spot that is protected from animal feces.

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| **Household visit 1**: convincing, advising how controlling mouthing could be performed, and to publicly commit to handwashing before feeding a baby |
| *Targeted behavioral factor and result*Caretakers who perform controlling mouthing less frequently… | Behavior change technique | Activities and messages |
| **Belief certain (healthier)**… are less certain that controlling to not pick up food or item from the floor and put it into the mouth makes the baby healthier**Belief certain (prevention)**… are less certain that controlling to not pick up food or item from the floor and put it into the mouth prevents the baby from getting diarrhea. | BCT 5: Inform about & assess costs and benefits | The health promoter demonstrates how the baby is eating dirt (or even feces) when picking up food from the floor and putting it into the mouth and getting sick. This can be done by using illustrations or by a live demonstration (e.g. a foot which is tramped in animal feces and then walking inside the house).  |
| **Belief effort**…think that to control the baby to not pick up food or item from the floor and put it into the mouth is effortful | BCT 5: Inform about & assess costs and benefits | Controlling mouthing is easy when the baby is fed only at a clean spot or protected area (which has to be cleaned before). The promoter starts a discussion about how effortful and expensive it is when a baby is ill and compares this effort to the easy performance of controlling mouthing. |
| **Other's behavior Village**... think that only some people in the village also control the baby not to pick up food or item from the floor and put it into the mouth**Feelings**… like it less to control the baby to not pick up food or item from the floor and put it into the mouth | BCT 9: Inform about others’ behavior BCT 8: Describe feelings about performing and about consequences of the behavior | Name people in the village who already control the baby to not pick up food or an item from the floor and put it into the mouth. State that they like this very much because they contribute to the health of the baby. |
| **Others approval Village**… think that village authorities, health workers or religious leader, only somewhat want that they control the baby to not pick up food or item from the floor and put it into the mouth | BCT 11: Inform about others’ approval / disapproval | Inform that important people in the village think that controlling the baby to not pick up food or an item from the floor and put it into the mouth contributes to the well-being of the baby. |
| **Confidence in performance**.. are only somewhat confident that they can control the baby to not pick up food or item from the floor and put it into the mouth | BCT 16; Provide infrastructureBCT 19: Prompt behavioral practice | Induce the family to provide a ‘healthy baby mat’ for baby feeding which is cleaned with water and soap before feeding, and nobody will put the feet on, and no animals will walk over it. Prompt the caretaker to perform controlling mouthing first 2 times a day then 3 times a day then always when the child is fed. |

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| **Household visit 2:** convincing**,** committing, and remembering the whole family, discussing how to overcome barriers, and enforcing the personal obligation. |
| *Targeted behavioral factor and result*Caretakers who perform controlling mouthing less frequently… | Behavior change technique | Activities and messages |
| **Barrier planning**… are only somewhat confident that they can control the baby to not pick up food or item from the floor and put it into the mouth, even if they have to cook and clean | BCT 30: Prompt coping with barriers | Ask all household members how successful they were with controlling mouthing of the baby and ask which the difficulties were. Discuss how these difficulties can be resolved.  |
| **Personal obligation**… feel only somewhat a personal responsibility to control the baby to not pick up food or item from the floor and put it into the mouth | BCT 12: Prompt anticipated regret | Discuss with the whole family that it is in their personal responsibility that the baby grows up healthy. They should imagine that the baby falls ill because they did not control mouthing and how they would feel then. |
| **Other's behavior HH**... think that only some people in the household also control the baby to not pick up food or item from the floor and put it into the mouth**Commitment**… feel only somewhat committed to control the baby to not pick up food or item from the floor and put it into the mouth**Remembering** (forgetting last 24h)… forget quite a lot to control the baby not to pick food or item from the floor and put it into the mouth | BCT 36: Prompt to agree on a behavioral contract BCT 10: Prompt public commitment BCT 34: Use memory aids and environmental prompts | Ask all members of the household to commit to guarantee that they control mouthing of the baby. Make a poster with the statement or illustration ‘We all care for our baby and make an effort to prevent that the baby picks up food from the floor and puts it into its mouth’. All household members should be represented on the poster (photo or painting, fingerprint). Fix the poster in the household where the baby is normally fed.  |

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| **Phone messaging:** reminding of the caretaker of controlling mouthing, the behavioral contract, overcoming barriers, and the regret by sending spoken messages. If the caretaker does not use the phone (about 60%, see Annex A) then the owner of the phone has to be trained to replay the message to the caretaker. Several combinations of the messages could make them more attractive to avoid boredom and inurement. The messages should be send two times a day, in the first week daily, in the second week every other day, and in the third week two times a week. In the following we phrase the messages according to the BCTs. |
| *Targeted behavioral factor and result*Caretakers who perform handwashing less frequently… | Behavior change technique | Activities and messages |
|  |  | Three different types of introduction: “Hello this is a message of …….” |
| **Commitment** … feel only somewhat committed to wash hands with soap and water before feeding the baby**Remembering** (forgetting last 24h)…forget quite a lot to wash hands with soap and water before feeding the baby. | BCT 36: Prompt to agree on a behavioral contract BCT 34: Use memory aids and environmental prompts | “We would like to remind you to our contract in which you agree to control the mouthing of your baby.” |
| **Barrier planning**... are less confident that they can wash hands with soap and water before feeding a baby, when they have to cook and clean | BCT 30: Prompt coping with barriers | “We hope that you succeeded. If it was not possible then reflect on the reasons why you did not control mouthing and how you can do it better for the next time.” |
| **Personal obligation**…feel only somewhat a personal responsibility to wash hands with soap and water before feeding the baby | BCT 12: Prompt anticipated regret | “Please imagine that your baby falls ill because you did not control mouthing. How bad would you feel then?”  |
| **Confidence in performance**… are only somewhat confident that they can wash hands with soap and water before feeding a baby, even if the baby is crying and needs attention | BCT 22: Use arguments to bolster self-efficacy | “We are sure that you will succeed in controlling mouthing of your baby. You are so a great mother/caretaker.” |
|  | BCT 21: Organize social support | “It might be difficult to watch your baby all the times. Ask other members of your family to help you to realize controlling mouthing.” |
|  | BCT 23: Set graded goals | “If you do not succeed in controlling mouthing all the times then do it at least 3 or more times a day.” |

# Intervention strategy for exclusive breast feeding for the first 6 months

According to our findings (Tables D2 to D7; Annex D) 73% of the mothers reported that they breastfeed their babies almost each time when the baby is hungry and nearly 90% state that they breastfeed exclusively. Only 22% respondents reported that they feed their baby with something else during a day. These numbers might not be the real numbers but we have to take into account that exclusive breastfeeding is widespread and socially approved. Nevertheless, we compile an intervention strategy for exclusive breast feeding for the first 6 months based on the finding that only 63% intend very much to exclusively breastfeed the baby for the first six months (Table D 8, Annex D). However we have to promote this behavior very carefully to not displease the mothers because they think that they already perform this behavior. If the mother does not have breastmilk (1.5% of the sample) then it is not possible to insist on breastfeeding.

Our findings (Figure D1and Table D1, Annex D) show that we have to change three beliefs (effort, prevention sick, prevention undernourished), one feeling (positive), the approval by household members and village authorities, the personally felt obligation, the confidence in performance, the planning of overcoming barriers, and the felt commitment.

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| **Household visit 1:** fostering confidence in performance, discussing how to overcome barriers and re-convincing |
| *Targeted behavioral factor and result*Mothers who’s intention to perform exclusive breastfeeding is middle to low… | Behavior change techniques (BCT’s)  | Activities and messages |
| **Confidence in performance** … are less confident (sure) that they can exclusively breastfeed for the first six months | BCT 17: **Demonstrate and model behavior** | Ask the mother carefully whether there are situations when she cannot or when it is difficult to breastfeed her baby. Then show how other mothers have resolved this situation by anecdotal sharing of experiences of other mothers. The facilitator should be prepared to have stories about how to master any obstacle which may arise.  |
| BCT 21: **Organize social support** | Ask the mother who could help her in that way that she can manage to breastfeed her baby even in difficult situations. |
| **Barrier planning (work)**… are less confident that they are able to hand express milk for the baby, even if they have to work in the field | BCT 30: **Prompt coping with barriers** | Encourage mothers to identify strategies already used in the past and develop new solutions how to perform exclusive breastfeeding for the first six months even if they have to work in the field. One solution might be to hand express milk. |
| BCT 32**: Prompt to resist social pressure** | Prepare the mothers with arguments for the case that other family members request activities which make breastfeeding impossible.  |
| **Belief certain (prevention undernourished)** … are less certain that exclusive breastfeeding for the first six months prevents the baby from getting undernourished and weak**Belief certain (prevention sick)** … are less certain that exclusive breastfeeding for the first six months prevents the baby from getting sick.**Belief effort** … think that exclusive breastfeeding of the baby for the first six months is effortful | BCT 5: **Inform about & assess costs and benefits** | Assure that the mother knows how important exclusive breastfeeding for the first six months is, to prevent the baby from getting undernourished and weak because breast milk contains liquids which make the baby strong and therefore will prevent that it gets sick. Message: Exclusive breastfeeding for the first six months is not effortful compared to the costs and efforts needed when the baby is ill. |
| **Feelings (positive)** … have a lower positive feeling to breastfeed the baby for the first six months | BCT 8: **Describe feelings about performing and about consequences of the behavior** | Message: exclusive breastfeeding for the first six months makes you feel good because you know that it prevents your baby from getting undernourished and weak. |

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| **Household visit 2:** introducing social norms, regretting, and a behavioral contract |
| *Targeted behavioral factor and result*Mothers who’s intention to perform exclusive breastfeeding is middle to low… | Behavior change techniques (BCT’s),  | Activities and messages |
| **Other's approval village** … think more that people who are important to them, like village authorities, health workers, or religious leaders, only somewhat want that they exclusively breastfeed the baby for the first six months | BCT 11: **Inform about others’ approval / disapproval** | Inform that important people in the village think that exclusive breastfeeding for the first six months contributes to the well-being of the baby. |
| **Other's approval HH** … think that people who are important to them, like family members and friends, only somewhat want that they exclusively breastfeed for the first six months | BCT 11: **Inform about others’ approval / disapproval** | Ask other people in the household to express their belief that it is good for the health of the baby to perform exclusive breastfeed for the first six months. Ask for their support. |
| **Personal obligation** … have a lower personal responsibility to exclusive breastfeed for the first six months | BCT 12: **Prompt anticipated regret** | Message: It is in your personal responsibility that your baby grows up healthy. Imagine that your baby falls ill because you did not exclusively breastfeed your baby in the first six months – how would you feel then. |
| **Commitment**… feel less committed to exclusively breastfeed for the first six months | BCT 36: **Prompt to agree on a behavioral contract** | Set up a contract with the mother, to always perform exclusive breastfeeding for the first six months. The whole family should agree to support the mother for exclusive breastfeeding and this should be signed with a fingerprint from everyone. |

# Intervention manuals on baby WASH and nutrition related behaviors

In the following, we present the intervention manuals for the behaviors handwashing with soap before feeding a child, controlling and inhibiting mouthing of food by a baby, and exclusive breastfeeding for the first six months. They represent the results of intensive discussions with all involved participants of the project. This product originated out of the intervention development workshop conducted using SLACK.

## Intervention manual for handwashing with soap before feeding a child

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| **Interventions** | **Activity** | **Date** | **Signature** |
| Step 1: Promotion to set up / build infrastructure (tippy tap/ handwashing facility) Step 2: Inform about others‘ approvalStep 3: Inform about and assess costs and benefitsStep 4: Foster positive emotionsStep 5: Prompt public commitment (to agree on a behavioral contract for tippy tap building & hand washing with soap before feeding a baby) | **Community meeting 1** | **Monday XX. XX. 2020** |  |
| Step 6: Prompt coping with barriers | **Household visit**  |  |  |
| Step 7: Prompt anticipated regret |  |  |  |
| Step 8: Use memory aids and environmental prompts and prompt commitment |  |  |  |
| Step 9: Prompt to agree on a behavioral contract and use memory aids and environmental prompts | **Phone messaging** |  |  |
| Step 10: Prompt coping with barriers | **Phone messaging** |  |  |
| Step 11: Prompt anticipated regret | **Phone messaging** |  |  |
| Step 12: Use arguments to bolster self-efficacy (confidence in performance) and organize social support | **Phone messaging** |  |  |
| Step 13: reward a village after reaching total coverage of hand washing facilities | **Community meeting 2** |  |  |

## Community group meeting 1

* Organize community group meeting with a local leader (or/and another important person/organization for the community). Please inform the local leader about community meeting one day before.
* Keep social distance (2 meters), use face mask and sanitizer (**COVID-19!)**
* Opening: today we are going to discuss what is hindering community members to build handwashing facilities, and what is encouraging community members to have them. We will also discuss today about the importance of always handwashing with soap before feeding a baby.
* At the end of the meeting we are going to sign a commitment.
* Use key slogans during the meeting: 1) Wash hands with soap and water before feeding a baby? Because we like it and we care about our children and the whole community!
* Closing: We come back again to review it! Your village will receive a reward certificate by reaching total handwashing facility coverage.

**Aims:**

1) Increase abilities to construct handwashing facility;

2) Increase norms, establish handwashing facility building and handwashing with soap as a community norm;

3) Change beliefs about costs and benefits of a handwashing with soap and water;

4) Increase positive emotions while washing hands with soap and water;

5) Prompt public commitment to wash hands with soap and water before feeding a baby and to build a handwashing facility.

**Description:**

**Step 1. Promotion to build infrastructure (tippy tap/ handwashing facility)**

* Health promoters should make sure that the participants bring the materials for the demonstration of handwashing facility in the communities:
	+ Local materials: tippy taps, bottles, soap, rope.
* Prompt participants to construct a hand washing facility (e.g. a tippy tap) if they don't have it. Demonstrate how easy a handwashing station (e.g. tippy tap) can be built.
* Declare that some materials can be given to those who want to build a handwashing station. If no materials can be given then ask how they would build a handwashing station to make handwashing easy and joyful.

**Step 2: Inform about others‘ approval**

* Point out that important others' support the handwashing facility construction and handwashing with soap before feeding a baby.
* During the community meeting the local leader (could be the Lao Women' Union, or another person why is influencer of the community) should state in front of the participants and inform them: ‘I highly appreciate that you construct a handwashing facility and wash your hands with soap before feeding a baby. Handwashing with soap before feeding the baby is important for the baby’s health, is easy to perform, and beneficial for the whole family and community.’

