



Rural Water Supply and Sanitation Project in
Western Nepal Phase II

2017

Systematic Approach to Behaviour Change in Sanitation in Kapilvastu district, Nepal



RWSSP-WN II, PSU

12/26/2017

PREFACE

Title of Study: Systematic Approach to Behaviour Change in Sanitation in Kapilvastu district, Nepal

Date of Survey: September 21-26, 2016

Date of Report: 01.12.2017

Survey Coordinator & data by: Kalpana Dishwa, National Field Specialist

Report by: Sanna-Leena Rautanen with inputs from Kalpana Dishwa and Bipin Poudel

Name of Enumerators: Support Person of Kapilvastu were mobilized for data collection.

Enumerator name	Designation	Number of surveys	% of total
Rajesh Kumar Gupta	SP (WASH Engineer)	12	7
Thaneshwor Adhikari	SP	36	22
Shyam Kumar Vishwokarma	SP	13	9
Sita Kumari Chaudhary	OA	11	7
Dinanath Pandey	SM	18	11
Rambilas Prasad Kohar	SM	23	14
Ramdhani Harijan	SM	8	5
Noor Mohammad Musalman	SM	11	7
Sangita Khadka	SDS	10	6
Chandra Bista	SHS	9	6
Kalpana Dishwa	FS	7	4
Bipin Poudel	DWASHA	3	2
Total		161	100%

Method of Data collection: Tablets with GPS and geotagged camera, survey format prepared using KoBO Toolbox (<http://www.kobotoolbox.org/>)

Method of Data Analysis: KoBoToolbox reports, Excel database and Google Earth

Background and Purpose: In 2016 RWSSP-WN did a 767 households survey, covering all households within Baluhawa VDC, to verify which households had received subsidy for the latrine construction, and whether the VDC was truly ready to declare itself ODF. At this time the completion of the toilets and their use when completed, emerged as major issues. The same dilemma is observed in many other locations as well. In 2017 RWSSP-WN decided to trial 'RANAS' approach to behaviour change in these hard-to-change locations. 'RANAS' approach was developed by Prof. Moesler, and it explores behavioural factors related to **Risk, Attitude, Norms, Ability and Self-regulation**, comparing both 'doers' (in this case those who do use the toilet) with 'non-doers' (in this case, who do not use the toilet), and then uses the location specific outcome to guide the selection of the Behaviour Change Technique.

Table of Contents

List of Figures.....	2
List of Tables.....	3
Abbreviations	3
1 Points of Entry.....	4
2 Objectives, methodology & study area	5
3 Step One: Identify potential behavioural & contextual factors	6
4 Phase Two: Measure identified potential factors and determine those steering the behaviour	6
4.1 Physical Contextual factors	6
4.2 Describing respondents	8
4.3 Introducing Doers & Non-Doers	11
4.4 Overview to all replies.....	14
4.5 Comparing doers and non-doers by behavioural factors	14
4.6 Comparing ‘almost doers’ and non-doers by behavioural factors	17
4.7 Situation in Ward 4 (Pipara)	23
5 Phase Three: Select corresponding BCTs and develop appropriate behaviour change strategies	26
6 Lessons learned by far.....	29
References	30

List of Figures

Figure 1 How many years ago did you construct your toilet?	6
Figure 2 Feelings and attitudes.....	15
Figure 3 Norms: approval and importance.....	16
Figure 4 Ability and self-regulation: confidence, barriers & vulnerability.....	16
Figure 5 All behavioral factors accepting only ‘always’ as ‘doers’.....	18
Figure 6 All behavioral factors accepting ‘always’ & ‘almost always’ as ‘doers’	19
Figure 7 Differences in between averages.....	20
Figure 8 Differences in between the ‘Doers’ averages in different wards	21
Figure 9 Differences in between the ‘Non-Doers’ averages in different wards	22
Figure 10 Differences in between ‘Doers’ and Non-Doers’ in Ward 4 (Pipara) only	24
Figure 11 Differences in averages between Ward 4 (Pipara) and average in Ward 2 and 5 together	25

List of Tables

Table 1 Knowledge if the ward is declared ‘ODF’	7
Table 2 Access to water in compound by ward	7
Table 3 Access to water in compound by ward and use of toilet.....	7
Table 4 Respondents by gender and ward	8
Table 5 Respondents by gender and ethnic/social/caste group	8
Table 6 Respondents by ward and ethnic/social/caste group	8
Table 7 Respondents by age and ethnic/social/caste group	8
Table 8 Respondents by gender and age group	9
Table 9 Respondents by size of household.....	9
Table 10 Respondents by gender and level of education	9
Table 11 Respondents by level of education and age group	9
Table 12 Respondents by level of education and Ward	10
Table 13 Use of different media	10
Table 14 Doers and non-doers by ward.....	11
Table 15 Doers and non-doers by gender	13
Table 16 Doers and non-doers by ethnic/social/caste group	13
Table 17 Doers and non-doers by age group.....	13
Table 18 Doers and non-doers - heads of households	13
Table 19 Summary of Behavioural factors and related BCT identified	27

Abbreviations

BCC	Behaviour Change Communications
BCT	Behaviour Change Technique
OD	Open Defaecation
ODF	Open Defaecation Free
RANAS	Risks, Attitudes, Norms, Abilities, and Self-regulation
RWSSP-WN II	Rural Water Supply and Sanitation Project in Western Nepal Phase II
VDC	Village Development Committee

1 Points of Entry

Kapilvastu district in Nepal is one of the remaining districts to declare itself as ‘Open Defecation Free’ (ODF) within the Rural Water Supply and Sanitation Project in Western Nepal Phase II (RWSSP-WN II) working districts. In 2016 RWSSP-WN did a sanitation survey covering all households within Baluhawa VDC on the India border in Southern Kapilvastu. This survey covered all households within Baluhawa VDC (total 767 households). It was used to verify which households had received subsidy for the latrine construction, and whether this VDC was truly ready to declare itself ‘ODF’. At this time the completion of the toilets and their use when completed, emerged as major issues (see RWSSP-WN 2016a and RWSSP-WN 2016b). The same dilemma is observed in many other locations as well (see e.g. RWSSP-WN 2016c).

In 2017 RWSSP-WN decided to trial ‘RANAS’ approach to behaviour change in these hard-to-change locations. ‘RANAS’ approach was developed by Prof. Moesler, and it explores behavioural factors related to **Risk, Attitude, Norms, Ability and Self-regulation**, comparing the ‘doers’ (in this case those who do use the toilet) with the ‘non-doers’ (in this case, who do not use the toilet), and then chooses the specific Behaviour Change Technique (BCT) accordingly. In other words, the BCT targets the behavioural factors that is different in between those who already practice the desired behaviour, and those who do not.

We have already earlier acknowledged that RWSSP-WN II needs to be more focused in its Behaviour Change Communications (BCC) and related BCTs used with regards to:

- Number of behaviours being addressed: we tend to address too many behaviours at the same time
- Related number of messages: similarly to the above, we tend to provide too many messages at the same time, we do not really know if these are actually effective messages considering the audience
- Knowing the target audience: we tend to deliver the same message or apply the same BCT to everybody, missing out elderly, the children, specific ethnic/caste/social groups, often not being very clear on who is the target audience, whose actual behaviour is the most critical
- Measuring impact: we invest a lot of resources, both human and financial, to organize a range of events and trainings, and keep using the same Information, Education and Communication (IEC) materials, but we do not know if that is having any impact at all

RANAS approach as defined by EAWAG can be very detailed and complex, even a heavy exercise. The steps in RANAS are logical but numerous. EAWAG concludes that *“although the complete RANAS approach takes several months, it is worth applying; it results in behaviour change strategies which (1) are tailored to the population, (2) have been proven to change behaviour effectively under local conditions, and (3) thus provide an evidence base for further interventions.”* (Contzen & Mosler, 2015).

RANAS

The Risks, Attitudes, Norms, Abilities, and Self-regulation (RANAS) approach to systematic behaviour change in a nutshell (EAWAG):

Phase 1: Identify potential behavioural and contextual factors

Phase 2: Measure the identified potential factors and determine those steering the behaviour

Phase 3: Select corresponding BCTs and develop appropriate behaviour change strategies

Phase 4: Implement and evaluate the behaviour change strategies

This report will outline the findings and plans until Phase 3 above. The overall results will be published next year when the locations will be re-visited to see whether the targeted BCT did lead into better results than the ‘business-as-usual’ approach to BCT selection, and ‘no BCT at all’.

RWSSP-WN decided to apply the RANAS approach to be able to use more effective Behaviour Change Techniques to address two important behaviours: **the use of latrines** and **handwashing after using the latrine**. In this report the target behaviour is use of latrines. During the survey it became evident that 'completing the latrine' is the first behaviour even if this location had been declared 'ODF' and it was assumed that the toilets did exist. They did not, too many were still not more than up to plinth level.

This report summarises the findings from the formative research conducted in Kapilvastu district in Nepal in September 2017. Kapilvastu is one of the last three RWSSP-WN working districts yet to be declared Open Defecation Free. At the same time there are concerns that even in those areas already declared, not all are using the latrines.

2 Objectives, methodology & study area

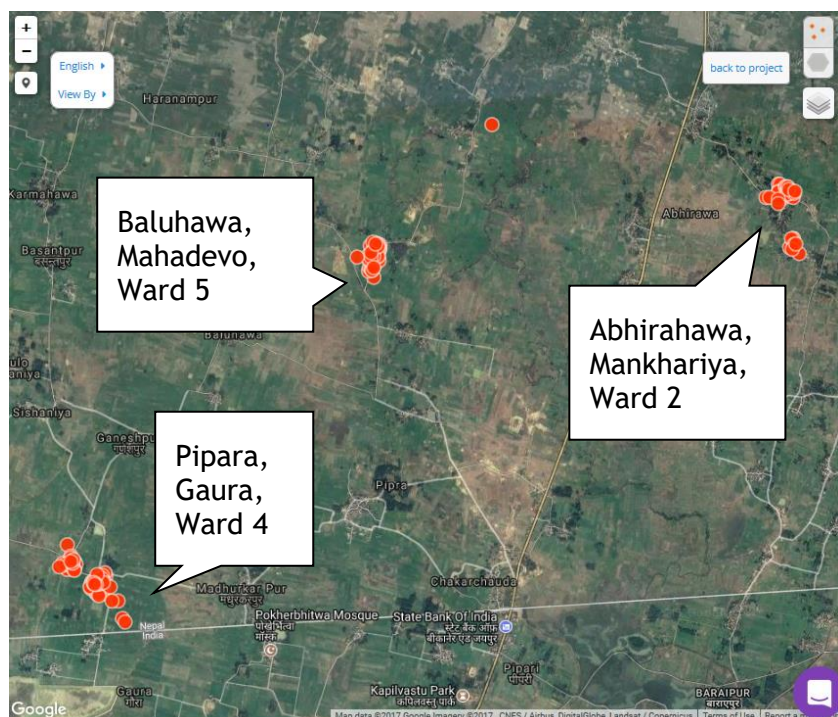
The purpose of the entire exercise is to sharpen our approach into Behaviour Change Communications (BCC) related to sanitation. The specific objectives of applying the RANAS approach in Kapilvastu is to explore whether the systematic behaviour change process will result in better outcomes than our business-as-usual approach to BCC. With this exercise we wish to understand better the behavioural factors that influence people's choice to use or not to use their existing toilets. While Kapilvastu has still many locations that have not been declared 'ODF', there is still a serious concern that even in those areas that have been declared, **Open Defecation ('OD')** still continues.