**Step 3: Inform about and assess costs and benefits**

* The health promoter demonstrates that invisible things like bacteria and virus are dangerous, e.g. the promoter rubs chili powder in his hands so it is no longer visible, but knew that it was there from smell, taste and fear of it stinging if he touches his eye (it could be white flour). The promoter starts a discussion about how effortful and expensive it is when a baby is ill and compares this effort to the easy performance of handwashing.
* Calculate together with the participants the corresponding costs and efforts for handwashing facility building and handwashing with soap before feeding a baby. The total cost should be compared to the effort of taking baby to the hospital or caring for a sick baby.
* Please ask participants: what is stopping you from building a handwashing facility? Please compare your efforts to perform handwashing with soap with a risk of getting you or your family members sick. Please make sure that the participants knows that to have a handwashing facility and wash hands with soap is more beneficial. Please include in your calculation following elements and discuss about costs & benefits

1) effort to build and maintain a hand washing facility (bottle, rope, soap, water, also supplying with water and soap) and washing hands with soap,

2) the costs of medical care when you or your baby is sick, and it takes time to recover from the sickness and malnourish.

3) lost time and lost productivity.

**Step 4: Foster positive emotions**

* Take a picture of the participant (if not possible, please ask the participant to take picture on their phone if they have one): 1) present hand washing as pleasant and ask the participant to describe the good feeling of washing hands with soap and water, 2) induce positive emotion while taking picture (tell a funny joke), 3) ask participant describe a positive emotion.

**Step 5: Prompt public commitment (to agree on a behavioral contract to build a handwashing facility & hand washing with soap before feeding a baby)**

* Invite the chief of the local leaders to stand in front of the participants and encourage them to commit to build a handwashing facility and for always wash hands with soap and water before feeding a baby. He should ask participants the following questions:
	+ Who would like to build their own handwashing facility?
	+ Do you commit to build a handwashing facility (if you don't have one) and do you commit to rebuild a handwashing facility if collapsed?
	+ Do you commit to always wash hands with soap and water before feeding a baby?
	+ If they agree, please invite participants to sigh the commitment (or fingerprint) with the health promoters. Give them applause!
* Health promoter makes a list who will build the handwashing station and when it will be completed. Who in the family will help to build it?

**Outcomes:**

* Participants know about how to build a hand washing facility (tippy tap).
* Participants are confident that they can wash hands with soap and water before feeding a baby.
* Participants know that important others’ approve the latrine construction.
* Participants know about benefits and positive consequences of handwashing facility construction and handwashing with soap before feeding a baby.
* Participants are certain that washing hands with soap and water prevents the baby from getting diseases.
* Participants know that washing hands with soap and water before feeding the baby is easy and not effortful
* Participants know how pleasurable the hand washing with soap is.
* Participants know how clean they feel when they wash hands with soap and water before feeding the baby.
* Participants are committed to construct a handwashing facility and to always wash hands with soap before feeding a baby.

**Key slogan:** Wash hands with soap and water? Because we like it and we care about our children and the whole community!

**Location:** community meeting

**Implemented by:** health promoters, local leaders or/and another important person (organization) for the community

**Material:** bottle, rope, soap, chili powder, tablet or smartphone to take a picture, a nice paper for commitment sign, the list of participants (to note who commits to wash hands with soap and to build a handwashing facility), face mask, sanitizer

## Household visit

Keep social distance (2 meters), use face mask and sanitizer (**COVID-19!)**

**Aims:**

1) Increase confidence in performance by coping with barriers,

2) Increase personal responsibility that the baby grows up healthy,

3) Increase remembering to use tippy tap for hand washing with soap and water and to always wash hands with soap before feeding a baby,

4) Commitment to wash hands with soap with soap before feeding a baby.

5) Increase good feelings and the feeling to be clean when washing hands with soap and water before feeding a baby.

**Description:**

**Step 6. Prompt coping with barriers**

* Ask participant: do you remember community meeting, you sign a commitment on hand washing with soap and building handwashing facility? Please go with the participant to check if they have a tippy-tap. If there is no handwashing facility ask the participant why not, what the problems are, how they can be resolved, and who could help. Make a plan about how to overcome these problems. Do the same if the handwashing station does not seem to be used.
* If the handwashing station seems to be used, ask the caretaker how frequently they managed to wash hands before feeding the child today, yesterday, and the day before yesterday. Ask about problems arising and make a plan about how to overcome these problems.
* The maintenance of the hand washing facility must be planned. The participant is requested to specify a moment in the daily routine to check whether water has to be refilled at the tippy tap, where the person will take the water for refilling from (water source) and how much water she/he will refill (provide poster with hand washing with soap at key times).

**Step 7. Prompt anticipated regret**

* Discuss with the whole family that it is in their personal responsibility that the baby grows up healthy and it could also lead to good early childhood developments. They should imagine that the baby falls ill because they did not wash hands with soap and water before feeding the baby and how they would feel then (you can do this on days like Growth Monitoring day, when you expect mother, father, etc. to come to a single location to get their babies weighted).
* Discuss with the whole family about COVID-19 situation in Lao PDR and how important is to wash hands with soap aiming to reduce the virus spread.

**Step 8. Use memory aids and environmental prompts and prompt to agree on a behavioral contract (commitment)**

* During the household visit, health promoter ask all members of the household to commit that before feeding the baby hands are washed.
* Health promoter should have a poster with a pictorial or painting (e.g. pre-printed poster, which they can color) expressing the statement ‘We all care for our babies and wash hands with soap before feeding it’.
* Health promoter mention that nutritional agenda for baby needs handwashing with soap and provides poster with illustration what good nutrition for babies looks like. Healthy plate/bowl image with appropriate balance of starchy foods/protein rich/fruits/vegetables etc.
* All household members should be represented on the poster (photo or painting, fingerprint).
* Fix the poster in the household where the baby is normally fed.

**Outcomes:**

* Participants know how to cope with barriers.
* Participants know how and when to maintain the hand washing facility.
* Participants are personally responsible that the baby grows up healthy.
* Participants always remember to wash hands with soap before feeding a baby.
* Participants know that they have wash hands with soap always at key times aiming to reduce COVID-19 spread in the community.
* Participants feel how pleasurable it is to feel clean when washing hands with soap before feeding a baby.
* Participants know about how to construct a tippy-tap.
* Participants construct a tippy-tap.

**Key slogans:**

* Wash hands with soap and water? Because we like it!
* Wash hands with soap and water? We can do it!
* We all care for our babies and wash hands with soap before feeding it!

**Location:** households

**Implemented by:** health promoters

**Duration:** after community meeting, during the period of one month every two weeks two visits, and then every month one

**Material:** poster - hand washing with soap at key times, pen, printed and laminated pictures for the participant, poster with nutritional agenda, face masks

## Phone messaging or call (if you use a call, please combine all steps together)

**Aims**:

1) Increase remembering to always wash hands with soap before feeding a baby,

2) Commitment to wash hands with soap with soap before feeding a baby,

3) Increase confidence in performance by coping with barriers,

4) Increase personal responsibility that the baby grows up healthy,

5) Increase confidence in performance for always washing hands with soap before feeding a baby

6) Increase social support

**Description:**

**Step 9: Prompt to agree on a behavioral contract and use memory aids and environmental prompts**

* ‘We would like to remind you to our contract in which you agree to always wash your hands before feeding your children.’

**Step 10: Prompt coping with barriers**

* ‘We hope that you succeeded. If it was not possible then reflect on the reasons why you did not wash your hands and how you can do it better for the next time.’

**Step 11: Prompt anticipated regret**

* ‘Please imagine that your baby falls sick because you did not wash hands with soap and water before feeding the baby. How bad would you feel then? But if you follow right practice, your baby will be healthy’.

**Step 12: Use arguments to bolster self-efficacy (confidence in performance) and organize social support**

* ‘We are sure that you will succeed in washing your hands before feeding your child. You are so a great mother/caretaker.’
* ‘If you have difficulties to wash your hands before feeding the baby then agree with somebody in your family to help you to realize handwashing.’

**Outcomes**:

* Participants always remember to wash hands with soap before feeding a baby.
* Participants feel committed to always wash hands with soap before feeding a baby.
* Participants feel supported by coping with barriers in case they failed to always wash hands with soap before feeding a baby.
* Participants feel personally responsible that the baby grows up healthy.
* Participants receive social support regarding handwashing with soap before feeding a baby.

**Recipients:** Caretakers. If the caretaker does not use the phone (about 60%) then the owner of the phone has to be asked to replay the message to the caretaker. Several combinations of the messages could make them more attractive to avoid boredom and inurement.

**Time:** The messages should be send during the morning, in the first week daily, in the second week every other day, and in the third week two times a week. Please follow the field-work schedule.

**Implemented by:** call center/ agency or health promoter, this person could be also a village head, LWU, LYU, Lao Front or teacher.

**Material**: phone, ability to communicate in a local language

## Community meeting 2

* Organize community meeting with a local leader. Please inform the local leader about the meeting one day before. Important! The health promoter should check before about the handwashing facility coverage!
* Keep social distance, use face mask, and sanitizer (**COVID-19!)**
* Opening: congratulations to community for total coverage of handwashing facilities.
* Use key slogans during the meeting: 1) Wash hands with soap before feeding a baby? Because we like it and we care about our children and all community!
* Closing: encourage community to keep this health related practice, which also helps to prevent spread of diseases e.g. COVID-19 and keeps children and community members healthy!

**Aims:** increasing positive feelings and confidence

**Description:**

**Step 13: Reward community after reaching total coverage of hand washing facilities**

* Reward on village level (total coverage of handwashing facilities in the village). The village receives a certificate with the written commitment (to reach and declare total coverage of hand washing facilities). This can be display board, like a flex banner on the side of a wall.
* Facilitate presentation/ handover of official certificate to villages with total coverage of hand washing facilities. Place stands with statements in the village after declaring total coverage of hand washing facilities (tippy taps).

**Outcomes:** Villages receive reward regarding hand washing with soap and water and construction of handwashing facility from important others’.

**Location:** villages

**Key slogans:**

* Wash hands with soap and water? We all do it!
* We are all proud of our handwashing facilities!

**Recipients**: community members

**Implemented by:** health promoters, community leaders

**Material:** pen, paper, certificate, face mask

## Intervention manual for controlling mouthing

|  |  |  |  |
| --- | --- | --- | --- |
| **Interventions** | **Activity** | **Date** | **Signature** |
| Step 1: Promotion to build infrastructure (playpen) Step 2: Inform about others’ approvalStep 3: Prompt behavioral practiceStep 4: Inform about others’ behavior and describe feelings about performing and about consequences of the behaviorStep 5: Change beliefs about prevention and healthyStep; 6 Change beliefs about costs and benefits | **Caretakers meeting** | **Monday XX. XX. 2020** |  |
| Step 7: Promotion to build infrastructure if they still don’t have it (playpen) Step 8: Prompt behavioral practiceStep 9: Inform about others’ behavior and describe feelings about performing and about consequences of the behaviorStep 10: Inform about others’ approvalStep 11: Change beliefs about prevention and healthyStep12: Change beliefs about costs and benefits | **Household visit 1** |  |  |
| Step 13: Prompt coping with barriers | **Household visit 2** |  |  |
| Step 14: Prompt anticipated regret |  |  |  |
| Step 15: Use memory aids and environmental prompts and prompt commitment |  |  |  |
| Step 16: Prompt to agree on a behavioral contract and use memory aids and environmental prompts | **Phone messaging** |  |  |
| Step 17: Prompt coping with barriers | **Phone messaging** |  |  |
| Step 18: Prompt anticipated regret and use arguments to bolster self-efficacy (confidence in performance) | **Phone messaging** |  |  |
| Step 19: Organize social support  | **Phone messaging** |  |  |
| Step 20: Set graded goals | **Phone messaging** |  |  |

## Caretakers meeting

Controlling ‘mouthing’ includes:

**Infrastructure:** construction of ‘playpen’ and cleaning with soap and water regularly

**Behavior:** controlling baby not to pick up food or any dirty item from the floor and put it into the mouth.

* Organize caretaker group meeting with a local leader. Please inform the local leader about care taker meeting one day before.
* Keep social distance (2 meters), use face mask and sanitizer (**COVID-19!)**
* Opening: today we are going to discuss what is encouraging community members to have a playpen and clean it with soap and water regularly. We will also discuss today about the importance of controlling baby not to pick up food or any dirty item from the floor and put it into the mouth.
* At the end of the meeting we are going to sign a commitment.
* Use key slogans during the meeting: 1) Controlling ‘mouthing’ and build a ‘playpen’? We can do it! Because we care about our children and the whole community!
* Closing: We come back again to review it! Your village will receive a reward certificate by reaching total handwashing facility coverage.

**Aims:**

1. Increase abilities to use/construct/clean a ‘playpen’
2. Increase confidence in performance of controlling mouthing behavior
3. Change beliefs about controlling mouthing (certain for prevention; certain baby is healthier)
4. Increase positive emotions by contributing to the health of the baby
5. Increase norms, establish ‘playpen’ building and controlling mouthing as a community norm
6. Change beliefs about costs and benefits

**Description:**

**Step 1. Provide infrastructure**

* Explain the usefulness of playpen for controlling ‘mouthing’ of children. This playpen could also be used as a safety place for the baby to be in when mother or care taker are busy working around the house. Show community members how to construct a ‘playpen’ which is cleaned with water and soap before putting the baby down. Please inform caretakers about the following household visit! Please encourage them to organize all materials for ‘playpen’ construction, and if they don’t manage to build it on their own, health promoter will help them during the following household meeting.

**Step 2. Inform about others’ approval**

* The community leader (or another important person for community) should inform the community members that important people in the village they think (approve) that controlling the baby to not pick up food or an dirty item from the floor and put it into the mouth contributes to the well-being of the baby.

**Step 3. Prompt behavioral practice**

* Prompt the caretakers to use a ‘playpen’ and perform controlling ‘mouthing’ (control the baby to not pick up food or any dirty item from the floor and put it into the mouth) first 2 times a day then 3 times a day.

**Step 4. Inform about others’ behavior and describe feelings about performing and about consequences of the behavior**

* Name people in the village who already control the baby to not pick up food or any dirty item from the floor and put it into the mouth.
* State that they like this very much because they contribute to the health of the baby.

**Step 5. Change beliefs (prevention and healthy)**

* The health promoter demonstrates how the baby is eating dirt (or even feces) when picking up food from the floor and putting it into the mouth and getting sick. This can be done by using illustrations or by a live demonstration (e.g. a foot which is tramped in animal feces and then walking inside the house).

**Step 6. Change beliefs about costs and benefits**

* Controlling ‘mouthing’ is easy when the baby is put down in a ‘playpen’ (which has to be cleaned with soap and water before).
* The promoter starts a discussion about how effortful and expensive it is when a baby is ill and compares this effort to the easy performance of controlling ‘mouthing’.