Our methodology follows the RANAS steps as described for instance by EAWAG, see for instance Methodological Fact Sheets by Contzen & Mosler (2015).

The plan is that after this exercise, one of the wards will continue with the regular BCC programme without any changes in the earlier practices, one will apply the focused Behaviour Change Technique that is recommended in this Brief based on the survey results, and one will not do any BCC programme but focuses on shallow tube well programme only (counterfactual). The survey will be repeated after 12 months to see whether there was any difference in these populations, in the words, whether the targeted BCT made any difference.

This brief presents the findings from the Steps 1 and 2, and based on these findings, makes recommendations on how to proceed with the Step 3. We wish to repeat the survey questions within the next 12 months to compare the situation in between the three study locations, and assume that after 12 months we can produce a follow up report for this, outlining how the Phase 4 was actually done, and how that selected target area compares with the other two.

Mayadevi Rural Municipality (Gaunpalika) in south-eastern Kapilvastu was chosen as the study site given that it is included into RWSSP-WN II programme activities this fiscal year, and given that the Baluhawa VDC is now included into that municipality. Within this, three wards were chosen, see Map 1.



Map 1 Study locations

3 Step One: Identify potential behavioural & contextual factors

The behaviour to be changed is *use of latrine for defecation by all family members, always*. RWSSP-WN II has found in its earlier studies (see for instance the study conducted in Baluhawa VDC of Kapilvastu District (RWSSP-WN Brief 11-2016) and Silautiya VDC in Rupandehi (RWSSP-WN Brief 10-2016), that even if the households have a latrine, it may not be used by all family members, or it may not be used at all times, i.e., open defecation continues regardless of the 100% toilet coverage.

A year earlier in September 2016 Baluhawa VDC was getting ready to declare itself as 'ODF'. At the time it was necessary to establish who had received subsidies and whether the VDC was truly ready to declare ODF. The survey covered all households within the VDC, total 764 households. It found that there were still 195 households (26%) without any toilet, and that 326 (91%) households reported as having a toilet that is regularly used by all family members while 33 (9%) report that the toilet is used but not by all family members. There has also been some media coverage in this regard, specifically from the Tarai districts. See the full report on Baluhawa for details (RWSSP-WN 2016a and RWSSP-WN 2016b).

We developed a questionnaire to measure behavioural factors using the earlier studies, reports and field observations made especially in Kapilvastu. We also studied the existing questionnaires developed by others applying RANAS in different parts of the world. The questionnaire was then translated into Nepali, and on study site itself, into a local language. At this point, some questions were still changed while thoroughly discussed with the enumerators during their orientation. The questionnaire was then created using the KoBo Toolbox and smartphones/tablets, and the enumerators were oriented in both. The orientation included the protocol to conduct the surveys. A small hygiene pack (consisting of a soap, toothbrush, toothpaste, towel, comb and nail clipper) was prepared as a gift for those who were interviewed. One interview took approximately 45 minutes.

4 Phase Two: Measure identified potential factors and determine those steering the behaviour

4.1 Physical Contextual factors

All respondents had a latrine. That was part of the research protocol: this study focuses on households who have a toilet. In practice we found that not all had completed their toilets, even those who claimed that they are using them.

It appears that ten years ago, there were only 5 toilets among the 161 respondent households. Between 6 and 10 years, another 12 toilets were constructed. Practically all who claim to have a toilet, have done this in between 1 and 5 years, but not within the past year, see figure aside. Since many of these are not actually completed, it means that the non-completed toilets have spent over 12 month without getting completed.

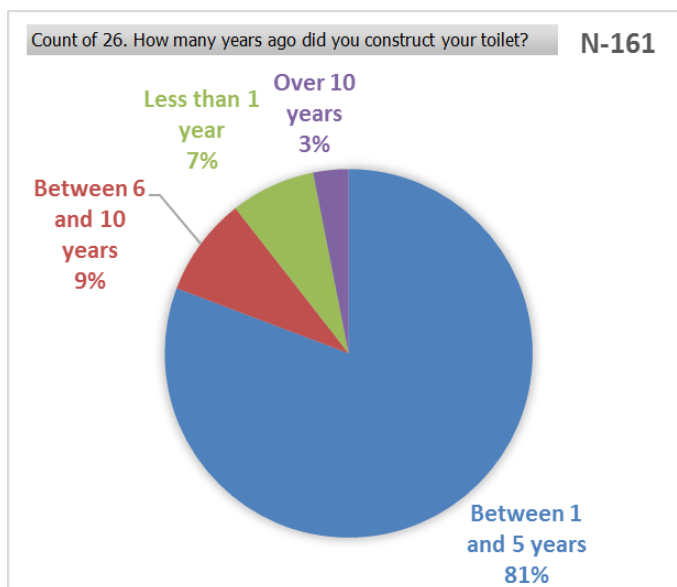


Figure 1 How many years ago did you construct your toilet?

Only 4 out of 161 reported using shared toilets, so this is not an issue. In practice, the toilet is often shared among a very large number of people living within a household as is shown in the following chapters.

All the wards have been declared as 'ODF'. Yet, it appears that especially female respondents did not know about this as is shown in the table below: while 80% of the male respondents did know, only 52% of female did, with third agreeing that they do not know. This gives an impression that whatever BCT was used, it had not reached these women. These responses were equally spread out in between the wards, and hence, cannot be explained by just one ward missing out in females.

Table 1 Knowledge if the ward is declared 'ODF'

Do you know if this Ward/Cluster is declared ODF?	Female	Male	Grand Total
Don't know	29	11	40
No	13	4	17
Yes	45	59	104
Grand Total	87	74	161
% yes	52%	80%	65%

In total 18 cases the respondent was threatened with penalties if they did not construct toilet. These cases were spread out in between the wards, with seven cases in Ward 2, three in Ward 4 and eight in Ward 5 agreeing that they were threatened. Out of these 18 respondents, seven were 'doers', i.e. always used the toilet. Out of 18, total 15 mentioned '*Detention from local government services*' as the penalty, two mentioned the involvement of a police, and one '*fine system*'. None mentioned social sanctioning or other forms of threat.

We assumed that water is not the challenge in this part of Tarai, that shallow tubewells can be found in each compound. This was not the case as is evident from the following table. The situation seems to be the worst in Ward 2 where only 64% had water available in their compound. Interestingly this does not affect the 'doers' as is evident in the next table: out of those who always use toilet, 68% had water available in their compound, while in the 'non-doer' groups the percentages were 80% or higher.

Table 2 Access to water in compound by ward

Do you have access to water in your compound?	Ward 2	Ward 4	Ward 5	Grand Total
No	18	6	14	38
Yes	32	55	36	123
Grand Total	50	61	50	161
% yes	64%	90%	72%	76%

Table 3 Access to water in compound by ward and use of toilet

Do you have access to water in your compound?	In last seven days, how often did you go for 'OD'?					Grand Total
	Almost always	Almost never	Always	Never	Sometimes	
No	3	3	3	24	5	38
Yes	12	14	12	51	34	123
Grand Total	15	17	15	75	39	161
	80%	82%	80%	68%	87%	76%

4.2 Describing respondents

There were total 161 respondents of which 54% were female and 46% male. Out of all respondents, 60% were heads of the household. Out of all heads of household (95), 42% were female. Two ethnic/caste/social groups stand out, namely Disadvantaged Tarai groups (43%) and religious minorities, in this case Muslims (40%).

The age group-wise samples were fairly equally spread out over the different age groups and within the caste/ethnic/social groups, see the following tables that describe the study population. This was also the strategy for the sampling: we were knowingly looking for a sample that has balanced representation of men and women, of different age groups, and 50:50 doers and non-doers. The following tables do not, therefore, represent any random sample as such.

Table 4 Respondents by gender and ward

Ward	Female	Male	Grand Total
2	28	22	50
4	29	32	61
5	30	20	50
Grand Total	87	74	161
	54%	46%	

Table 5 Respondents by gender and ethnic/social/caste group

Ethnic/caste group	Female	Male	Grand Total	% of total
Adibasi/Janajati	1		1	1%
Dalit	12	3	15	9%
Disadvantage Tarai Group	34	36	70	43%
Others	5	6	11	7%
Religious Minority	35	29	64	40%
Grand Total	87	74	161	100%

Table 6 Respondents by ward and ethnic/social/caste group

Ethnic/caste group	Ward 2	Ward 4	Ward 5	Grand Total
Adibasi/Janajati	1	0	0	1
Dalit	2	6	7	15
Disadvantage Tarai Group	19	24	27	70
Others	5	6	0	11
Religious Minority	23	25	16	64
Grand Total	50	61	50	161

Table 7 Respondents by age and ethnic/social/caste group

Age group	Adibasi/Janajati	Dalit	Disadvantage Tarai Group	Others	Religious Minority	Grand Total
>60		1	8	3	12	24
18-29		4	11	3	7	25
30-39		3	12	1	14	30
40-49		7	23	3	12	45
50-59	1		16	1	19	37
Grand Total	1	15	70	11	64	161

Systematic Approach to Behaviour Change in Sanitation in Kapilvastu district, Nepal

Table 8 Respondents by gender and age group

Age group	Female	Male	Grand Total
>60	9	15	24
18-29	13	12	25
30-39	24	6	30
40-49	25	20	45
50-59	16	21	37
Grand Total	87	74	161

The household sizes tend to be very large. This might be a practical problem when there is only one toilet per up to 30 family members.

Table 9 Respondents by size of household

Household size	Number of households
2 to 5	22
6 to 10	86
11 to 15	29
16 to 20	15
21 to 30	9
Total	161

The educational level is very low. Out of all female respondents, 90% had no schooling. Out of all female respondents, 71% were illiterate, the corresponding figures for male respondents being 54% no schooling and 34% illiterate.

Out of total sample, more than half are illiterate.

This is a strong message for the behaviour change communications: there is both the language issue to consider, and literacy. The most literate age group in this sample is 18-29, but even in this group 40% report 'no schooling'. Among the three Wards, the Ward 2 has the poorest record with 82% without schooling, while Ward 5 has most illiterate persons with 66% of the respondents being illiterate.