**Outcomes:**

* Participants are certain that controlling ‘mouthing’ behavior prevents baby from getting sick and keeps it healthy
* Participants are confident in controlling ‘mouthing’ behavior
* Participants know that many others perform controlling ‘mouthing’
* Participants know that important others approve controlling ‘mouthing’ behavior
* Participants feel how pleasurable it is to be sure that the baby grows healthy by performing controlling ‘mouthing’
* Participants know about how to construct a ‘playpen’
* Participants construct a ‘playpen’ and clean with soap and water regularly

**Key slogan:**

* Controlling ‘mouthing’ and build a ‘playpen’? We can do it!

**Location:** caretakers meeting

**Implemented by:** health promoters, local leader or the Lao Women’s Union

**Material:** material which is needed to construct a playpen (bottles, rope, matt, etc.), info poster with baby (optional), face masks and sanitizer.

## Household visit 1

Keep social distance (2 meters), use face mask and sanitizer (**COVID-19!)**

Controlling ‘mouthing’ includes:

**Infrastructure:** construction of ‘playpen’ and cleaning with soap and water regularly

**Behavior:** controlling baby not to pick up food or any dirty item from the floor and put it into the mouth.

**Aims:**

1) Increase abilities to use/construct/clean a ‘playpen’

2) Increase confidence in performance of controlling mouthing behavior

3) Change beliefs about controlling mouthing (certain for prevention; certain baby is healthier) 4) Increase positive emotions by contributing to the health of the baby

5) Increase norms, establish ‘playpen’ building and controlling mouthing as a community norm

6) Change beliefs about costs and benefits

**Description:**

**Step 7. Provide infrastructure if they still don’t have it**

* Help the family to construct a ‘playpen’ which is cleaned with water and soap before putting the baby down if they still don’t have one.

**Step 8. Prompt behavioral practice**

* Prompt the caretaker to use a ‘playpen’ and perform controlling ‘mouthing’ (control the baby to not pick up food or any dirty item from the floor and put it into the mouth) first 2 times a day then 3 times a day.

**Step 9. Inform about others’ behavior and describe feelings about performing and about consequences of the behavior**

* Name people in the village who already control the baby to not pick up food or any dirty item from the floor and put it into the mouth.
* State that they like this very much because they contribute to the health of the baby.

**Step 10. Inform about others’ approval**

* Inform that important people in the village think that controlling the baby to not pick up food or an dirty item from the floor and put it into the mouth contributes to the well-being of the baby.

**Step 11. Change beliefs (prevention and healthy)**

* The health promoter demonstrates how the baby is eating dirt (or even feces) when picking up food from the floor and putting it into the mouth and getting sick. This can be done by using illustrations or by a live demonstration (e.g. a foot which is tramped in animal feces and then walking inside the house).

**Step 12. Change beliefs about costs and benefits**

* Controlling ‘mouthing’ is easy when the baby is put down in a ‘playpen’ (which has to be cleaned with soap and water before).
* The promoter starts a discussion with a community members about how effortful and expensive it is when a baby is ill and compares this effort to the easy performance of controlling ‘mouthing’.

**Outcomes:**

* Participants are certain that controlling ‘mouthing’ behavior prevents baby from getting sick and keeps it healthy
* Participants are confident in controlling ‘mouthing’ behavior
* Participants know that many others perform controlling ‘mouthing’
* Participants know that important others approve controlling ‘mouthing’ behavior
* Participants feel how pleasurable it is to be sure that the baby grows healthy by performing controlling ‘mouthing’
* Participants know about how to construct a ‘playpen’
* Participants construct a ‘playpen’ and clean with soap and water regularly

**Key slogan:**

* Controlling ‘mouthing’ and build a ‘playpen’? We can do it!

**Location:** households

**Implemented by:** health promoters

**Material:** material which is needed to construct a playpen (bottles, rope, matt, etc.), info poster with baby (optional), face masks and sanitizer

## Household visit 2

Keep social distance (2 meters), use face mask and sanitizer (**COVID-19!)**

Controlling ‘mouthing’ includes:

**Infrastructure:** construction of ‘playpen’ and cleaning with soap and water regularly

**Behavior:** controlling baby not to pick up food or any dirty item from the floor and put it into the mouth.

**Aims:**

1. Increase confidence in performance by coping with barriers,
2. Increase personal responsibility that the baby grows up healthy, and they contribute to early childhood cognitive development with having cleaned toys for the baby to play in the playpen.
3. Increase remembering to use playpen and perform controlling mouthing,
4. Commitment to use ‘playpen’ and control ‘mouthing’ by children under 2 years.

**Description:**

**Step 13. Prompt coping with barriers**

* Ask caretakers how successful they were with controlling ‘mouthing’ of the baby and ask which the difficulties were.
* Discuss how these difficulties can be resolved.

**Step 14. Prompt anticipated regret**

* Discuss with the caretakers that it is in their personal responsibility that the baby grows up healthy.
* They should imagine that the baby falls ill because they did not control ‘mouthing’ and how they would feel then.

**Step 15. Prompt public commitment and use memory aids and environmental cues**

* Ask all caretakers to commit to guarantee that they control ‘mouthing’ of the baby.
* Make a poster with the illustration: ‘We all care for our baby and make an effort to prevent that the baby picks up food from the floor and puts it into its mouth’; use pre-printed posters showing babies being controlled from mouthing common objects and fallen food?
* All caretakers commitment should be represented on the poster (photo or painting, fingerprint). Fix the poster in the household at a visible place.

**Outcomes:**

* Participants know how to cope with barriers.
* Participants are personally responsible that the baby grows up healthy.
* Participants always remember to use a playpen and control mouthing by children.
* Participants commit to use playpen and control mouthing by children.

**Key slogan:** Controlling mouthing and use a playpen? We all are responsible!

**Location:** households

**Implemented by:** health promoters

**Material:** tablet or phone to make a family picture or use poster with illustration, face mask, sanitizer

## Phone messaging or call (if you use a call, please combine all steps together)

**Aims**:

1) Increase remembering to always control mouthing of a baby,

2) Commitment to use a playpen and control mouthing of a baby,

3) Increase confidence in performance by coping with barriers,

4) Increase personal responsibility that the baby grows up healthy,

5) Increase confidence in performance for always washing hands with soap before feeding a baby,

6) Increase social support.

**Description:**

**Step 16: Prompt to agree on a behavioral contract and use memory aids and environmental prompts**

* ‘We would like to remind you to our contract in which you agree to control the ‘mouthing’ of your baby.’

**Step 17: Prompt coping with barriers**

* ‘We hope that you succeeded. If it was not possible then reflect on the reasons why you did not control ‘mouthing’ and how you can do it better for the next time.’

**Step 18: Prompt anticipated regret and use arguments to bolster self-efficacy (confidence in performance)**

* ‘Please imagine that your baby falls ill because you did not control ‘mouthing’. How bad would you feel then?’
* ‘We are sure that you will succeed in controlling ‘mouthing’ of your baby. You are so a great mother/caretaker.’

**Step 19: Organize social support**

* ‘It might be difficult to watch your baby all the times. Ask other members of your family to help you to realize controlling ‘mouthing’ and use ‘playpen’.’

**Step 20: Set graded goals**

* ‘If you do not succeed in controlling ‘mouthing’ all the times then do it at least 3 or more times a day.’

**Outcomes**:

* Participants always remember to control ‘mouthing’ of a baby.
* Participants feel committed to use a playpen and control ‘mouthing’ of a baby.
* Participants feel supported by coping with barriers in case they failed to regularly use a ‘playpen’ and control ‘mouthing’ of a baby.
* Participants feel personally responsible that the baby grows up healthy.
* Participants receive social support regarding controlling ‘mouthing’ behavior and use of ‘playpen’
* Participants set graded goals

**Recipients:** Caretakers. If the caretaker does not use the phone (about 60%) then the owner of the phone has to be asked to replay the message to the caretaker. Several combinations of the messages could make them more attractive to avoid boredom and inurement.

**Time:** The messages should be send during the morning, in the first week daily, in the second week every other day, and in the third week two times a week. Please follow the field-work schedule.

**Implemented by:** call center/ agency

**Material**: phone, ability to communicate in a local language

## Intervention manual for exclusive breastfeeding for the first 6 months

|  |  |  |  |
| --- | --- | --- | --- |
| **Interventions** | **Activity** | **Date** | **Signature** |
| Step 1: Demonstrate and model behavior; organize social support Step 2: Prompt coping with barriers and prompt to resist social pressureStep 3: Change beliefs about costs and benefitsStep 4: Describe feelings about performing and about consequences of the behavior | **Household visit 1** | **Monday XX. XX. 2020** |  |
| IStep 5: Inform about others approval | **Household visit 2** |  |  |
| Step 6: Prompt anticipated regret |  |  |  |
| Step 7: Prompt to agree on a behavioral contract |  |  |  |

## Household visit 1

Keep social distance (2 meters), use face mask and sanitizer (**COVID-19!)**

**Health worker should be a female and a mother!**

Ensure that people know that EBF mean only and nothing else besides mother breast milk to give to baby from day one to 6 months. This contributes to building immunity for the baby. Please explain what immunity means exactly.

**Aims:**

1. Increase confidence in performance of exclusive breastfeeding
2. Increase confidence in performance by coping with barriers,
3. Change beliefs about costs and benefits of exclusive breastfeeding
4. Increase positive emotions by contributing to the health of the baby

**Description:**

**Step 1. Demonstrate and model behavior; organize social support**

* Ask the mother carefully whether there are situations when she cannot or when it is difficult to breastfeed her baby.
* Then show how other mothers have resolved this situation by story sharing of experiences of other mothers. The facilitator should be prepared to have stories about how to master any obstacle which may arise. Using a Doer from the village as an example. It could be also a well known and respected mothers that EBF as a model.
* Ask the mother who could help her in that way that she can manage to breastfeed her baby even in difficult situations.

**Step 2. Prompt coping with barriers and prompt to resist social pressure**

* Encourage mothers to identify strategies already used in the past and develop new solutions how to perform exclusive breastfeeding for the first six months even if they have to work in the field. One solution might be to hand express milk. Expressed milk should be stored in a cleaned bottle for and leave it in cool and dry place. Solution two is to take the baby with them (likesome families are already doing) Health promoter should raise this point for discussion with the family.
* Prepare the mothers with arguments for the case that other family members request activities which make breastfeeding impossible.

**Step 3. Change beliefs about costs and benefits**

* Assure that the mother knows how important exclusive breastfeeding for the first six months is, to prevent the baby from getting undernourished and weak because breast milk contains liquids which make the baby strong and therefore will prevent that it gets sick.
* Message: Exclusive breastfeeding for the first six months is not effortful compared to the costs and efforts needed when the baby is ill.

**Step 4. Describe feelings about performing and about consequences of the behavior**

* Message: exclusive breastfeeding for the first six months makes you feel good because you know that it prevents your baby from getting undernourished and weak.

**Outcomes:**

* Participants are confident by performing exclusive breastfeeding
* Participants know how to cope with barriers and how to resist social pressure
* Participants know how beneficial is exclusive breastfeeding
* Participants feel how pleasurable it is to be sure that the baby grows healthy by performing exclusive breastfeeding

**Key slogan:** Exclusive breastfeeding? We do it for the health of our baby!

**Location:** households

**Implemented by:** female health promoters

**Material:** use of face mask and sanitizer

## Household visit 2

Keep social distance (2 meters), use face mask and sanitizer (**COVID-19!)**

**Health worker should be a female and a mother!**

**Aims:**

1. Increase norms, establish exclusive breastfeeding for the first six months as a community norm,
2. Increase personal responsibility that the baby grows up healthy,
3. Behavioral contract to perform exclusive breastfeeding for the first six months.

**Description:**

**Step 5. Inform about important others approval**

* Inform that important people in the village think that exclusive breastfeeding for the first six months contributes to the well-being of the baby.
* Ask other people in the household to express their belief that it is good for the health of the baby to perform exclusive breastfeed for the first six months. Ask for their support.

**Step 6. Prompt anticipated regret**

* Message: It is in your personal responsibility that your baby grows up healthy. Imagine that your baby falls ill because you did not exclusively breastfeed your baby in the first six months – how would you feel then.

**Step 7. Prompt to agree on a behavioral contract**

* Set up a contract with the mother, to always perform exclusive breastfeeding for the first six months.
* The whole family should agree to support the mother for exclusive breastfeeding. Provide poster with a mother breastfeeding baby and this should be signed with a fingerprint from everyone.

**Outcomes:**

* Participants know that important others approve exclusive breastfeeding.
* Participants are personally responsible that the baby grows up healthy.
* Participants commit to perform exclusive breastfeeding for the first six months.

**Key slogan:** Exclusive breastfeeding? We do it for the health of our baby!

**Location:** households

**Implemented by:** female health promoters

**Material:** use poster with illustration for commitment to sign, face mask, sanitizer

# Evaluation procedure

The objective of the evaluation is to prove the effectiveness of the implemented interventions in changing the target behaviors, handwashing before feeding the baby, controlling mouthing of a baby, and exclusive breast-feeding for the first 6 months. Moreover, the RANAS approach enables to detect whether the interventions changed the targeted behavioral factors. Knowing which behavioral factors changed because of the interventions and which not, informs about how to improve the interventions and makes them more effective in changing behavior.

To prove the effectiveness of the interventions in this baby WASH project it is necessary to measure the behavior and the behavioral factors before (baseline) and after the intervention (endline). In ideal circumstances, to assure that only the interventions produced the change, behavior and behavioral factors of a control group should also be measured in a baseline and in an endline. A control group contains a sample of households which did not receive any intervention. However, in this project no control group was planned, therefore we have to switch to the comparison between those households which incidentally did not receive an intervention or which did only receive very few interventions (a small intervention ‘dose’) with those which received all interventions.

The measurements should be taken from the same households in the baseline and in the endline to be able to determine exactly the change. The questions in the survey should be exactly the same in the baseline as in the endline. This questionnaire can be found in Annex F. Additionally, an intervention check should be applied, meaning that questions about the interventions should be asked, whether the household got into contact with an intervention and how it was received. This questionnaire is added in Annex G.

The effectiveness of an intervention is measured by calculating the difference in the mean values of the measured behavior and of the behavioral factors between the baseline and the endline. This difference has to be compared between those households, which got the intervention and those, which did not or only partially. A significant difference of at least 10% indicates that the intervention was effective. If all households received all interventions then we can only compare the values before with the values after the intervention.