Table 10 Respondents by gender and level of education

How many years you were in the school?	Female	Male	Grand Total
>10 S.L.C	1	8	9
1-5 class	3	6	9
6-10 class	5	20	25
Illiterate (No schooling)	62	25	87
Literate (No schooling)	16	15	31
Grand Total	87	74	161
Illiterate (No schooling)	71%	34%	54%
No schooling	90%	54%	73%

Table 11 Respondents by level of education and age group

Education (how many years did you go to school?)	Age group					Grand Total
	>60	18-29	30-39	40-49	50-59	
>10 S.L.C	1	3	0	5	0	9

Systematic Approach to Behaviour Change in Sanitation in Kapilvastu district, Nepal

1-5 class	2	3	3	1	0	9
6-10 class	2	9	1	8	5	25
Illiterate (No schooling)	17	3	19	24	24	87
Literate (No schooling)	2	7	7	7	8	31
Grand Total	24	25	30	45	37	161
Illiterate (no schooling)	71%	12%	63%	53%	65%	54%
No schooling	79%	40%	87%	69%	86%	73%

Table 12 Respondents by level of education and Ward

Education	Wards			Grand Total
	2	4	5	
>10 S.L.C	2	5	2	9
1-5 class	2	4	3	9
6-10 class	5	13	7	25
Illiterate(No schooling)	26	28	33	87
Literate(No schooling)	15	11	5	31
Grand Total	50	61	50	161
No schooling (both literate and illiterate)	82%	64%	76%	73%
No schooling (Illiterate)	52%	46%	66%	54%

The following tables about the use of different types of media reflects the overall low literacy: while people do use mobile phones, they are not listening to FM radio (20% of women and 38% men responded 'yes'), use social media or read anything at all (3% of women and 31% of men report reading local news papers, leaflets or anything at all).

Table 13 Use of different media

Do you use mobile phone?	Female	Male	Grand Total
No	45	21	66
Yes	42	53	95
Grand Total	87	74	161
% yes	48%	72%	59%
Do you listen to radio/FM?	Female	Male	Grand Total
No	70	46	116
Yes	17	28	45
Grand Total	87	74	161
% yes	20%	38%	28%
Do you read anything (newspaper/leaflet/brochures)?	Female	Male	Grand Total
No	84	51	135
Yes	3	23	26
Grand Total	87	74	161
% yes	3%	31%	16%
Do you use Facebook or other social media?	Female	Male	Grand Total
No	83	58	141
Yes	4	16	20
Grand Total	87	74	161
% yes	5%	22%	12%

4.3 Introducing Doers & Non-Doers

In RANAS analysis it is important to be able distinguish in between ‘doers’ and ‘non-doers’. In this case, those who always use the toilet for defecation (‘doer’) and those who go for open defecation (‘non-doer’). There were four categories of this, of which the strictest definition for a ‘doer’ is that over the past seven days, the respondent always used the toilet for defaecation. In other words, the responded replied ‘never’ to the last question about ‘*in the last seven days, how often did you go for open defecation?*’

Since the aim was to have balanced representation of both ‘doers’ and ‘non-doers’, the sample does not represent the population in the same was as the random sampling would have. The result that 47% of the respondents were always using toilet for defaecation does not mean that nearly half of the entire village would do the same. The following table shows that were successful in having balanced representation in each ward, even if in the Ward 4 it was more difficult to find ‘doers’ with 41% of the total sample only.

Table 14 Doers and non-doers by ward

Ward	Q47. In last seven days, how often did you go for ‘OD’?						Doers’%
	Almost always	Almost never	Always	Never*	Sometim es	Grand Total	
2	3	5	6	25	11	50	50%
4	5	4	6	25	21	61	41%
5	7	8	3	25	7	50	50%
Grand Total	15	17	15	75	39	161	

In the following maps, the ‘doers’ are those who replied ‘Never’ to the question ‘*How many times did you go for Open Defecation over the past seven days?*’. All others are considered ‘non-doers (Maps 2, 3 and 4)



Map 2 ‘Doers’ and ‘Non-Doers’ in Ward 2

Systematic Approach to Behaviour Change in Sanitation in Kapilvastu district, Nepal



Map 3 'Doers' and 'Non-Doers' in Ward 4



Map 4 'Doers' and 'Non-Doers' in Ward 5

The sample is equally divided across the various types of respondents. In the following, 'Never'-replies indicate the 'doer' who always used the toilet, all the others can be considered as 'non-doers'. In the analysis further on, we will study also whether the results appear different if we consider also the 'almost never' as a 'doer'. In the following series of tables, the last column shows the percentage of 'doers' out of vertical totals. For instance, in the first table below, 43% of the heads of household are 'doers' while 52% of the non-head of households are. For some reasons heads of household are not keen on using the toilet! Yet, the percentages must be considered against the total sample, 100% is easy to achieve with one respondent only...

Systematic Approach to Behaviour Change in Sanitation in Kapilvastu district, Nepal

Table 15 Doers and non-doers by gender

Gender	Q47. In last seven days, how often did you go for 'OD'? (* indicates 'Doers')						
	Almost always	Almost never	Always	Never*	Sometimes	Grand Total	'Doers' %
Female	6	9	8	41	23	87	47%
Male	9	8	7	34	16	74	46%
Grand Total	15	17	15	75	39	161	47%

Table 16 Doers and non-doers by ethnic/social/caste group

Ethnic/social group	Q47. In last seven days, how often did you go for 'OD'? (* indicates 'Doers')						
	Almost always	Almost never	Always	Never*	Sometimes	Grand Total	'Doers' %
Adibasi/Janajati				1		1	100%
Dalit	1	4		5	5	15	33%
Disadvantage Tarai Group	9	5	12	27	17	70	39%
Others				9	2	11	82%
Religious Minority	5	8	3	33	15	64	52%
Grand Total	15	17	15	75	39	161	47%

Table 17 Doers and non-doers by age group

Age group	Q47. In last seven days, how often did you go for 'OD'? (* indicates 'Doers')						
	Almost always	Almost never	Always	Never*	Sometimes	Grand Total	'Doers' %
>60	3	2	3	11	5	24	46%
18-29	2	6	1	14	2	25	56%
30-39	4	2	2	11	11	30	37%
40-49	4	6	3	19	13	45	42%
50-59	2	1	6	20	8	37	54%
Grand Total	15	17	15	75	39	161	47%

Table 18 Doers and non-doers - heads of households

Respondent head of household	Q47. In last seven days, how often did you go for 'OD'? (* indicates 'Doers')						
	Almost always	Almost never	Always	Never*	Sometimes	Grand Total	'Doers' %
No	6	7	6	34	13	66	52%
Yes	9	10	9	41	26	95	43%
Grand Total	15	17	15	75	39	161	47%

4.4 Overview to all replies

The following summaries capture all the responses without making difference in between doers and non-doers. According to the 72% of the respondents', about half or 'most' people in their communities do go for 'OD' (Question 33). Yet, at the same time, most respondents are embarrassed to go for 'OD', they do not like to do it, but rather, they like their toilet. Against this background, it is difficult to understand why half of these respondents still do go for 'OD'.

- Access to water in the compound? There are more non-doers that have access to water in the compound (Doers 1.68, non-doers 1.8, scores 1 for 'no' and 2 for 'yes').
- Years from constructing the toilet: doers 2.15 and non-doers 2.01. Not significant difference, cannot conclude that doers would have had the toilet longer than non-doers.
- Out of total sample, 85% like their toilets and 85% are comfortable in using them. Very few can give any reasons why it would be uncomfortable to use the toilets, usually relating to privacy. This is easy to understand when seeing what the respondents call toilet, which in many cases is just up to plinth level, with no walls or 'sari only' walls.
- When asking who is not using the toilets, the answers are spread out over various combinations, two groups stand out: **16-59 years old male** (14+13 where this group is combined with others) and **Male over 60** (15 + 9 cases where this group is combined with others).
- It is not generally approved that children under 5 do 'OD'. Only five persons out of 161 stated that 'all would approve' to the question "*Imagine that young child (baccha) went for open defecation. How much would people in your community approve or disapprove?*" 82% were in the opinion that all or most would disapprove this practice.
- Similarly, the 'OD' by elderly people is not approved either. Here 84.5% stated that all or most would disapprove.

BCT related observations from the overview:

- Need to ensure that male 16-59 and male over 60 get targeted with some messages of their own right. Does this mean that we have somehow been successful in targeting women, the usual target group being mothers for many sanitation, hygiene and health related messages?
- Completing latrines is the number One in the to-do list. We cannot go ahead with using the toilet as long as there is no toilet to use.
- Approval is not an issue, social norms are somehow in favour of 'ODF'

4.5 Comparing doers and non-doers by behavioural factors

The following three charts capture the various types of behavioural factors as defined by RANAS. In this chapter the 'doers' are those who never go for 'OD'. In this data those who replied '*almost never*' for having gone for 'OD' over the past seven days, are still considered 'non-doers'. The following Chapter 4.6 will see the same charts by accepting '*almost never*' respondents into 'doers' to see whether something else stands out, and to see how this influences the averages.

The aim is to compare 'doers' scores against 'non-doers' to see which behavioural factors differ. The chosen behaviour change technique should then be chosen to address that or those factors, *not those that do not differ*. Note that following charts use different scales, and that in many cases the difference is minimal. Yet, the differences are there.

The first chart shows the responses under the main headings 'feelings' and 'attitudes'. Score '3' means '*a little costly*' and score '4' '*very costly*'. In Chart 1 it appears that slightly more 'non-doers' did consider diarrhoea more costly to treat than within the doers. The difference here is minimal.

The next question about whether the respondents think that it is costly to empty the pit, score '2' is for '*very costly*' and score '3' for '*a little costly*'. It appears that both 'doers' or 'non-doers' considered that the pit emptying would be costly. There have been some cases where

people have not used their toilet as they were worried about the pit getting full, but in these results, that does not seem to stop ‘doers’ from being ‘doers’, both groups are equally worried about it being costly to empty the pit.

The third question enters the domain of ‘Feelings’. The first question under this heading was how much the respondent would feel embarrassed or not embarrassed if someone saw him/her going for ‘OD’? The scale went from ‘1’ for ‘*not at all embarrassed*’ to ‘5’ for ‘*extremely embarrassed*’. Interestingly the responses are fairly equal, even the ‘non-doers’ feel embarrassed to go for ‘OD’. The ‘doers’ dislike ‘OD’, but so do the ‘non-doers’, although there is a difference here. The difference is more clear in disliking the toilet use and whether using toilet is comfortable. When exploring the photos of the toilets of the ‘non-doer’ group, it is easy to see why these toilets are not comfortable to use: they hardly exist! Most of the toilets in the category of those who always go for ‘OD’, are hardly completed at all! The following stand out:

- Dislike toilet use
- Comfortable to use toilet

The following chart explore norms in terms of approval and importance. Here three items stand out:

- Family’s approval for going to ‘OD’ (in ‘doers’ group family disapproves, but the ‘non-doers’ are not very far from this average score)
- Uncomfortable to send guests for ‘OD’ (‘doers’ are more uncomfortable with this)
- Important to use toilet (‘doers’ feel that it is important to use toilet)

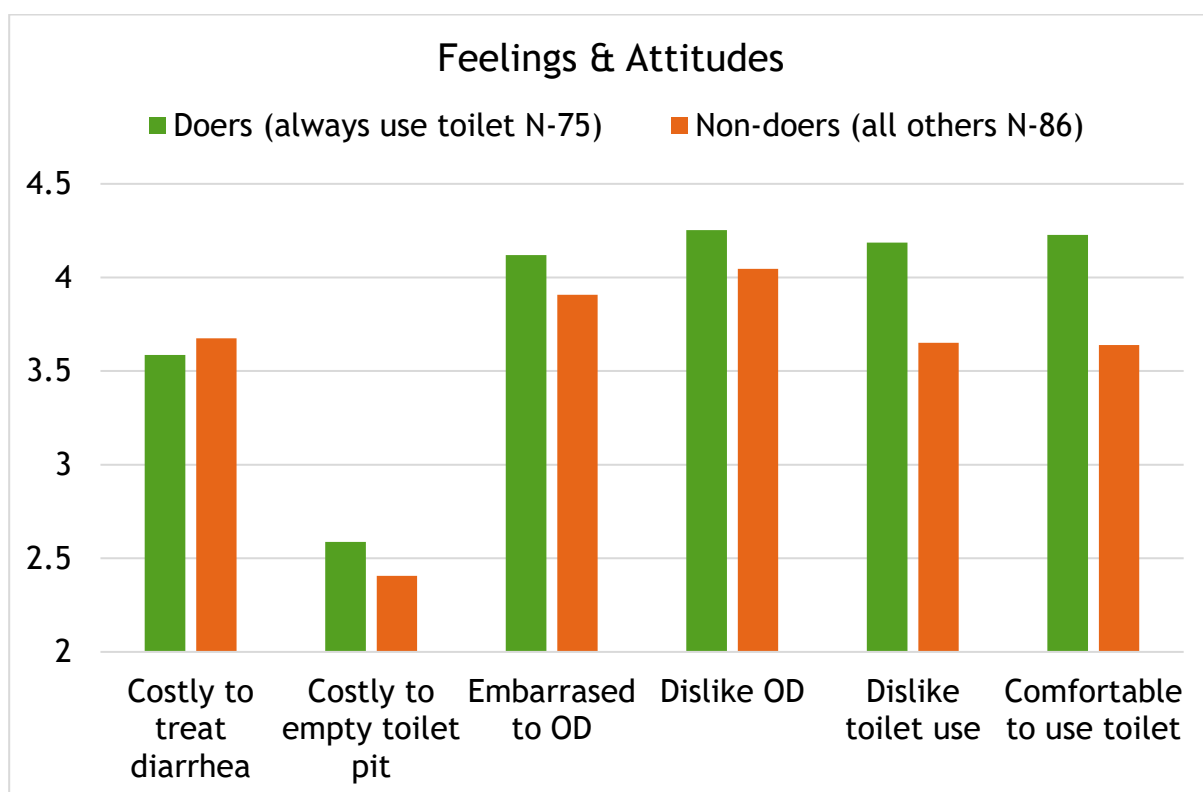


Figure 2 Feelings and attitudes

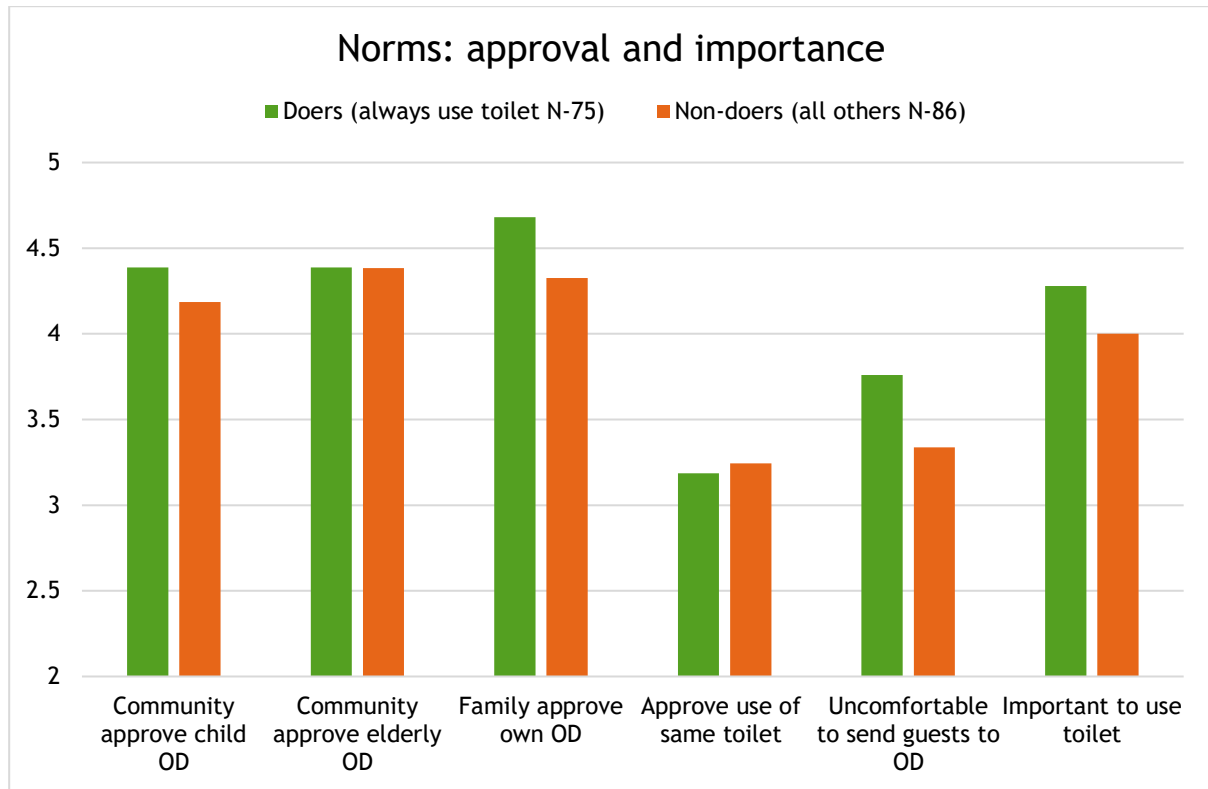


Figure 3 Norms: approval and importance

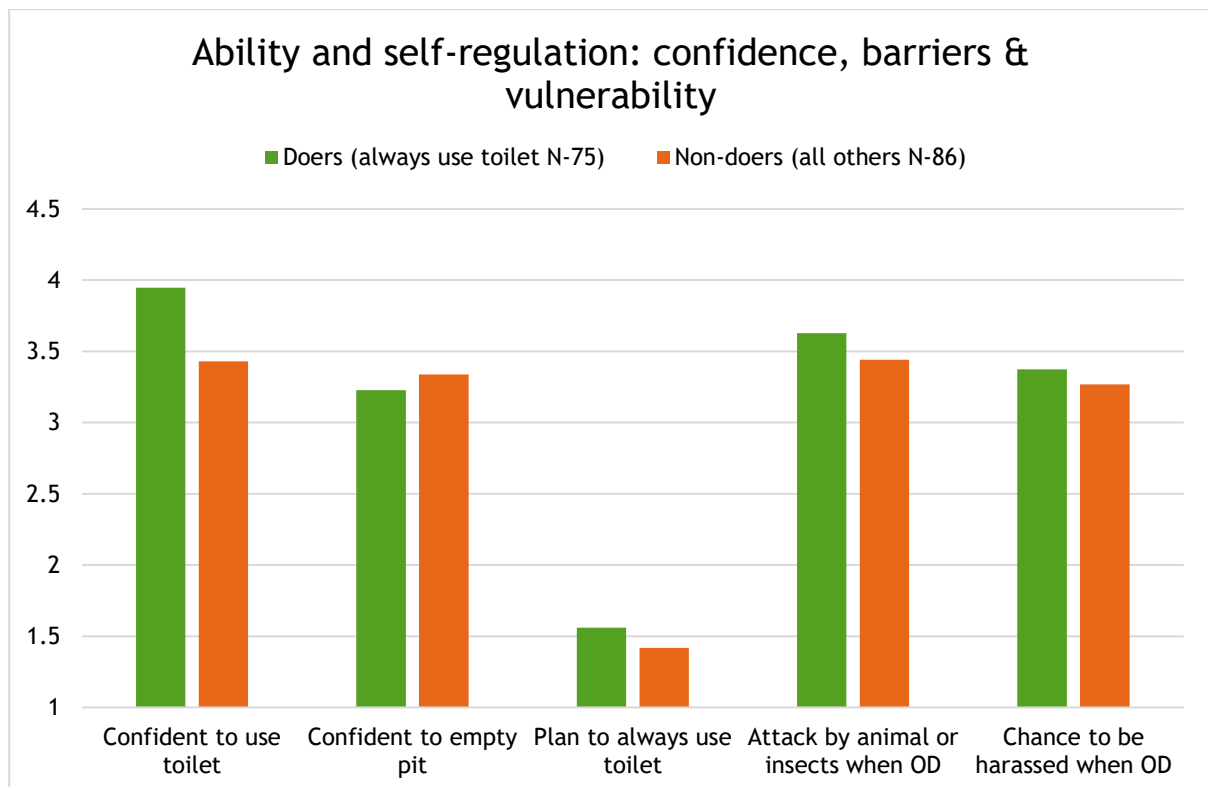
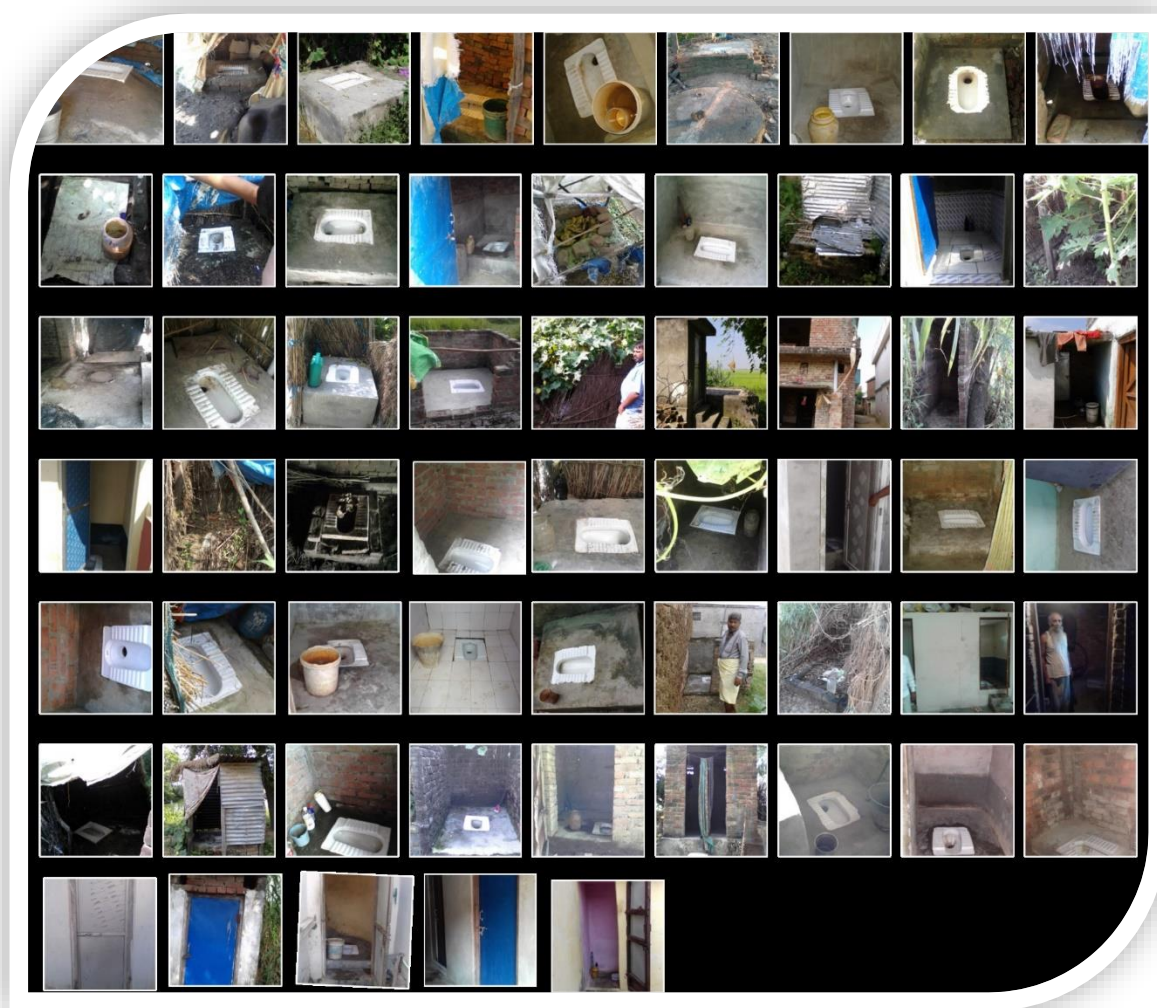