# Annex A: General Results

**Key characteristics of the sample:**

* Sample size is *N=616*.
* 87.5% of the study participants were female, and 12.5% were male.
* The average participants age was 31.42 (*SD*=14.63).
* 94.3% of study participants are married, 0.5% single, 2.9% widowed, 0.7% divorced/ separated, and 1.6% cohabiting.
* 43.2% of study participants can’t read or write.
* 29.9% of the respondents did not go to school; 19.2% did not completed primary school; 22.7% finished primary school; 14.1% did not completed secondary school; 10.9% finished secondary school; 2.3 % finished college; 1% finished university.
* 85.1% of the respondents are Animists, 14.6% are Buddhists and 0.3% Christians.
* The average household size in our study sample is *M*=7.16 (*SD*=2.7)
* No rice shortage last year were reported by 97.7% of the respondents.
* 55.2% of the study participants own the house they live in, and 44.8% live in their parent house.
* 87% have a mobile phone, of these 41% have a smart phone; however only 57% use the phone
* Wealth factors: 11.2% of study participants own a radio, 57.5% TV, 94.5% have electricity, and 28.6% have running water in their house.[For comparison: Wealth factors LSIS (2017-2018 total percentage of rural and urban areas): 20% radio, 79.3% TV, 89.7% electricity, 92.2% mobile phone, running water 3.5%.]
* 64.9% of households in our sample have a latrine.

**Mental health:** average score and correlation with baby WASH outcomes

To assess mental health in our population we used Warwick-Edinburgh Mental Well-being Scale (WEMWBS), a 14 items measured on 5-point Likert scale from 1 to 5 (1=none of the time, 2=rarely, 3=some of the time, 4=often, 5=all of the time). All items are positively worded and the total score ranges from 14 to 70 (recode 1 and 2 =0, 3=3, 4=4, 5=5 and calculating a sum scale) with a high score corresponding to a high level of mental well-being. The analysis revealed (*N*=616) average score of 44.68 (*SD*=12.02) see Figure 1 below. The scale is not aimed to identify individuals with high or low positive mental health, that’s why no ‘cut off’ has been developed (Stewart-Brown & Janmohamed, 2008; Tennant et al., 2007). Further analysis is needed to confirm our results.

Statistical analysis revealed significant Pearson correlations of mental well-being with handwashing with soap before feeding a baby (*r*= .340\*\*), with controlling ‘mouthing’ (*r*= .170\*\*) and with intention for exclusive breastfeeding for the first six months (*r*= .278\*\*).

**Health knowledge:**

Different ‘yes or no’ questions were used to measure the factual knowledge of the study participants about potential diarrhea effects, potential diarrhea causes, and potential diarrhea prevention possibilities. 15 questions with correct and wrong answers about diarrhea facts were read to the respondents. The interviewer received the following instruction: ‘Read the questions to the participant and ask him/her to respond with yes, no or I don’t know.’ The percentages of the correct answers for the statements with correct symptoms can be found in table 1 below. Most of the questions were answered correctly by the majority of the study participants.

**Table A 1.** *Percentages of correct answers for the “yes/ no” diarrhea knowledge questions*

|  |  |  |
| --- | --- | --- |
| **Knowledge items** | **The statement is correct/false** | **Correct answers** |
| ***Potential diarrhea effects*** |  |  |
| Could you please tell me for each whether it is a body effect of diarrhea or not? |  |  |
| Weakness/ weight loss | False | 1.6% |
| Loss of water from the body | Correct | 95% |
| Fever | Correct | 88.6% |
| Three or more loose stools per day | Correct | 96.9% |
| ***Potential diarrhea causes*** |  |  |
| Could you please tell me for each following aspects whether it is a cause or not? |  |  |
| Food touched by an infected person | Correct | 84.2% |
| Eating food that was dropped on the ground | Correct | 93.4% |
| Eating spoiled food  | Correct | 99.2% |
| Drinking contaminated water  | Correct | 97.7% |
| Defecate in the open | Correct | 92.5% |
| Been cursed by someone | False | 49.5% |
| Mother or baby eating spicy food | False | 5.2% |
| ***Potential diarrhea preventions*** |  |  |
| Wash baby’s hands with soap before eating | Correct | 94.0% |
| Drink treated water (boiled, chlorinated, filtered) | Correct | 94.6% |
| Wash hands with soap before feeding a baby | Correct | 94.6% |
| Prevent baby to pick up things from the floor and put them in the mouth | Correct | 93.2% |

*Note. N =* 616

The questions of knowledge about diarrhea were built in the knowledge factor with a mean of 12.37 in a scale from 0 to 15 (*SD*=2.1). To conclude, the knowledge about effects, causes, and prevention of diarrhea in study areas is high and has only a small improvement potential.

# Annex B: Results on handwashing with soap and water before feeding the baby

**Figure B1.** *Correlations (Pearson r) of behavioral factors explaining handwashing before feeding a child (displayed are only factors with significant correlations with behavior) above or below the green lines the relevant factors (Pearson r >= 0.4) are indicated.*



**Table B1.** *Correlations of RANAS behavioral factors with handwashing with soap before feeding the baby*

|  |  |
| --- | --- |
| **Behavioral factors** | ***r*** |
| ***Risk factors*** |  |
| Vulnerability (general)In general, how high do you think is the risk that your baby gets diarrhea/ runny stools?Response scale: 1 = no risk, 2 = little risk, 3 = medium risk, 4 = high risk, 5 = very high risk | .092\* |
| Vulnerability (specific)How likely is it that your baby gets diarrhea/runny stools if you do not wash your hands with soap and water before feeding your baby?Response scale: 1 = not at all, 2 = a little, 3 = medium, 4 = likely, 5 = very likely | .189\*\* |
| Health knowledge (Factor)Sum scale (0-15) | .240\*\* |
| ***Attitude factors*** |  |
| Belief effortHow effortful do you think is washing hands with soap and water before feeding your baby?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .522\*\* |
| Belief distance (far away)Do you think that the handwashing facility is too far away from the place where you feed your baby?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .194\*\* |
| Belief expensiveHow expensive is it for you to wash hands with soap and water before feeding your baby?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | -.114\*\* |
| Belief certain hw for preventionHow certain are you that washing hands with soap and water prevents your baby from getting diarrhea?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .456\*\* |
| Feelings: likeHow much do you like washing hands with soap and water before feeding your baby?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .597\*\* |
| Feelings: disgustHow disgusting is it for you not to wash hands with soap and water before feeding your baby?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .493\*\* |
| Feelings: cleanHow clean do you feel when washing hands with soap and water before feeding your baby?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .373\*\* |
| FeelingsHow much do you like the smell of soap on your hands?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .262\*\* |
| ***Norm factors*** |  |
| Other's behavior HHHow many people of your household wash hands with soap and water before feeding a baby?Response scale: 1 (almost) nobody, 2 = some of them, 3 = half of them, 4 = most of them, 5 = (almost) all of them | .561\*\* |
| Other's behavior VillageHow many people of your village wash hands with soap and water before feeding a baby?Response scale: 1 (almost) nobody, 2 = some of them, 3 = half of them, 4 = most of them, 5 = (almost) all of them | .395\*\* |
| Others approvalPeople who are important to you like your family members and friends, how much they want that you wash your hands with soap and water before feeding your baby?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .471\*\* |
| Others approvalPeople who are important to you like village authorities, health workers, people from a project or religious leader, how much they want that you wash your hands with soap and water before feeding a baby?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .324\*\* |
| Personal obligationHow strong do you feel a personal responsibility to yourself to wash hands with soap and water before feeding your baby?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .572\*\* |
| ***Ability factors*** |  |
| Difficult waterHow difficult is to get as much water as you need to wash hands with soap and water before feeding your baby?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | -.143\*\* |
| Difficult soapHow difficult is it to get as much soap as you need to wash hands with soap and water before feeding your baby?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | -.175\*\* |
| Difficult timeHow difficult is it to find the time to wash hands with soap and water before feeding your baby?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | -.133\*\* |
| Confidence in performanceHow confident are you that you can wash hands with soap and water before feeding a baby, even if your baby is crying and needs attention?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .644\*\* |
| Confidence in performanceHow confident are you that you can wash hands with soap and water before feeding your baby, even if you have to cook and clean?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .629\*\* |
| Coping plan (response scale: yes/no) waterDo you have a plan what to do so that you have always water for handwashing? | .193\*\* |
| Coping plan (response scale: yes/no) soapDo you have a plan what to do so that you have always soap for handwashing? | .221\*\* |
| ***Self-regulation factors*** |  |
| Commitment How committed do you feel to wash hands with soap and water before feeding your baby?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .489\*\* |
| CarelessAre you sometimes careless to wash hands with soap and water before feeding your baby?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .355\*\* |
| LazyAre you sometimes too lazy to wash hands with soap and water before feeding your baby?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | -.333\*\* |
| Remembering (forgetting last 24h)When you think about the last 24 hours: How often did it happen that you forgot to wash your hands with soap and water before feeding your baby?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | -.563\*\* |
| ***Additional factor*** |  |
| Communication How often do you talk with others about handwashing with soap and water before feeding a baby?Response scale: 1 = never, 2 = seldom, 3 = sometimes, 4 = often, 5 = very often | .484\*\* |

*Note.* \*p ≤ .05, \*\*p ≤ .01, \*\*\*p ≤ .001. Pearson correlation r: This parameter of effect size is denoted by r. The value of the effect size of Pearson r correlation varies between -1 to +1. According to Cohen (1988, 1992), the effect size is low if the value of r varies around 0.1, medium if r varies around 0.3, and large if r varies more than 0.5. *N*=616. Behavior measure: *Before you feed your baby, how often do you wash your hands with soap and water?*

**Table B 2.** *Means (M) and standard deviations (SD) of handwashing self-reports*

|  |  |  |  |
| --- | --- | --- | --- |
| **Behavioral measure** | *N* | *M* | *SD* |
| HW700a. Before you feed your baby, how often do you wash your hands with soap and water? | 616 | 3.14 | 1.23 |
| HW701. Before you feed your baby, how often do you wash your baby's hands with soap and water? | 616 | 2.91 | 1.32 |
| HW702. Before other household members feed a baby, how often do they wash their hands with soap and water? | 616 | 2.95 | 1.23 |
| HW703. Do you intend to wash your hands with soap before feeding your baby? | 616 | 3.51 | 1.18 |

*Note. All measures ranged from 1 – I (almost) never do this to 5 – (almost) each time.*

**Table B 3.** *Spot-check regarding handwashing*

|  |  |  |
| --- | --- | --- |
| **Context factors** | **Percentage of availability** | ***N*** |
| Availability of handwashing facility | 94% | 579 |
| Availability of soap | 70.6% | 409 |
| Availability of water | 98.6% | 572 |

*Note. N=616. Scale: Yes/No.*

The different places of the hand washing facility and the percentage who named it, are listed in table B 4 below. Places of the hand washing facility: in 3.4% of the households located elsewhere in the compound, 15.9% inside or near the latrine, 34.1% outside the house near the door, 12.9% elsewhere in the house, and 53.4% inside the house near the cooking place.

**Table B 4.** *Handwashing place*

|  |  |
| --- | --- |
| **Place of the hand washing facility** | **Percentage who named facility** |
| Elsewhere in the compound | 3.4% |
| Inside or near the latrine | 15.9% |
| Outside the house near the door | 34.1% |
| Elsewhere in the house | 12.9% |
| Inside the house near the cooking place/fire | 53.4% |

*Note. N=580.*

The available devices for hand washing are bucket (58.7%), jerry can (54%), mug/ cup (73.8%), tippy tap (20.7%), tap from running water (6.6%) and are showed in table B 5 below.

**Table B 5.** *Used devices for hand washing*

|  |  |
| --- | --- |
| **Used device** | **Percentage who named device** |
| Bucket | 92.9% |
| Jerry can | 54% |
| Mug/Cup | 73.8% |
| Tippy tap | 20.7% |
| Tap from running water | 6.6% |
| Others |  .2% |

*Note. N=580.*

Correlation of self-reported handwashing before feeding the baby with observed availability of soap was *r*=.178\*\* (*N*=579) and with observed availability of tippy-tap *r*=.149\*\* (*N*=580).

# Annex C: Results on controlling the baby to not pick up food or item from the floor and put it into the mouth

**Figure C1.** *Correlations of behavioral factors explaining controlling ‘mouthing’ of children under 2 years (displayed only factors with significant correlations with behavior) above or below the green lines the relevant factors (Pearson r >= 0.3) are indicated.*



**Table C 1.** *Correlations of RANAS behavioral factors with controlling ‘mouthing’ of children under 2 years*

|  |  |
| --- | --- |
| **Behavioral factors** | ***r*** |
| ***Risk factors***  |  |
| SeverityImagine that your baby contracted diarrhea/runny stools how severe would be the impact on your life?Response scale: 1= not severe, 2 = little severe, 3 = quite severe, 4 = severe, 5 = very severe | .142\*\* |
| Severity Imagine that your baby contracted diarrhea/ runny stools how severe would be the impact on your baby’s health?Response scale: 1= not severe, 2 = little severe, 3 = quite severe, 4 = severe, 5 = very severe | .102\* |
| ***Attitude factors***  |  |
| Belief effortHow effortful do you think is it to control your baby to not pick up food or item from the floor and put it into the mouth?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .350\*\* |
| Belief time consumingHow time consuming do you think is it to always control your baby to not pick up food or item from the floor and put it into the mouth?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | -.200\*\* |
| Belief certain (healthier)How certain are you that controlling to not pick up food or item from the floor and put it into the mouth makes your baby healthier?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .321\*\* |
| Belief certain (prevention)How certain are you that controlling to not pick up food or item from the floor and put it into the mouth prevents your baby from getting diarrhea (sick)?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .329\*\* |
| FeelingsHow much do you like to control your baby to not pick up food or item from the floor and put it into the mouth?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .398\*\* |
| ***Norm factors*** |  |
| Other's behavior HHHow many people of your household control baby from picking up food or item from the floor and put it into the mouth?Response scale: 1 (almost) nobody, 2 = some of them, 3 = half of them, 4 = most of them, 5 = (almost) all of them | .375\*\* |
| Other's behavior VillageHow many people of your village control baby from picking up food or item from the floor and put it into the mouth?Response scale: 1 (almost) nobody, 2 = some of them, 3 = half of them, 4 = most of them, 5 = (almost) all of them | .345\*\* |
| Others approval HHPeople who are important to you like your family members and friends, how much they want that you control your baby to pick up food or item from the floor and put it into the mouth?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .389\*\* |
| Others approval VillagePeople who are important to you like village authorities, health workers or religious leader, how much they want that you control your baby to pick up food or item from the floor and put it into the mouth?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .298\*\* |
| Personal obligationHow strong do you feel a personal responsibility to yourself to control baby to pick up food or item from the floor and put it into the mouth?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .370\*\* |
| ***Ability factors*** |  |
| Difficult controlHow difficult is it to control your baby to not pick up food or item from the floor and put it into the mouth?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | -.172\*\* |
| Confidence in performanceHow confident are you that you can control your baby to not pick up food or item from the floor and put it into the mouth?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .330\*\* |
| Difficult timeHow difficult is it to find the time to control your baby to not pick up food or item from the floor and put it into the mouth?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | -.140\*\* |
| Barriers How confident are you that you can control your baby to not pick up food or item from the floor and put it into the mouth, even if you have too cook and clean?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .309\*\* |
| Coping Do you have a plan what to do so that you can prevent baby to pick a food or an item from the floor and put it into the mouth? Yes/No | .220\*\* |
| ***Self-regulation factors***  |  |
| CommitmentHow committed do you feel to control your baby not to pick food or item from the floor and put it into the mouth?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .280\*\* |
| CarelessAre you sometimes careless to control your baby not to pick food or item from the floor and put it into the mouth?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .372\*\* |
| LazyAre you sometimes to lazy to control your baby not to pick food or item from the floor and put it into the mouth?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | -.223\*\* |
| WillingnessHow willing are you to control your baby not to pick food or item from the floor and put it into the mouth?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | .370\*\* |
| Remembering (forgetting last 24h)When you think about the last 24 hours: How often did it happen that you forgot to control your baby not to pick food or item from the floor and put it into the mouth?Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | -.296\*\* |
| ***Additional factor*** |  |
| Communication How often do you talk about controlling your baby to pick up food or item from the floor and put it into the mouth with others?Response scale: 1 = never, 2 = seldom, 3 = sometimes, 4 = often, 5 = very often | .235\*\* |

*Note.* \*p ≤ .05, \*\*p ≤ .01, \*\*\*p ≤ .001. *N*=533. Behavior measure: *How many times during the day do you control your baby to not pick up food or item from the floor and put it into the mouth?*

**Table C 2.** *Spot-check observations relevant for controlling mouthing*

|  |  |
| --- | --- |
| **Spot-check** | **Percentage (yes)** |
| Are there human feces just outside the house? | 5.5% |
| Are there animal feces just outside the house? | 81% |
| Are there animals outside the house? | 82.3% |
| Are there animal faeces inside the house? | 23.1% |
| Are there human faeces inside the house? | 1.5% |
| Is there garbage inside the house? |  53.2% |
| Are there animals near or in the cooking area? |  20% |
| Are there animals inside the house? |  28.9% |
| Are there flies inside the house? |  49.5% |
| Are unwashed dishes present? |  44.2% |
| Are the clean dishes stored covered? |  29.7% |
| Are the clean dishes stored on an elevated position? |  82.8% |
| Is the cooked food covered? |  63.6% |
| Is there garbage inside the kitchen and play area? |  50.2% |

*Note. N=616. Scale: Yes/No.*

# Annex D: Results on exclusive breastfeeding for the first six months

**Figure D1.** *Means of behavioral factors explaining breastfeeding separated for intentioners and non-intentioners. Arrows have those factors with an effect size >= 0.8.*

**Table D 1.** *Doers vs non-doers mean comparison of RANAS behavioral factors explaining exclusive breastfeeding for the first six months (T-test; Cohen’s d)*

|  |  |  |  |
| --- | --- | --- | --- |
| **RANAS factors** | Intentioners*M (SD)* | Non-Intentioners*M (SD)* | Cohen's *d* |
| ***Risk factors***  |  |  |  |
| Vulnerability \*\*\*How likely is it that your baby becomes undernourished if you don't exclusively breastfeed your baby? Response scale: 1 = not at all, 2 = a little, 3 = medium, 4 = likely, 5 = very likely | 3.53 (1.26) | 2.97 (1.22) | .45 |
| Vulnerability \*\*\*How likely is it that your baby becomes more likely to get sick, have stomach aches and diarrhoea if you don't exclusive breastfeed your baby? Response scale: 1 = not at all, 2 = a little, 3 = medium, 4 = likely, 5 = very likely | 3.48 (1.31) | 3.00 (1.10) | .40 |
| Severity\*\*\*Imagine that your baby contracted diarrhea/runny stools how severe would be the impact on your life? Response scale: 1= not severe, 2 = little severe, 3 = quite severe, 4 = severe, 5 = very severe | 4.11 (1.05) | 3.68 (1.09) | .40 |
| Severity\*\*Imagine that your baby contracted diarrhoea/ runny stools how severe would be the impact on your baby’s health? Response scale: 1= not severe, 2 = little severe, 3 = quite severe, 4 = severe, 5 = very severe | 4.16 (1.03) | 3.88 (1.05) | .27 |
| Health knowledge (factor) \*\*\*Sum scale (0-15) | 12.66 (1.83) | 11.80 (2.43) | .40 |
| ***Attitude factors*** |  |  |  |
| Belief effort \*\*\*How effortful is exclusive breastfeeding your baby for the first six months? Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | 4.66 (.63) | 3.77 (.83) | 1.21 |
| Belief time consuming \*\*How time consuming is exclusive breastfeeding your baby for the first six months? Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | 1.80 (1.22) | 2.22 (1.20) | .35 |
| Belief certain (prevention sick) \*\*\*How certain are you that exclusive breastfeeding your baby for the first six months prevents your baby from getting sick? Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | 4.39 (.87) | 3.62 (.86) | .89 |
| Belief certain (prevention undernourished) \*\*\*How certain are you that excusive breastfeeding your baby for the first six months prevents your baby from getting undernourished and weak? Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | 4.36 (.84) | 3.69 (.86) | .79 |
| Feelings (like bf)\*\*\*How much do you like breastfeeding your baby for the first six months? Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | 4.73 (.51) | 4.9 (.75) | .27 |
| Feelings (like pump)\*How much do you like to pump breastmilk to give it to the other caretakers to feed your baby? Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | 1.34 (.96) | 1.17 (.59) | .21 |
| Feelings (positive) \*\*\*How strong is your positive feeling to breastfeed your baby for the first six months? Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | 4.63 (.63) | 4.00 (.71) | .94 |
| ***Norm factors*** |  |  |  |
| Other's behavior village\*\*\*How many women of your village perform exclusive breastfeeding of baby’s for the first six months? Response scale: 1 (almost) nobody, 2 = some of them, 3 = half of them, 4 = most of them, 5 = (almost) all of them | 3.94 (.81) | 3.58 (.89) | .042 |
| Other's approval HH \*\*\*People who are important to you like your family members and friends, how much they want that you exclusively breastfeed your baby for the first six months? Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | 4.51 (.69) | 3.87 (.87) | .82 |
| Other's approval village \*\*\*People who are important to you like village authorities, health workers, or religious leader, how much they want that you exclusively breastfeed your baby for the first six months? Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | 4.48 (.77) | 3.82 (.90) | .79 |
| Personal obligation \*\*\*How strong do you feel a personal responsibility to yourself to exclusive breastfeed your baby for the first six months? Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | 4.52 (.64) | 2.89 (.78) | 2.29 |
| ***Ability factors*** |  |  |  |
| Confidence in performance \*\*\*How sure (confident) are you that you can exclusively breastfeed your baby for the first six months? Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | 4.62 (.58) | 3.75 (.88) | 1.17 |
| Confidence in performance maintenance (busy) \*\*\*How difficult is to exclusively breastfeed your baby for the first six months when you are busy working? Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | 2.23 (1.23) | 2.66 (1.14) | .36 |
| Confidence in performance maintenance (difficult) \*\*\*How difficult is it to exclusively breastfeed every time your baby wants it and not giving other alternatives during this time? Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | 2.05 (1.28) | 2.54 (1.16) | .40 |
| Confidence in performance maintenance (have to work) \*\*How confident are you that you are able to hand express milk for your baby, even if you have to work in the field? Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | 3.73 (1.17) | 2.73 (1.22) | .84 |
| Difficult time\*\*\*How difficult is it to find the time to exclusively breastfeed your baby for the first six months? Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | 1.94 (1.15) | 2.39 (1.13) | .40 |
| Confidence in performance maintenance (taking baby to the field) \*\*\*How confident are you that you can exclusively breastfeed your baby when you are taking it to the field? Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | 4.07 (1.04) | 3.59 (1.02) | .47 |
| ***Self-regulation factors*** |  |  |  |
| Remembering (pay attention) \*\*\*How much do you pay attention that you exclusively breastfeed your baby before leaving to the field or hand express milk for your baby? Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | 3.80 (1.27) | 3.13 (1.27) | .53 |
| Commitment \*\*\*How committed do you feel to exclusively breastfeed your baby for the first six months? Response scale: 1 = not at all, 2 = somewhat, 3 = rather, 4 = quite a lot, 5 = very much | 4.45 (.81) | 3.63 (1.02) | .89 |
| Communication \*\*\*How often do you talk about exclusive breastfeeding for the first six months with others? Response scale: 1 = never, 2 = seldom, 3 = sometimes, 4 = often, 5 = very often | 3.23 (1.36) | 2.42 (1.12) | .65 |

*Note.* \*p ≤ .05, \*\*p ≤ .01, \*\*\*p ≤ .001, *n.s.* = not significant. Total sample size: *N=*421. Doer: *N*=264; Non-doer: *N*=157. Cohen's *d*, small: *d=.*20, medium: *d=.*50, large: *d* =.80. Behavioral measure to differentiate doers from non-doers: ‘*Do you intend exclusively breastfeed for the first six months?*’ non doers (1-4); doers (5).

|  |
| --- |
| **Table D 2: BF500c. Do you breastfeed?** |
|  | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | No | 24 | 3.9 | 3.9 | 3.9 |
| Yes | 592 | 96.1 | 96.1 | 100.0 |
| Total | 616 | 100.0 | 100.0 |  |

|  |
| --- |
| **Table D 3: BF500f. Can you please tell me what you feed?** |
|  | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | exclusive breastfeeding | 440 | 71.4 | 89.4 | 89.4 |
| formula milk | 30 | 4.9 | 6.1 | 95.5 |
| prechew rice | 8 | 1.3 | 1.6 | 97.2 |
| boiled water | 2 | .3 | .4 | 97.6 |
| soya milk | 1 | .2 | .2 | 97.8 |
| rice porridge | 9 | 1.5 | 1.8 | 99.6 |
| other | 2 | .3 | .4 | 100.0 |
| Total | 492 | 79.9 | 100.0 |  |
| Missing | System | 124 | 20.1 |  |  |
| Total | 616 | 100.0 |  |  |

|  |
| --- |
| **Table D 4: BF500g. How many times do you feed ${child\_pos2\_name} with somethings else in a day? (not breast milk)** |
|  | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 0 | 2 | .3 | 1.5 | 1.5 |
| 1 | 5 | .8 | 3.7 | 5.1 |
| 2 | 15 | 2.4 | 11.0 | 16.2 |
| 3 | 59 | 9.6 | 43.4 | 59.6 |
| 4 | 22 | 3.6 | 16.2 | 75.7 |
| 5 | 20 | 3.2 | 14.7 | 90.4 |
| 6 | 5 | .8 | 3.7 | 94.1 |
| 7 | 4 | .6 | 2.9 | 97.1 |
| 10 | 2 | .3 | 1.5 | 98.5 |
| 12 | 1 | .2 | .7 | 99.3 |
| 15 | 1 | .2 | .7 | 100.0 |
| Total | 136 | 22.1 | 100.0 |  |
| Missing | System | 480 | 77.9 |  |  |
| Total | 616 | 100.0 |  |  |

|  |
| --- |
| **Table D 5: BF500d. Do you use a wet nurse ${child\_pos2\_name}?** |
|  | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | No | 464 | 75.3 | 75.3 | 75.3 |
| Yes | 152 | 24.7 | 24.7 | 100.0 |
| Total | 616 | 100.0 | 100.0 |  |

|  |
| --- |
| **Table D 6: BF501. How many times during the day when the baby is hungry do you breastfeed?** |
|  | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | (Almost) at no time | 1 | .2 | .2 | .2 |
| At times | 2 | .3 | .5 | .7 |
| Half of the times | 9 | 1.5 | 2.1 | 2.9 |
| Most of the times | 102 | 16.6 | 24.2 | 27.1 |
| (Almost) each time | 307 | 49.8 | 72.9 | 100.0 |
| Total | 421 | 68.3 | 100.0 |  |
| Missing | System | 195 | 31.7 |  |  |
| Total | 616 | 100.0 |  |  |

|  |
| --- |
| **Table D 7: BF502. How many times during the day do you pump of breast milk and store it?** |
|  | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | (Almost) at no time | 343 | 55.7 | 81.5 | 81.5 |
| At times | 21 | 3.4 | 5.0 | 86.5 |
| Half of the times | 14 | 2.3 | 3.3 | 89.8 |
| Most of the times | 5 | .8 | 1.2 | 91.0 |
| (Almost) each time | 11 | 1.8 | 2.6 | 93.6 |
| Not applicable | 27 | 4.4 | 6.4 | 100.0 |
| Total | 421 | 68.3 | 100.0 |  |
| Missing | System | 195 | 31.7 |  |  |
| Total | 616 | 100.0 |  |  |

|  |
| --- |
| **Table D 8: BF503. Do you intend to exclusively breastfeed your baby for the first six months?** |
|  | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | not at all | 7 | 1.1 | 1.7 | 1.7 |
| somewhat | 8 | 1.3 | 1.9 | 3.6 |
| rather | 24 | 3.9 | 5.7 | 9.3 |
| quite a lot | 118 | 19.2 | 28.0 | 37.3 |
| very much | 264 | 42.9 | 62.7 | 100.0 |
| Total | 421 | 68.3 | 100.0 |  |
| Missing | System | 195 | 31.7 |  |  |
| Total | 616 | 100.0 |  |  |

# Annex E: The RANAS behavior change techniques

Behavior change techniques (BCTs) are the components of an intervention strategy designed to alter or redirect the processes that regulate behavior. BCTs are observable, replicable, and irreducible, meaning that they cannot be divided into smaller sub-elements. Several BCTs can be combined, and they are brought to recipients through one or several communication channels, thus forming intervention strategies. BCTs are the ‘what’ of an intervention strategy, whereas the communication channels are the ‘how’. To be most effective, BCTs should correspond with the behavioral factors that were found to differ between doers and non-doers. While many of the BCTs address more than one behavioral factor, all but one have a predominant behavioral factor on which they operate (see the main behavioral factor listed in the left-hand column below). The exception is exploit persuasive attributes, which means using the persuasive attributes of the information/testimonial source and of the message. Persuasive attributes include the competence, sympathy, credibility, famousness, and publicity of the source and the length and number of arguments of the message. As every BCT implies a specific source from which a specific message is sent, exploit persuasive attributes can be applied in combination with every other BCT so as to increase impact. Each BCT is briefly described here.