Figure 4 Ability and self-regulation: confidence, barriers & vulnerability



4.6 Comparing 'almost doers' and non-doers by behavioural factors

The following three charts capture the various types of behavioural factors as defined by RANAS similarly to the previous chapter. In this chapter the 'doers' are both those who reported that they never go for 'OD' over the past seven days, *and* those who replied 'almost never'. All others are considered 'non-doers'. The following three charts look similar, with the following items standing out with more clear difference.

The differences in between the two charts above appear very small. The chart xxx takes closer look at the differences in between the averages by the following equation:

$$[Average \text{ when accepting only 'always use toilet' as a doer}] \text{ minus } [Average \text{ when accepting both 'always' and 'almost always' as a 'doer'}].$$

These refer to the question whether the respondents had done open defecation over the previous seven days (week, those replying 'never' being considered as those who 'always use toilet'. The following chart shows how accepting 'almost always' as a 'doer' would impact the outcome.

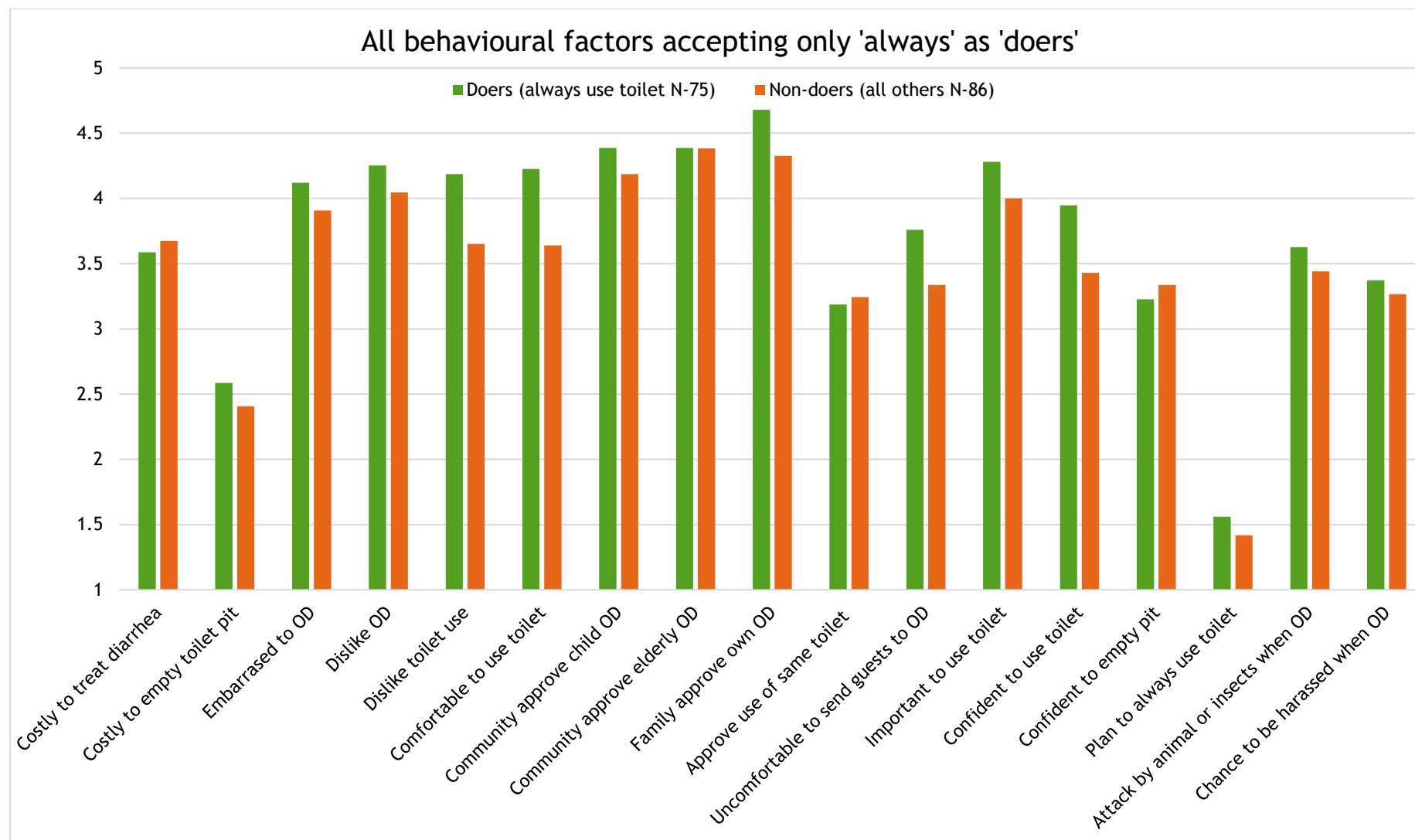


Figure 5 All behavioral factors accepting only 'always' as 'doers'

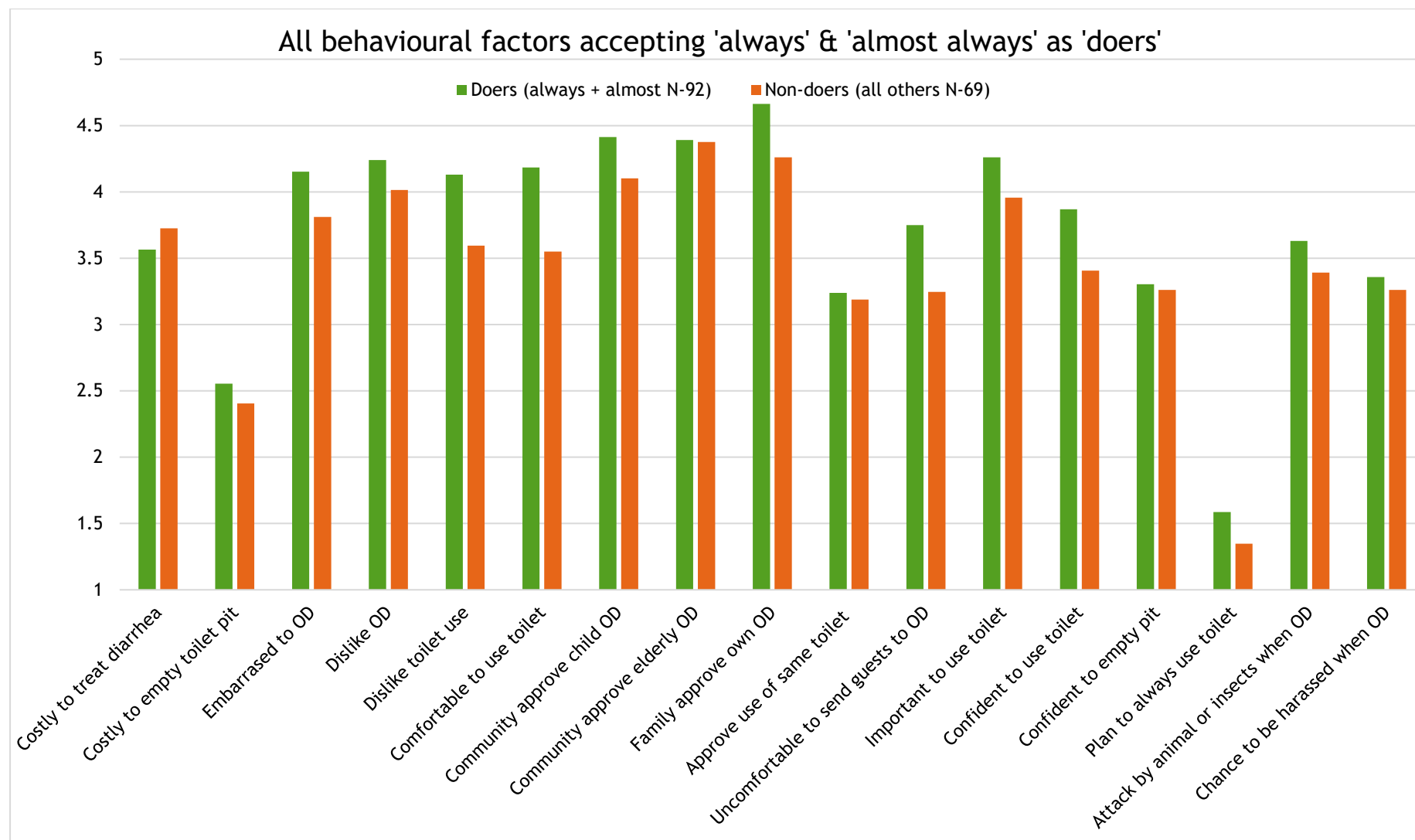


Figure 6 All behavioral factors accepting 'always' & 'almost always' as 'doers'