|  |
| --- |
| **Table: Behavioral factors and behavior change techniques (continued on next page)** |
| **Behavioral factors** | **Behavior change techniques** |
| *Information BCTs – Risk factors* |
| Health knowledge | 1. **Present facts**: present information about the circumstances and possibilities of contracting a disease and about the relationship between a behavior and the disease.
 |
| 1. **Present scenarios**: present situations in the everyday life of the participant, showing how a certain behavior leads to the disease.
 |
| Vulnerability | 1. **Inform about and assess personal risk**: present qualitative and quantitative assessments individually for each person in such a way that the person realizes that his/her health is at risk.
 |
| Severity | 1. **Arouse fear**: use threatening information that stresses the severity of contracting a disease.
 |
| *Persuasive BCTs – Attitude factors* |
| Beliefs about costs and benefits | 1. **Inform about and assess costs and benefits:** provide information about costs and benefits of a behavior (omission) and conduct a cost-benefit analysis.
 |
|  | 1. **Use subsequent reward:** reward the person each time she/he has performed the desired behavior or achieved the behavioral outcome.
 |
|  | 1. **Prompt to talk to others:** invite participants to talk to others about the healthy behavior in question.
 |
| Feelings | 1. **Describe feelings about performing and about consequences of the behavior:** present the performance and the consequences of a healthy behavior as pleasant and joyful and its omission or an unhealthy behavior as unpleasant and aversive.
 |
| *Norm BCTs – Norm factors* |
| Others’ behavior | 1. **Inform about others’ behavior:** point out that a desired behavior is already adapted by other persons.
 |
| 1. **Prompt public commitment:** let people commit to a favorable behavior and make their commitment public, thus showing to others that there are people who perform the behavior.
 |

|  |
| --- |
| **Table: Behavioral factors and behavior change techniques (continued)** |
| **Behavioral factors** | **Behavior change techniques** |
| Others’ (dis)approval | 1. **Inform about others’ approval / disapproval:** point out that important others support the desired behavior or disapprove the unhealthy behavior.
 |
| Personal importance | 1. **Prompt anticipated regret:** bring people to imagine the concerns and regret they would feel after performing undesired behaviors which are not consistent with their personal norms of living healthily and caring for their children.
 |
| 1. **Provide a positive group identity:** describe people already engaged in the behavior in an attractive way, for example as modern and up-to-date so as to increase the attractiveness of the behavior itself.
 |
| 1. **Prompt identification as role model:** ask participants to set a good example (e.g. for children) by engaging in the desired behavior so as to influence others’ behaviors by one’s own behavior.
 |
| *Infrastructural, skill and ability BCTs – Ability factors* |
| How-to-do knowledge | 1. **Provide instruction:** convey know-how in order to improve a person’s knowledge about how to perform the respective behavior.
 |
| Confidence in performance  | 1. **Provide infrastructure:** prompt and support the community or households to set up infrastructure.
 |
| 1. **Demonstrate and model behavior:** demonstrate a behavior and prompt participants to pay attention to others’ performing the behavior and its consequences in their everyday life.
 |
| 1. **Prompt guided practice:** train participants in behavior enactment by giving instructions, demonstrating the behavior, letting him/her practice and giving feedback about the correctness of the performance.
 |
| 1. **Prompt behavioral practice:** prompt participants to practice the new behavior in their daily life.
 |
| 1. **Facilitate resources:** provide financial help. It may be unconditional or conditional, meaning the recipient has to contribute (e.g. with manpower) to get the resources.
 |
| 1. **Organize social support:** prompt participants to seek practical or emotional support from neighbors, friends, acquaintances, or relatives and/or to initiate social support groups.
 |
| 1. **Use arguments to bolster self-efficacy:** convince participants that they will be able to perform and/or maintain the desired behavior.
 |
| 1. **Set graded tasks/goals:** prompt participants to learn difficult behaviors including several tasks step by step.
 |
| Confidence in continuation  | 1. **Reattribute past successes and failures:** prompt participants to attribute failures to a temporary lack of skill or adverse circumstances instead of to his/her deficiency and successes as personal achievements.
 |
| Confidence in recovering  | 1. **Prompt coping with relapse:** tell participants that lapses are normal when adopting a new behavior and, though discouraging, not a sign of failure.
 |
| *Planning & relapse prevention BCTs – Self-regulation factors* |
| Action planning | 1. **Prompt specific planning:** stimulate participants not only to formulate what she/he will do, but also when, where, and how she/he intends to achieve his or her goals.
 |
| Action control | 1. **Prompt (self)-monitoring of behavior:** invite participants to (self-)monitor their behavior by means of recording it (e.g. frequency).
 |
| 1. **Provide feedback on performance:** give participants a feedback on their behavior performance.
 |
|  | 1. **Highlight discrepancy between set goal and actual behavior:** invite the participant to regularly evaluate the actual behavior performance (e.g. correctness, frequency, and duration) in relation to the set behavioral goal.
 |

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| **Table: Behavioral factors and behavior change techniques (continued)** |
| **Behavioral factors** | **Behavior change techniques** |
| Barrier planning  | 1. **Prompt coping with barriers:** ask participants to identify barriers to behavior change and plan solutions to those barriers.
 |
| 1. **Restructure the social and physical environment:** prompt participants to remove social and physical bolsters of the undesired behavior so as to interrupt habitual procedures.
 |
| 1. **Prompt to resist social pressure:** ask participants to anticipate and prepare for negative comments from others or for pressures towards the undesired behavior.
 |
| 1. **Provide negotiation skills:** prompt participants to reflect on others’ perspectives to find compromises that benefit both sides and arguments bolstering them.
 |
| Remembering | 1. **Use memory aids and environmental prompts:** prompt the participant to install memory aids or to exploit environmental cues so as to help to remember the new behavior and to trigger it in the right situation.
 |
| Commitment | 1. **Prompt goal setting:** invite participants to formulate a behavioral goal or intention.
 |
| 1. **Prompt to agree on a behavioral contract:** invite the participant to agree to a behavioral contract to strengthen her/his commitment to a set goal.
 |

# Annex F: Quantitative questionnaire baby WASH

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **general factor** | **detailed factor** | **item no** | **survey**  | **code** | **choices**  |
|  |  |  | **INTRODUCTION AND PARTICIPANT CONSENT** |  |  |
| *Introduction* |  |   | Hello, my name is \_\_\_\_\_\_\_and I work for World Bank in collaboration with Eawag, the Swiss Institute for Water Research. We lead an investigation on behavior related to household hygiene and child feeding. In addition to your community, this survey takes place in other places. The purpose of this investigation is to know about your daily hand washing practices, preventing baby 'mouthing', and breastfeeding to improve thereafter, the hygiene, and breastfeeding situation in Lao. If you agree, I would like to ask you some questions concerning hand washing, sanitation and child feeding to know your thoughts and attitudes concerning health and sanitation conditions in your home. Our interview will last approximately one hour. You can help us better if you answer as honestly and accurately as possible. Please help us understand what the real situation is! The participation contains no risk for you. We will question you about what you think and do during your day. All information is anonymous and confidential. Participation in the survey is voluntary. |  |  |
| *Consent* |  | A1 | INTERVIEWER: Please ask the person you are about to interview about her permission to conduct the interview. If consent is NOT given, thank the person for her time and search for the next household according to procedure. If yes, start with the interview now. | 12 | YesNo |
|  |  |   | Dear respondent, before we start with Interview, we want to underline that we are not the implementers and we do not provide subsidies or money. Therefore you now have the chance to express your personal opinion and honest believes about the following questions. |  |  |
|  |  |  | **BASIC INFORMATION** |  |  |
| *general info* | *interview* | S1 | Date of the Interview |  |  |
| *general info* | *interview* | S1a | Start time |  |  |
| *general info* | *interview* | S1b | End time |  |  |
| *general info* | *interview* | S2 | Name of the Interviewer |  |  |
| *general info* | *interview* | S5 | Name of the region |  |  |
| *general info* | *interview* | S5a | Name of the village |  |   |
|  |  | S5e | Survey ID |  |  |
| *general info* | *interview* | S6 | Enter Household ID here  |  |  |
|  |  | S7 | Do you have family book |  | Yes/No |
|  |  | S8 | If yes, What the number?  |  |  |
|  |  |  | **PARTICIPANT INFORMATION** |  |  |
| *general info* | *respondent* | P101 | What is your Name? All names! |  |  |
| *general info* | *respondent* | P102 | Please choose gender. | 12 | femalemale |
| *general info* | *respondent* | P103 | How old are you? |  |  |
|  |  | P104 | Mobile number of respondent |  |  |
| *general info* | *respondent* | P105 | What is your relationship to the head of household? | 123456789 | spousedaughtermothersistersonfatherbrotherhead of the hhcousin |
| *general info* | *respondent* | P106 | What is your marital status? | 123456 | marriedsinglewidowedcohabitingdivorced/separatedpolygam married |
| *general info* | *respondent* | P107 | What language use in the household |  |  |
| *general info* | *respondent* | P109 | What is the highest school level you finished? | 0123457 | Did not go to school at allPrimary school finishedSecondary school finishedCollegeUniversity finishedDid not completed secondary schoolDid not completed primary school |
| *general info* | *respondent* | P110 | Are you able to read and write? | 12 | yesno |
| *general info* | *respondent* | P111 | Are you able to read? | 12 | yesno |
|  |  |  | **HOUSEHOLD INFORMATION** |  |  |
| *general info* | *household* | P112 | How many people live in this household …? |  |  |
| *general info* | *household* | P112d | … children under 2 years?  |  |  |
| *general info* | *household* | P113 | What is your religion? | 12345 | MuslimChristianBuddhistAnimistCatholic |
| *general info* | *household* | P114 | What is your​​ household`s main source of income?Multiple choice | 1234567891011 | farmingtradingemployedday laborerfishinglivestock timber forest producthandicrafthuntersalarymoney from cousin |
|  |  | P115 | Did you have any rice shortage last year? | 12 | yesno |
|  |  | P115a | How many months you did not have a rice? | 12 | less than 15 daysmore than 15 days |
| *general info* | *household* | P117 | Do you live in your parents or your own house? | 12 | parent houseown house |
|  |  | P118 | Does your household have ... |  |  |
|  |  | P118a | ... radio? | 10 | YesNo |
|  |  | P118b | ... TV? | 12 | YesNo |
|  |  | P118c | ... electricity?  | 123 | on gridoff gridno electricity |
|  |  | P118e | ... running water? | 10 | YesNo |
|  |  | P118d | ... mobile phone? | 10 | YesNo |
|  |  | P118d\_1 | \*\*What type of phone do you have?  | 12 | normalsmartphone |
|  |  | P118d\_2 |  Do you use the phone? | 12 | YesNo |
|  |  | P118d\_3 | \*\*what phone number? |  |  |
|  |  |  | **RISK PERCEPTION - AWARENESS** |  |  |
| *Risk Perception* | *Vulnerability* | P806 | In general, how high do you think is the risk that *your baby* gets diarrhea/ runny stools? | 12345 | No riskLittle riskMedium riskHigh riskVery high risk |
| *Risk Perception* | *Vulnerability* | P806b | How likely is it that your baby gets diarrhea/runny stools if you do not wash your hands with soap and water before feeding your baby? | 12345 | Not at allA littleMediumLikelyVery likely |
| *Risk Perception* | *Vulnerability* | P806c | How likely is it that your baby becomes undernourished if you don't exclusively breastfeed your baby? | 12345 | Not at allA littleMediumLikelyVery likely |
| *Risk Perception* | *Vulnerability* | P806d | How likely is it that your baby becomes more likely to get sick, have stomach aches and diarrhea if you don't exclusive breastfeed your baby? | 12345 | Not at allA littleMediumLikelyVery likely |
| *Risk Perception* | *Severity* | P814 | Imagine that your baby contracted diarrhea/runny stools how severe would be the impact on your life? | 12345 | not severelittle severequite severeseverevery severe |
| *Risk Perception* | *Severity* | P815 | Imagine that your baby contracted diarrhea/ runny stools how severe would be the impact on your baby's health? | 12345 | not severelittle severequite severeseverevery severe |
|  |  |  | **DIARRHEA KNOWLEDGE TEST: POTENTIAL DIARRHEA EFFECTS** |  |  |
|  |  |   | "In the following we talk about health issues. First, I will present you some potential body effects of diarrhea. Could you please tell me for each whether it is a body effect of diarrhea or not?" |  |  |
| *Diarrhea Knowledge* | *Body Effects* | P816a | Weakness/ weight loss | 1099 | YesNoI don’t know |
| *Diarrhea Knowledge* | *Body Effects* | P816b | Loss of water from the body | 1099 | YesNoI don’t know |
| *Diarrhea Knowledge* | *Body Effects* | P816c | Fever | 1099 | YesNoI don’t know |
| *Diarrhea Knowledge* | *Body Effects* | P816d | Three or more runny stools per day | 1099 | YesNoI don’t know |
|  |  |  | **POTENTIAL DIARRHEA CAUSES** |  |  |
|  |  |  | "Can you tell me what causes diarrhea? Could you please tell me for each following aspects whether it is a cause or not?" |  |  |
| *Diarrhea Knowledge* | *Causes* | P817a | Food touched by an infected person  | 1099 | YesNoI don’t know |
| *Diarrhea Knowledge* | *Causes* | P817b | Eating food that was dropped on the ground | 1099 | YesNoI don’t know |
| *Diarrhea Knowledge* | *Causes* | P817c | Eating spoiled food | 1099 | YesNo I don’t know |
| *Diarrhea Knowledge* | *Causes* | P817d | Drinking water contaminated | 1099 | YesNo I don’t know |
| *Diarrhea Knowledge* | *Causes* | P817e | Defecate in the open | 1099 | YesNo I don’t know |
| *Diarrhea Knowledge* | *Causes* | P817g | Been cursed by someone | 1099 | YesNo I don’t know |
| *Diarrhea Knowledge* | *Causes* | P817h | Mother or baby eating spicy food | 1099 | YesNo I don’t know |
|  |  |  | **POTENTIAL DIARRHEA PREVENTIONS** |  |  |
|  |  |  | "Now I will present you some potential preventive measures against diarrhea. Could you please tell me for each whether it is a preventive measure or not?" |  |  |
| *Diarrhea Knowledge* | *Prevention* | P818a | Wash baby's hands with soap before eating  | 1099 | YesNoI don’t know |
| *Diarrhea Knowledge* | *Prevention* | P818b | Drink treated water (e.g. chlorinated, filtered, boiled)  | 1099 | YesNoI don’t know |
| *Diarrhea Knowledge* | *Prevention* | P818c | Use latrines for defecation | 1099 | YesNoI don’t know |
| *Diarrhea Knowledge* | *Prevention* | P818d | Wash your hands with soap before feeding baby | 1099 | YesNoI don’t know |
| *Diarrhea Knowledge* | *Prevention* | P818e | Prevent baby to pick up things from the floor and put them in the mouth | 1099 | YesNoI don’t know |
|  |  |  | **HANDWASHING BEHAVIORAL MEASURES** |  |  |
| *Hand washing* | *Behavior* |  | In following we will talk about handwashing practices before feeding the child.  |  |  |
|  |  | HW700 | Do you use a spoon to feed your baby? | 1099 | YesNoI don’t know |
| *Hand washing*  | *Behavior* | HW700a | Before you feed your baby, how often do you wash your hands with soap and water? | 12345 | (Almost) at no timeAt timesHalf of the timesMost of the times(Almost) each time |
| *Hand washing*  | *Behavior* | HW701 | Before you feed your baby, how often do you wash your baby's hands with soap and water? | 12345 | (Almost) at no timeAt timesHalf of the timesMost of the times(Almost) each time |
| *Hand washing*  | *Behavior* | HW702 | Before other household members feed a baby, how often do they wash their hands with soap and water? | 12345 | (Almost) at no timeAt timesHalf of the timesMost of the times(Almost) each time |
| *Hand washing*  | *Intention* | HW703 | Do you intend to wash your hands with soap before feeding your baby?  | 12345 | (Almost) at no timeAt timesHalf of the timesMost of the times(Almost) each time |
|  |  |  | **HANDWASHING HABIT MEASURES**  |  |  |
| *Hand washing*  | *Habit* | HB702 | How often do you wash your hands with soap and water before feeding your baby without thinking?  | 12345 | not at allsomewhatratherquite a lotvery much |
| *Hand washing*  | *Habit* | HB705 | How much do you feel that you wash your hands with soap and water before feeding a baby as a matter of habit? | 12345 | not at allsomewhatratherquite a lotvery much |
|  |  |  | **COMMUNICATION** |  |  |
| *Hand washing*  | *Communication* | Co800 | How often do you talk with others about handwashing with soap and water before feeding a baby ? | 12345 | NeverSeldomSometimesOftenVery often |
|  |  |  | **Attitudes regarding handwashing** |  |  |
| *Attitudes* | *Instrumental* | At600 | How effortful do you think is washing hands with soap and water before feeding your baby? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Attitudes* | *Instrumental* | At601 | How time consuming do you think it is wash hands with soap and water before feeding your baby? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Attitudes* | *Instrumental* | At601a | Do you think that the handwashing facility is too far away from the place where you feed your baby? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Attitudes* | *Instrumental* | At602 | How expensive is it for you to wash hands with soap and water before feeding your baby? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Attitudes* |   | At603 | How certain are you that washing hands with soap and water prevents your baby from getting diarrhea? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Attitudes* | *Affective beliefs* | At604 | How much do you like washing hands with soap and water before feeding your baby? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Attitudes* | *Affective beliefs* | At604a | How disgusting is it for you not to wash hands with soap and water before feeding your baby?  | 12345 | not at allsomewhatratherquite a lotvery much |
| *Attitudes* | *Affective beliefs* | At604b | How clean do you feel when washing hands with soap and water before feeding your baby?  | 12345 | not at allsomewhatratherquite a lotvery much |
| *Attitudes* | *Affective beliefs* | At605 | How much do you like the smell of soap on your hands? | 12345 | not at allsomewhatratherquite a lotvery much |
|  |  |  | **Norms regarding handwashing** |  |  |
| *Norms* | *Descriptive* | N606 | How many people of your household wash hands with soap and water before feeding a baby? | 12345 | (almost) nobodysome of themhalf of themmost of them(almost) all of them |
| *Norms* | *Descriptive* | N607 | How many people of your village wash hands with soap and water before feeding a baby? | 12345 | (almost) nobodysome of themhalf of themmost of them(almost) all of them |
| *Norms* | *Injunctive* | N608 | People who are important to you like your family members and friends, how much they want that you wash your hands with soap and water before feeding your baby? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Norms* | *Injunctive* | N608a | People who are important to you like village authorities, health workers, religious leader, how much they want that you wash your hands with soap and water before feeding a baby? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Norms* | *Personal* | N609 | How strong do you feel a personal responsibility to yourself to wash hands with soap and water before feeding your baby? | 12345 | not at allsomewhatratherquite a lotvery much |
|  |  |  | **Ability regarding handwashing** |  |  |
| *Abilities* |   | Ab611 | How difficult is to get as much water as you need to wash hands with soap and water before feeding your baby? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Abilities* |   | Ab612 | How difficult is it to get as much soap as you need to wash hands with soap and water before feeding your baby? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Abilities* |   | Ab613 | How difficult is it to find the time to wash hands with soap and water before feeding your baby? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Abilities* |   | Ab614 | How confident are you that you can wash hands with soap and water before feeding a baby, even if your baby is crying and needs attention? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Abilities* |   | Ab614a | How confident are you that you can wash hands with soap and water before feeding your baby, even if you have too cook and clean? | 12345 | not at allsomewhatratherquite a lotvery much |
|  |  |  | **Self-regulation regarding handwashing** |  |  |
| *Self-regulation* |   | Sr616 | When you think about the last 24 hours: How often did it happen that you forgot to wash your hands with soap and water before feeding your baby? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Self-regulation* |   | Sr617 | Are you sometimes careless to wash hands with soap and water before feeding your baby? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Self-regulation* |   | Sr617a | Are you sometimes too lazy to wash hands with soap and water before feeding your baby? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Self-regulation* |   | Sr618 | How committed do you feel to wash hands with soap and water before feeding your baby? | 12345 | not at allsomewhatratherquite a lotvery much |
|  |  |  | **Barriers & coping plan regarding handwashing** |  |  |
| *Barriers-Coping* | *Water* | Br619 | Do you have a plan what to do so that you have always water for handwashing? | 01 | No planPlan, please specify |
|   |   | Br619a | Plan, please specify | 12345 | Ask neighbor, relatives, otherFetch water (soon)Rub with clothsEat with spoon/forkOther |
| *Barriers-Coping* | *Soap* | Br620 | Do you have a plan what to do so that you have always soap for handwashing? | 01 | No planPlan, please specify |
|   |   | Br620a | Plan, please specify | 1234567 | Ask neighbor, relatives, otherWash with waterUse sand/ ashEat with spoon/ forkdetergentAsk husbandOther |
|  |  |  | **CONTROLLING ‘MOUTHING’ OF CHILDREN UNDER 2 YEARS (CM BLOCK)** |  |  |
| *Controlling mouthing* | *Behavior* |   | In following we will talk about controlling the baby when it is picking up food from the floor and puts it into the mouth  |  |  |
| *Controlling mouthing* | *Behavior* | CM500 | How many times during the day do you control your baby to not pick up food or item from the floor and put it into the mouth? | 12345 | (Almost) at no timeAt timesHalf of the timesMost of the times(Almost) each time |
| *Controlling mouthing* | *Behavior* | CM501 | How many times during the day do you clean the house in order to prevent your baby to pick up food or item from the floor and put it into the mouth?  | 12345 | (Almost) at no timeAt timesHalf of the timesMost of the times(Almost) each time |
| *Controlling mouthing* | *Behavior* | CM502 | How often do you avoid sitting and playing your baby on dirty floor?  | 12345 | NeverSeldomSometimesOftenVery often |
| *Controlling mouthing* | *Behavior* | CM504 | How often do you remove items from your baby before them being placed in mouth, or washing the item before giving back to the baby? | 12345 | NeverSeldomSometimesOftenVery often |
|  |  |  | **Communication regarding 'mouthing'** |  |  |
| *Controlling mouthing* | *Communication* | CM800 | How often do you talk about controlling your baby to pick up food or item from the floor and put it into the mouth with others? | 12345 | NeverSeldomSometimesOftenVery often |
|  |  |  | **Attitudes regarding controlling 'mouthing' of children under 2 y.** |  |  |
| *Attitudes* | *Instrumental* | CM600 | How effortful do you think is it to control your baby to not pick up food or item from the floor and put it into the mouth? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Attitudes* | *Instrumental* | CM601 | How time consuming do you think is it to always control your baby to not pick up food or item from the floor and put it into the mouth? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Attitudes* | *Instrumental* | CM603 | How certain are you that controlling to not pick up food or item from the floor and put it into the mouth prevents your baby from getting diarrhea (sick)? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Attitudes* | *Affective beliefs* | CM604 | How much do you like to control your baby to not pick up food or item from the floor and put it into the mouth? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Attitudes* | *Affective beliefs* | CM605 | How certain are you that controlling to not pick up food or item from the floor and put it into the mouth makes your baby healthier? | 12345 | not at allsomewhatratherquite a lotvery much |
|  |  |  | **Norms regarding controlling 'mouthing' of children under 2 y.** |  |  |
| *Norms* | *Descriptive* | CM606 | How many people of your household control baby from picking up food or item from the floor and put it into the mouth? | 12345 | (almost) nobodysome of themhalf of themmost of them(almost) all of them |
| *Norms* | *Descriptive* | CM607 | How many people of your village control baby from picking up food or item from the floor and put it into the mouth? | 12345 | (almost) nobodysome of themhalf of themmost of them(almost) all of them |
| *Norms* | *Injunctive* | CM608 | People who are important to you like your family members and friends, how much they want that you control your baby to pick up food or item from the floor and put it into the mouth? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Norms* | *Injunctive* | CM608a | People who are important to you like village authorities, health workers or religious leader, how much they want that you control your baby to pick up food or item from the floor and put it into the mouth? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Norms* | *Personal* | CM609 | How strong do you feel a personal responsibility to yourself to control baby to pick up food or item from the floor and put it into the mouth? | 12345 | not at allsomewhatratherquite a lotvery much |
|  |  |  | **Ability regarding controlling 'mouthing' of children under 2 y.** |  |  |
| *Abilities* |   | CM611 | How difficult is it to control your baby to not pick up food or item from the floor and put it into the mouth? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Abilities* |   | CM612 | How difficult is it to find the time to control your baby to not pick up food or item from the floor and put it into the mouth? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Abilities* |   | CM613 | How confident are you that you can control your baby to not pick up food or item from the floor and put it into the mouth?  | 12345 | not at allsomewhatratherquite a lotvery much |
| *Abilities* |   | CM614a | How confident are you that you can control your baby to not pick up food or item from the floor and put it into the mouth, even if you have too cook and clean? | 12345 | not at allsomewhatratherquite a lotvery much |
|  |  |  | **Self-regulation controlling 'mouthing' of children under 2 y.** |  |  |
| *Self-regulation* |   | CM616 | When you think about the last 24 hours: How often did it happen that you forgot to control your baby not to pick food or item from the floor and put it into the mouth? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Self-regulation* |   | CM617 | Are you sometimes careless to control your baby not to pick food or item from the floor and put it into the mouth? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Self-regulation* |   | CM617a | Are you sometimes to lazy to control your baby not to pick food or item from the floor and put it into the mouth? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Self-regulation* |   | CM618 | How committed do you feel to control your baby not to pick food or item from the floor and put it into the mouth? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Self-regulation* |   | CM618a | How willing are you to control your baby not to pick food or item from the floor and put it into the mouth? | 12345 | not at allsomewhatratherquite a lotvery much |
|  |  |  | **Barriers & coping plan regarding controlling 'mouthing' of children** **under 2 y.** |  |  |
| *Barriers-Coping* | *Controlling 'mouthing'* | CM619 | Do you have a plan what to do so that you can prevent baby to pick a food or an item from the floor and put it into the mouth? | 01 | No planPlan, please specify |
|   |   | CM619a | Plan, please specify | 1234567 | Forbid baby to pick a food or an item from the floorKeep house and baby's sitting/ playing area cleanDon't put a baby on a dirty floorLay the matJumper kidsbaby walkerother, please specify |
|  |  |  | **EXCLUSIVE BREASTFEEDING FOR THE FIRST SIX MONTHS** |  |  |
|  |  |   | In following we will talk about exclusive feeding of your baby with breast milk. With this we mean that your baby is fed directly with milk from your breast, or with milk that you have hand expressed, or with milk from a wet nurse.  |  |  |
| *Breastfeeding* | *Behavior* | BF500c | Do you breastfeed your baby? | 10 | YesNo |
|  |  | BF500e | What's the reason ? | 1235 | Don't have breast milkSickDon’t like breastfeedingOther |
| *Breastfeeding* | *Behavior* | BF500f | Can you please tell me what you feed your baby?Multiple choice | 123456789 | excl. breastfeedingFormula milkPre-chew riceBoiled watercondense milksoya milk rice porridgefruitsother |
|   |   | BF500g | How many times do you feed your baby with somethings else in a day? (not breastmilk) |  |  |
| *Breastfeeding* | *Behavior* | BF500d | Do you use a wet nurse? | 1099 | YesNoI don’t know |
|   | Behavior | BF501 | How many times during the day when the baby is hungry do you breastfeed? | 12345 | (Almost) at no timeAt timesHalf of the timesMost of the times(Almost) each time |
| *Breastfeeding* | *Behavior* | BF502 | How many times during the day do you pump of breast milk and store it? | 1234598 | (Almost) at no timeAt timesHalf of the timesMost of the times(Almost) each timeNot applicable |
| Breastfeeding | Intention | BF503 | Do you intend to exclusively breastfeed your baby for the first six months?  | 12345 | not at allsomewhatratherquite a lotvery much |
|  |  |  | **Communication regarding exclusive breastfeeding for the first six months** |  |  |
| *Breastfeeding*  | *Communication* | BF800 | How often do you talk about exclusive breastfeeding for the first six months with others? | 12345 | NeverSeldomSometimesOftenVery often |
|  |  |  | **Attitudes regarding exclusive breastfeeding for the first six months** |  |  |
| *Attitudes* | *Instrumental* | BF600 | How effortful is exclusive breastfeeding your baby for the first six months? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Attitudes* | *Instrumental* | BF601 | How time consuming is exclusive breastfeeding your baby for the first six months? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Attitudes* | *Instrumental* | BF602 | How much will your household income be reduced if you perform exclusive breastfeeding for the first six months as you cannot return to work outside the home as early? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Attitudes* |   | BF603 | How certain are you that exclusive breastfeeding your baby for the first six months prevents your baby from getting sick? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Attitudes* |   | BF603a | How certain are you that excusive breastfeeding your baby for the first six months prevents your baby from getting undernourished and weak? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Attitudes* | *Affective beliefs* | BF604 | How much do you like breastfeeding your baby for the first six months? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Attitudes* | *Affective beliefs* | BF604a | How much do you like to pump breastmilk to give it to the other caretakers to feed your baby? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Attitudes* | *Affective beliefs* | BF604b | How much do you fear about inadequate breastmilk supply (not having enough breast milk)? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Attitudes* | *Affective beliefs* | BF605a | How strong is your positive feeling to breastfeed your baby for the first six months? | 12345 | not at allsomewhatratherquite a lotvery much |
|  |  |  | **Norms regarding exclusive breastfeeding for the first six months** |  |  |
| *Norms* | *Descriptive* | BF606 | How many women of your household perform exclusive breastfeeding of baby's for the first six months? | 1234598 | (almost) nobodysome of themhalf of themmost of them(almost) all the themNot applicable |
| *Norms* | *Descriptive* | BF607 | How many women of your village perform exclusive breastfeeding of baby's for the first six months? | 12345 | (almost) nobodysome of themhalf of themmost of them(almost) all the them |
| *Norms* | *Injunctive* | BF608 | People who are important to you like your family members and friends, how much they want that you exclusively breastfeed your baby for the first six months? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Norms* | *Injunctive* | BF608a | People who are important to you like village authorities, health workers, or religious leader, how much they want that you exclusively breastfeed your baby for the first six months? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Norms* | *Personal* | BF609 | How strong do you feel a personal responsibility to yourself to exclusive breastfeed your baby for the first six months? | 12345 | not at allsomewhatratherquite a lotvery much  |
|  |  |   | **Ability regarding exclusive breastfeeding for the first six months** |   |   |
| *Abilities* |   | BF610 | How sure (confident) are you that you can exclusively breastfeed your baby for the first six months? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Abilities* |   | BF611 | How difficult is to exclusively breastfeed your baby for the first six months when you are busy working? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Abilities* |   | BF612 | How difficult is it to exclusively breastfeed every time your baby wants it and not giving other alternatives during this time? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Abilities* |   | BF613 | How difficult is it to find the time to exclusively breastfeed your baby for the first six months? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Abilities* |   | BF614 | How confident are you that you are able to hand express milk for your baby, even if you have to work in the field? | 1234598 | not at allsomewhatratherquite a lotvery muchNot applicable |
| *Abilities* |   | BF614a | How confident are you that you can exclusively breastfeed your baby when you are taking it to the field? | 12345 | not at allsomewhatratherquite a lotvery much |
|  |  |  | **Self-regulation regarding breastfeeding for the first six months** |  |  |
| *Self-regulation* |   | BF617 | How much do you pay attention that you exclusively breastfeed your baby before leaving to the field or hand express milk for your baby? | 12345 | not at allsomewhatratherquite a lotvery much |
| *Self-regulation* |   | BF618 | How committed do you feel to exclusively breastfeed your baby for the first six months? | 12345 | not at allsomewhatratherquite a lotvery much |
|  |  |  | **Barriers & coping plan regarding breastfeeding for the first six months** |  |  |
| *Barriers-Coping* | *Water* | BF619 | Do you have a plan what to do when you are sick or you have not enough milk and can't exclusive breastfeed your baby? | 01 | No planPlan, please specify |
|   |   | BF619a | Plan, please specify | 12345 | Use wet nurseGive alternative foodAsk husband to go buy formulaTraditional medicine/ food to increase breast milkOther, please specify |
|  |  |  | **HYGIENE PROXY MEASURES** |  |  |
|  |  | P119 | Do you have a specific place and facility for hand washing?  | 10 | YesNo |
|   |   |  P119\_1 | Do you have toilet? | 10 | YesNo |
|  |  | P119a | Can you show it to me? | 10 | YesNo |
|  |  | P119b | Observe! Where is the hand washing facility/device (e.g. jerry can/mug) located?  | 12345 | Inside or near the latrineInside the house near the cooking place/fireElsewhere in the houseOutside the house near the door Elsewhere in the compound |
|  |  | P119c | Observe! Is water present at the specific place? | 10 | YesNo |
|  |  | P119d | Observe!What device is used for water at the specific place? | 1234 56 | Tippy tapMug/cupBucketJerry canTap/ running waterOther |
|  |  | P119e | Observe!Is soap or detergent present at the specific place? | 10 | YesNo |
|  |  | P119f | Observe! Where is the hand washing facility/device (e.g. jerry can/mug) located?  |  |  |
|  |  | P119g | Does this house drink boiling water? | 12345 | KettleTea/roots treePitchersVacuum bottleOther |
|  |  |  | **PARTICIPANT INFORMATION – DEBRIEFING** |  |  |
|  |  | EC | This was the last question. And the interview is now finished. Thank you very much for taking the time to talk with us. If you have any questions concerning the study please feel free to ask them. If you have any comments you want to make about hand washing with soap, latrine use, latrine construction or open defecation please also let us know about it right now! |  |  |