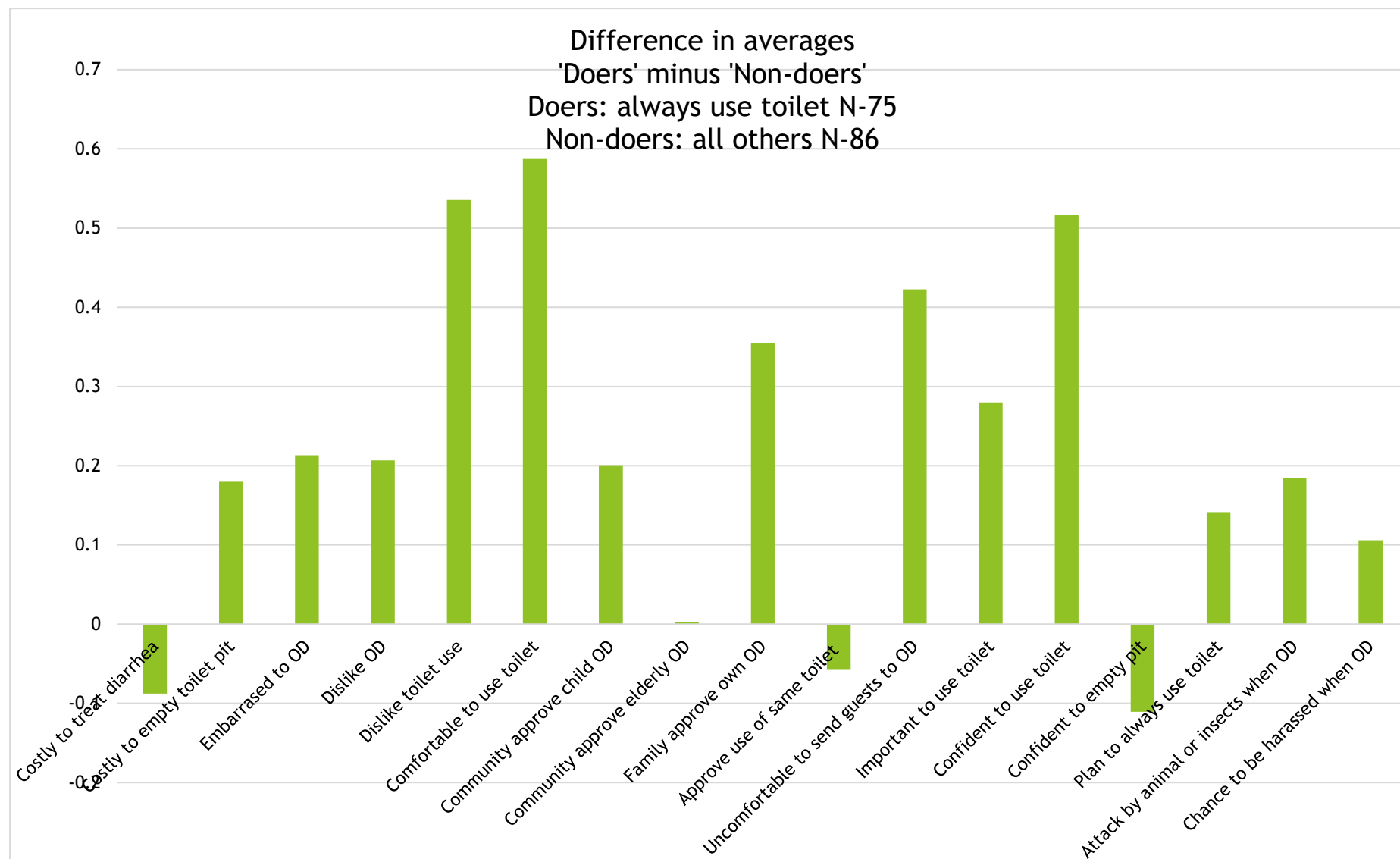


Figure 7 Differences in between averages

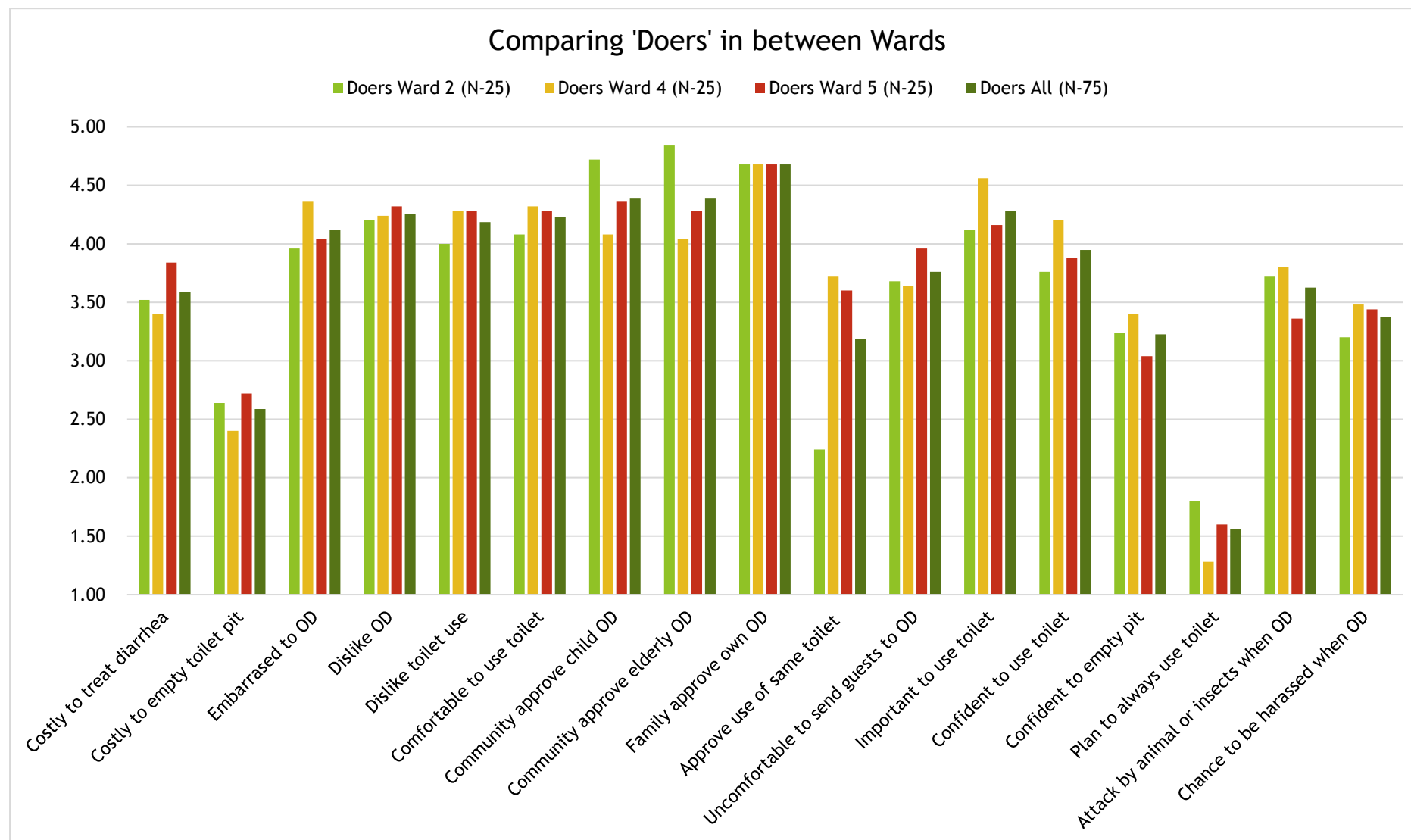


Figure 8 Differences in between the 'Doers' averages in different wards

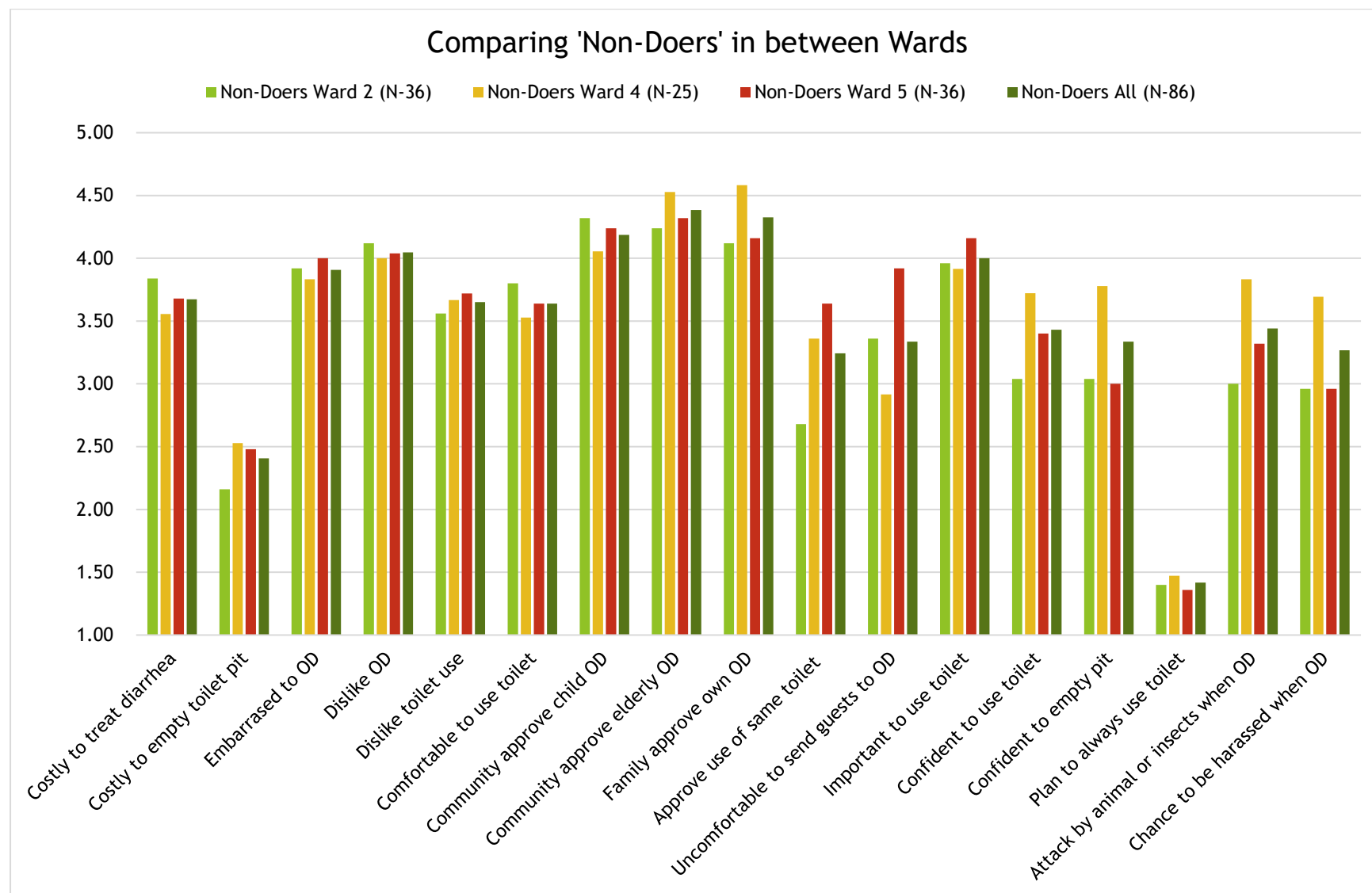


Figure 9 Differences in between the 'Non-Doers' averages in different wards

4.7 Situation in Ward 4 (Pipara)

Pipara, Gaura, Mayadevi Rural Municipality Ward 4, was selected as the ward where the behaviour change technique to be used is based on the findings of this study. In this ward, only the chosen BCTs will be used. In the following pages, the first chart shows the 'doer' and 'non-doer' responses for Ward 4 only. In the following chart, 'doers' and 'non-doers' in Ward 4 are compared the other two wards together, i.e. Ward 4 replies are not influencing the other two. In this chart, the ward 4 'doers' and 'non-doers' are located next to each at the middle of the column clusters to make it easier to compare against each other and against the other two. The following characterizes Pipara ward 4:

- 39% of the respondents in Ward 4 were from the Disadvantaged Tarai group, and 41% from the 'Religious minority', in this case Muslim. The sample was gender balanced with 48% women respondents, the respondents also representing the different age groups fairly equally.
- 64% of the 61 respondents did not have any schooling, and 46% of them were illiterate. Illiterate people could be found all age groups.
- Out of total sample of 61 households, there were only 6 'doers' (who never went for 'OD' over the past seven days) and 4 that 'almost never' went to 'OD'. Even if this Ward is declared 'ODF', only 9% reported that they never went for 'OD' over the past seven days, i.e. that they always use toilet.
- While within the total sample, the '*embarrassed to OD*' did not stand out, in Ward 4 it does. Similarly, '*important to use toilet*' stands out more strongly in ward 4 compared to the total sample. Also the statement '*uncomfortable to send guests for Open Defecation*' stands out in between 'doers' and n-n-doers' of Ward 4, while in the two others combined there is no strong difference.
- While '*community approves child 'OD*' and '*community approves elderly OD*' do stand out amongst the two other wards, the differences are not so pronounced in ward 4 in between 'doers' and 'non-doers'.

The likelihood of being harassed when going for open defecation is very high in all wards. Very few respondents out of 50 in Ward 4 reported it extremely unlikely, while total 96% considered it likely to various degrees, see map below. Since the responses in all wards are high on this count, there is not much difference in between 'doers' and 'non-doers'.



Map 5 Pipara (Ward 4) 'Doers' and 'Non-Doers'

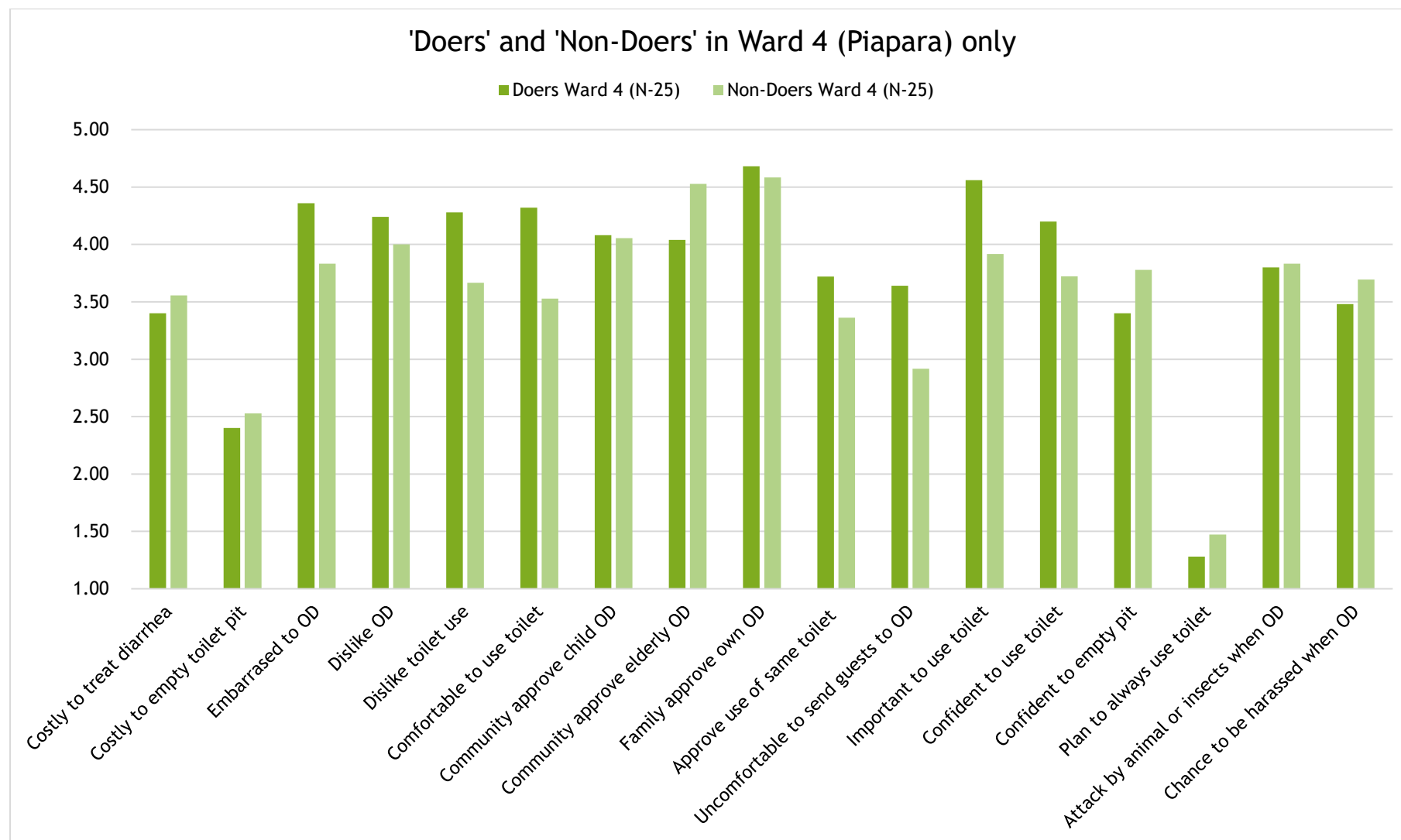


Figure 10 Differences in between 'Doers' and Non-Doers' in Ward 4 (Piapara) only

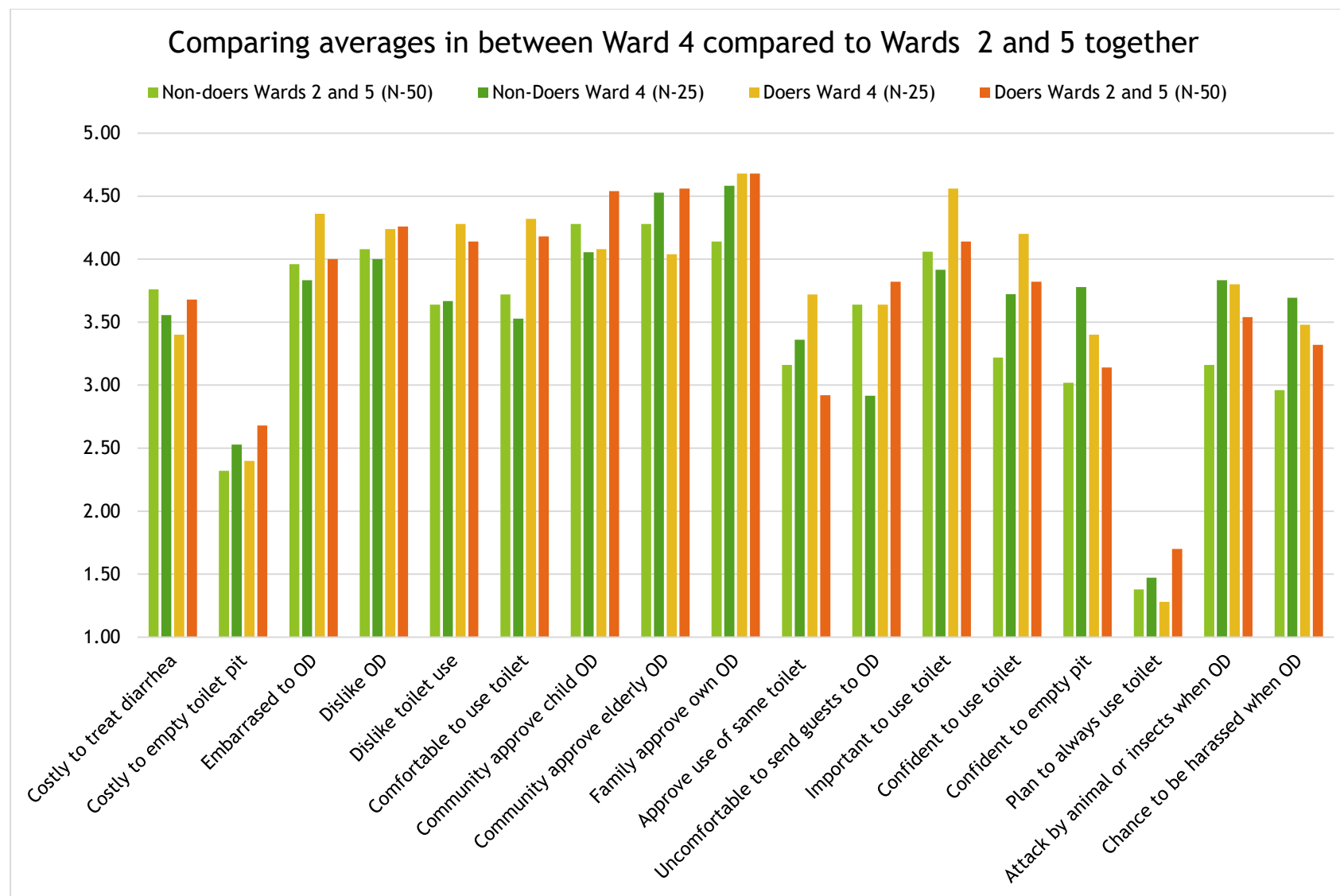


Figure 11 Differences in averages between Ward 4 (Pipara) and average in Ward 2 and 5 together

5 Phase Three: Select corresponding BCTs and develop appropriate behaviour change strategies

Based on the results, the following behavioural factors were standing out:

1. Dislike toilet use
2. Comfortable to use toilet, comfortable to send guests for open defecation
3. Confident to use toilet

The following initial points were raised:

- ✓ Positive group identity- Have group who have toilet and used it (have some visible identity e.g. T-shirt, some other cloth or cap, bag?) within the cluster - this group doing the household visits (from 'doer' to 'non-doer'), trying to convince the non-doer households to complete and use their toilet, or perhaps directly help them to complete the superstructure of toilets locally.
- ✓ No written IEC materials (literacy rate is very low)
- ✓ Test all the IEC material before applying in the field
- ✓ Better to have the real object /video for IEC
- ✓ Find out the toilet structures group (good one vs bad one)