# Annex G: Intervention-check questionnaires for baby WASH interventions

## Intervention-check questionnaire for handwashing with soap

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| In the last months, hygiene promotion was conducted in the village. Promoters provided the information about hygiene including hand washing before feeding the baby. We now would like to talk about the information you might have received there. |
| F01. Have you been to a community meeting with community leader or Lao Women’s Union? Yes/No/ I don’t know |
| F02. Did you see the demonstration how to build a handwashing facility? Yes/No/ I don’t know |
| F03. Did the local leader or Lao Women’s Union express that they approve of handwashing before feeding the baby and building a handwashing facility? Yes/No/ I don’t know |
| F04. Did you calculate together with the health promoter the corresponding costs and efforts for handwashing facility building and handwashing with soap before feeding a baby? Yes/No/ I don’t know |
| F05. Did the health promoter took your picture while you washed your hands with soap and water? Yes/No/ I don’t know |
| F06. Did you sign the commitment with a health promoter for handwashing with soap before feeding the baby and for building a handwashing facility? Yes/No/ I don’t know |
| F07. Did the health promoter visit you at home? Yes/No/ I don’t know |
| F08. Did you construct a handwashing facility? Observe. Yes/No |
| F09. Did the health promoter encourage you to maintain handwashing facility and to specify a moment in the daily routine to check whether water and soap has to be refilled at the handwashing facility? Yes/No/ I don’t know |
| F10. Did you receive poster with handwashing with soap at key moments? Yes/No/ I don’t know |
| F11. Can you show it to me? Observe. Yes/No |
| F12. Did your whole family discuss on Growth Monitoring Day with a health promoter about your responsibility that the baby grows up healthy and it could also lead to good early childhood developments? Yes/No/ I don’t know |
| F13. Did you discuss with the health promoter about COVID-19 situation in Lao PDR and how important is to wash hands with soap aiming to reduce the virus spread? Yes/No/ I don’t know |
| F14. Did you agree on a behavioral contract, during the household visit, that before feeding the baby hands are washed with soap and water? Yes/No/ I don’t know |
| F15. Did you receive a poster which you colored expressing the statement ‘we all care for our babies and wash hands with soap before feeding it’? Yes/No/ I don’t know |
| F16. Can you show me that poster? Observe. Yes/No |
| F17. Was the poster fixed in the household where the baby is normally fed? Observe. Yes/No |
| F18. Did the health promoter call or message you about handwashing with soap before feeding a baby? Yes/No/ I don’t know |
| F19. Did the health promoter remind you to your contract in which you agree to always wash your hands before feeding your children? Yes/No/ I don’t know |
| F20. Did the health promoter ask you if you succeeded to wash your hands with soap and water before feeding your children? Yes/No/ I don’t know |
| F21. Did health promoter ask you to imagine that your baby falls sick because you did not wash hands with soap and water before feeding it, but if you follow right practice, your baby will be healthy? Yes/No/ I don’t know |
| F22. Did health promoter told you that you are so a great mother/caretaker because you wash your hands with soap and water before feeding your children? Yes/No/ I don’t know |
| F23. Did health promoter tell you that if you have difficulties to wash your hands with soap before feeding the baby then agree with somebody in your family to help you to realize handwashing? Yes/No/ I don’t know |
| F24. Have you been to a second community meeting with community leader or Lao Women’s Union? Yes/No/ I don’t know |
| F24. Did your village receive a reward for total coverage of handwashing facilities in the village? Did you see it? Yes/No/ I don’t know |
| F25. Observe. Is there a display board, like a flex banner on the side of a wall in the village? Yes/ No |

## Intervention-check questionnaire for controlling mouthing

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| --- |
| In the last months, hygiene promotion was conducted in the village. Promoters provided the information about construction of playpen and controlling baby not to pick up food or any dirty item from the floor and put it into the mouth. We now would like to talk about the information you might have received there. |
| F01a. Have you been to a caretakers meeting? Yes/No/ I don’t know |
| F02a. Did you see the demonstration how to build ‘playpen’? Yes/No/ I don’t know |
| F03a. Did the local leader or Lao Women’s Union express that they approve ‘playpen’ for baby’s which is cleaned with water and soap before putting the baby down? Yes/No/ I don’t know |
| F04a. Did the health promoter name other people who already control the baby to not pick up food or any dirty item from the floor and put it into the mouth? Yes/No/ I don’t know |
| F05a. Did the health promoter prompt you to use a ‘playpen’ and control the baby to not pick up food or any dirty item from the floor and put it into the mouth) first 2 then 3 times a day? Yes/No/ I don’t know |
| F06a. Did the health promoter demonstrate how the baby is eating dirt (or even feces) when picking up food from the floor and putting it into the mouth and getting sick? Yes/No/ I don’t know |
| F07a. Did the promoter discuss with you about how effortful and expensive it is when a baby is ill and compared this effort to the easy performance of controlling the baby to not pick up food or any dirty item from the floor and put it into the mouth? Yes/No/ I don’t know |
| F08a. Did the health promoter visit you at home? Yes/No/ I don’t know |
| F09a. Did you construct a playpen? Observe. Yes/No |
| F10a. Did the health promoter prompt you during the visit to use a ‘playpen’ and control the baby to not pick up food or any dirty item from the floor and put it into the mouth) first 2 times a day then 3 times a day? Yes/No/ I don’t know |
| F11a. Did the health promoter during the visit name other people who already control the baby to not pick up food or any dirty item from the floor and put it into the mouth? Yes/No/ I don’t know |
| F12a. Did the health promoter during the visit state that other people like this very much because it contributes to the health of the baby? Yes/No/ I don’t know |
| F13a. Did the health promoter during the visit inform you that important people in the village think that controlling the baby to not pick up food or an dirty item from the floor and put it into the mouth contributes to the well-being of the baby? Yes/No/ I don’t know |
| F14a. Did the health promoter during the visit demonstrate how the baby is eating dirt when picking up food from the floor and putting it into the mouth and getting sick? Yes/No/ I don’t know |
| F15a. Did the health promoter discuss during the visit with you about how effortful and expensive it is when a baby is ill and compared this effort to the easy performance of control the baby to not pick up food or an dirty item from the floor and put it into the mouth? Yes/No/ I don’t know |
| F16a. Did health promoter visit you at home again? Yes/No/ I don’t know |
| F17a. Did health promoter ask you how successful you were with controlling mouthing of the baby and discussed how difficulties can be resolved? Yes/No/ I don’t know |
| F18a. Did health promoter discuss with you about your personal responsibility that the baby grows up healthy and asked you to imagine that the baby falls ill if you did not control mouthing and how you would feel then? Yes/No/ I don’t know |
| F19a. Did health promoter ask you and other family members to commit to guarantee that you control mouthing of the baby? Yes/No/ I don’t know |
| F20a. Did health promoter make a poster with the illustration where you agreed to the behavioral contract to control ‘mouthing’ of your baby? Yes/No/ I don’t know |
| F21a. Did you fix a poster at a visible place at home? Yes/ No |
| F22a. Can you show it to me? Observe. Yes/No |
| F23a. Did health promoter call or message you about controlling mouthing of the baby? Yes/No/ I don’t know |
| F24a. Did health promoter remind you to your behavioral contract in which you agreed to control the mouthing of your baby? Yes/No/ I don’t know |
| F25a. Did health promoter ask you if you succeeded and if it was not possible then reflected on the reasons why you did not control mouthing and how you could do it better for the next time? Yes/No/ I don’t know |
| F26a. Did health promoter ask you to imagine that your baby falls ill if you did not control mouthing and how bad would you feel then? Yes/No/ I don’t know |
| F27a. Did health promoter tell you that she is sure that you will succeed in controlling mouthing of your baby and that you are so a great mother/caretaker? Yes/No/ I don’t know |
| F28a. Did health promoter tell you that it might be difficult to watch your baby all the times and encouraged to ask other members of your family to help you to control mouthing of the baby and to use playpen? Yes/No/ I don’t know |
| F29a. Did health promoter tell you that if you do not succeed in controlling mouthing all the times then do it at least 3 or more times a day? Yes/No/ I don’t know |

## Intervention-check questionnaire for exclusive breastfeeding for the first 6 months

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| --- |
| In the last months, hygiene promotion was conducted in the village. Promoters provided the information about exclusive breastfeeding for the first 6 months. We now would like to talk about the information you might have received there. |
| F01b. Did health promoter visit you at home? Yes/No/ I don’t know |
| F02b. Did health promoter ask you whether there are situations when you cannot or when it is difficult to breastfeed your baby and told you how other mothers have resolved this situation? Yes/No/ I don’t know |
| F03b. Did health promoter ask you who could help you in that way that you could manage to breastfeed your baby even in difficult situations? Yes/No/ I don’t know |
| F04b. Did the health promoter encourage you to identify strategies already used in the past and develop new solutions how to perform exclusive breastfeeding for the first six months even if you have to work in the field? Yes/No/ I don’t know |
| F05b. Did the health promoter prepare you with arguments for the case that other family members request activities, which make breastfeeding impossible? Yes/No/ I don’t know |
| F06b. Did the health promoter discuss with you how important exclusive breastfeeding for the first six months is to prevent the baby from getting undernourished and weak because breast milk contains liquids, which make the baby strong and therefore will prevent that it gets sick? Yes/No/ I don’t know |
| F07b. Did health promoter discuss with you that exclusive breastfeeding for the first six months is not effortful compared to the costs and efforts needed when the baby is ill? Yes/No/ I don’t know |
| F08b. Did health promoter discuss with you that exclusive breastfeeding for the first six months makes you feel good because you know that it prevents your baby from getting undernourished and weak? Yes/No/ I don’t know |
| F09b. Did health promoter visit you at home again? Yes/No/ I don’t know |
| F10b. Did health promoter inform you that important people in the village think that exclusive breastfeeding for the first six months contributes to the well-being of the baby? Yes/No/ I don’t know |
| F11b. Did health promoter discuss about your personal responsibility that your baby grows up healthy and asked you to imagine that your baby falls ill because you did not exclusively breastfeed your baby in the first six months – how would you feel then? Yes/No/ I don’t know |
| F12b. Did health promoter ask you and other family members to set up a behavioral contract to always perform exclusive breastfeeding for the first six months? Yes/No/ I don’t know |
| F13b. Did you receive a poster with a mother breastfeeding baby?Yes/No/ I don’t know |
| F14b. Can you show it to me? Observe. Yes/No |