The Kapilvastu field staff raised the following points:

- ✓ Movie - Only ½ hrs duration should also capture the local culture in local language (just not only conveying toilet use only directly)
- ✓ Street drama - also needed (through this we can cover more things than the movie only)
- ✓ Mobilization of religious group would be better (these are most influential and important person)
- ✓ Wall painting (about toilet use)
- ✓ Sanitation truck or cart - miking within cluster through songs in local language.
- ✓ For positive group identity might not work (if we only include 'doers')



Map 6 Comfortable sending visitors for open defecation in ward 4

Systematic Approach to Behaviour Change in Sanitation in Kapilvastu district, Nepal

Table 19 Summary of Behavioural factors and related BCT identified

Behaviour Factor	Proposed BCT	Choose BCT by SP	Communication channel	Remarks (comments from SP)
Attitude factor (Feeling)				
Comfortable to use	BCT8: Describe feelings about performing and about consequences of the behaviour	BCT8: Describe feelings about performing and about consequences of the behaviour	Mass media (<i>Movie</i>)	Should make own and in local language and include culture. Movie length ½ hrs.
Embarrassed to ‘OD’				
Norms Factor				
Others dis/approval				
Community approval elderly ‘OD’	BCT11: Inform about others approval/disapproval	BCT11: Inform about others approval/disapproval	Interpersonal communication (<i>Mobilization priest or religious group</i>)	Reward to the Priest or Religious group after mobilization would be very effective, these are most influential person in cluster.
Uncomfortable to send guest				
Personal Importance				
Important to use toilet	BCT12: Prompt anticipated regret	BCT12: Prompt anticipated regret	Mass media (<i>street drama</i>)	In street drama more issues can be capture than movie.
	BCT13: Provide positive group identity			Less impact as people will not give importance to doers unless if they get something (some sort of subsidy).
	BCT14: Prompt people to become role model			Very crucial to keep important person picture/poster in cluster (although it may be great impact).

Table continues next page

Systematic Approach to Behaviour Change in Sanitation in Kapilvastu district, Nepal

Behaviour Factor	Proposed BCT	Choose BCT by SP	Communication channel	Remarks (comments from SP)
Ability Factor				
Confidence in performance				
Confident to use toilet	BCT16: Provide infrastructure	BCT16: Provide infrastructure	Interpersonal communication (<i>provide information about types of toilet superstructure locally available</i>)	Find out local person from who are skill full invite people in meeting/HHs for demonstration of different type's toilet superstructure.
	BCT17: Demonstrate and model behaviour (similar to BCT14) along with BCT13			Very crucial to keep important person picture/poster in cluster (although it may be great impact).
	BCT22: Use argument to bolster self-confidence	BCT22: Use argument to bolster self-confidence	Interpersonal communication	Mobilization of religious group or person.
Confidence in continuation				
Confident to empty	BCT24: Reattribute past successes and failure	BCT24: Reattribute past successes and failure	Interpersonal communication (<i>Sharing and experiences about how to empty the pit</i>).	

6 Lessons learned by far

The interviewing process itself has been an eye-opening process by far, with the following learnings:

- *We should not assume anything.* We now assumed that the behaviour to target is the use of toilets as these are areas declared as 'ODF'. Yet, the very first behaviour should be the completion of the toilets, then their use. We did not have questions about the toilets and their completion, but luckily the KoBo survey tool let us take photos that are attached to each reply. See Annexes 1 to 3.
- *The geo-tagged photos are a rich source of information.* This time we only asked to take the picture of the toilet. In the future we should give more detailed instructions how to take the picture so that some of the surrounding context is also revealed. Now many photos are of the pan set only, showing whether it is clean or not, possibly used or not, but missing out the superstructure and water source, as well as the location of the toilet. We should develop an analytical tool for the use of visual materials, too.
- *Making sensible questions is hard:* it is not easy to define questions that are not giving hints or pointers on what is the 'right answer' or 'what we would like to hear'. Another challenge for creativity is to be able to come up with a question or two under each behavioural factor. We tend to be so stuck with knowledge and practice type of questions that we really have to stretch our imagination to make questions under such as 'self-regulation' and 'confidence'. Furthermore, what are the questions that could have negative impact if we start asking about it? For instance if we ask whether people are not using their toilets because they are worried that the pit gets full, would we be spreading a rumour that there is actually something to worry? Just because we are going around asking about it, and suddenly there would be a new concern that was not there before?
- *Translating questions is art of its own right.* When asking the respondents then give answers on Likert scale with four to five different options that can be scored, the different responses can be so close to each other that once translated two times (first from English to Nepali, then to local language), the questions are essentially the same. Another challenge is to have self-explanatory questions that do not need any explaining from the interviewer's part. Hence, all terms used need to be understandable also to the non-educated (illiterate) people in their own language, without the need to lecture what is meant with what.
- *Great for learning to think out of box.* The behavioural determinants give excellent frame of reference to force ourselves to think out of our usual box, to ask something that we have not asked yet, something that will open up a new perspective into the question of simple act of using the toilets. It is not as much as about 'which behavioural determinant we have not addressed yet', but more about have we even asked about it? How many important items have we missed when we have not been able to even ask about it?

With regards to BCT, the learnings from our previous reports remain still relevant: there is the pre-ODF and post-ODF situations still to be considered. Follow up, going back to the people. This is the challenge of Tarai with large number of people: not all can be reached face-to-face. Human interaction remains, however, at the heart of our approach. Whatever will be the final BCT, it boils down to people doing it and people receiving it. The human faces on both sides. The effort is now in translating the chosen BCT into action that makes sense. At the same time, the comparison group should be exposed to the BCC programme as usual, without being influenced by the BCT chosen for Ward 4. The surveys will be repeated after 12 months, while we need to do regular monitoring in both locations (but not in the comparison ward as the monitoring itself can influence the outcome).

References

Contzen, N. A practical Guide to Systematic Behavior Change using the RANAS Approach. EAWAG. <http://www.eawag.ch/en/departement/ess/empirical-focus/environmental-and-health-psychology-ehpsy/>.

Dishwa & Rautanen (2017). Getting the message right: Step by Step behaviour change communication to guide change in sanitation in Nepal. Paper 2605. Local Action with International Cooperation to Improve and Sustain Water, Sanitation and Hygiene Services. 40th WEDC International Conference, Loughborough, UK, 2017.

Gerwel-Jensen, 2015. Behaviour Change Communications: Terai BCC Action Plan & Total Sanitation BCC in the Hills

Gerwel-Jensen, L., Rautanen, S.-L., & White, P. (2015). Strengthening Behaviour Change Communication in Western Nepal - how can we do better? *Waterlines*, 34(4), 330-346. doi:10.3362/1756-3488.2015.030

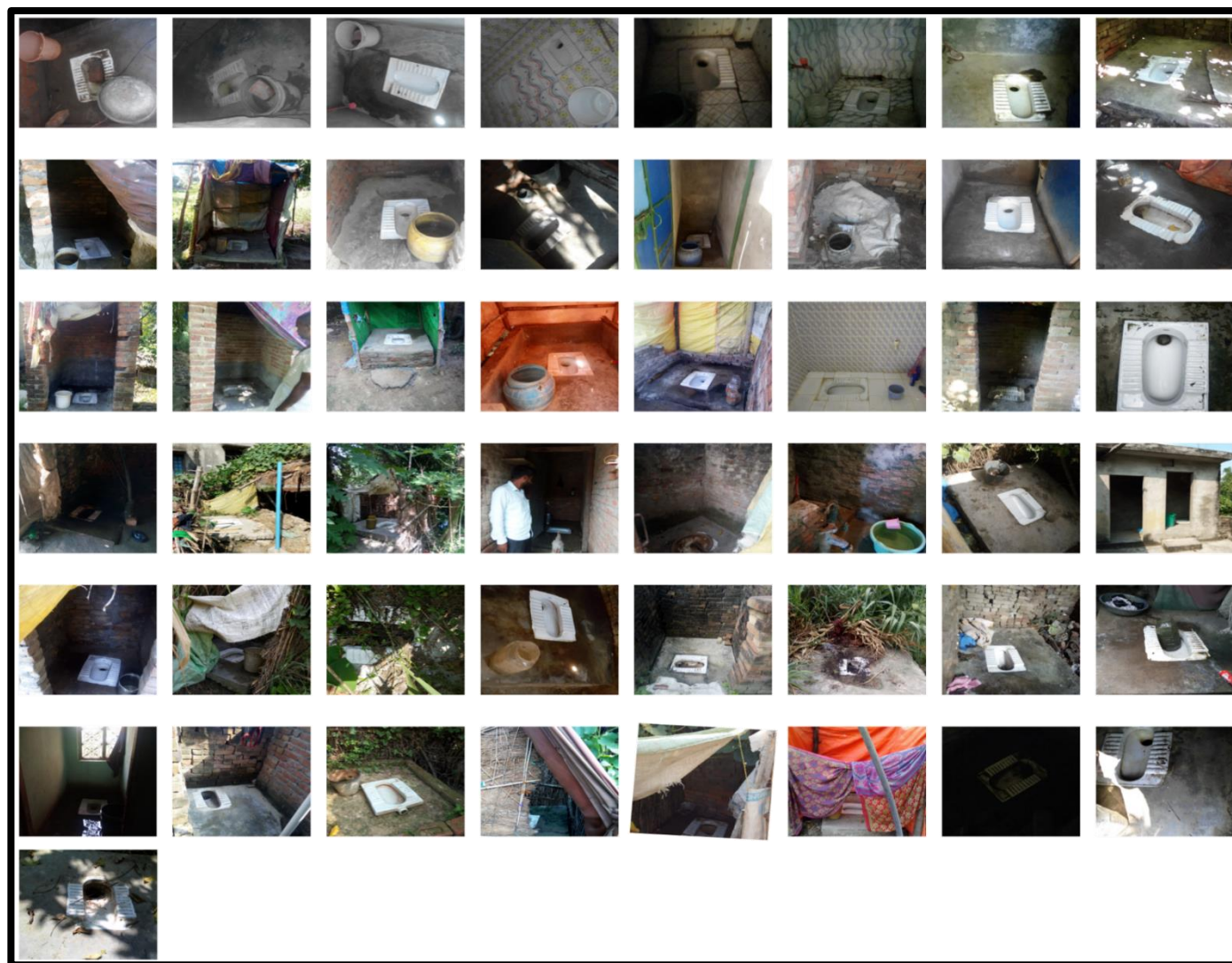
Rautanen, Dishwa & Laukka (2016). ODF revisited - Sanitation in 5,506 Households in Western Nepal, *full report*

Rautanen, Dishwa & Poudel (2016) Rapid Assessment on 764 Households' Sanitation Subsidies in Baluhawa VDC, Kapilvastu district, *full report*

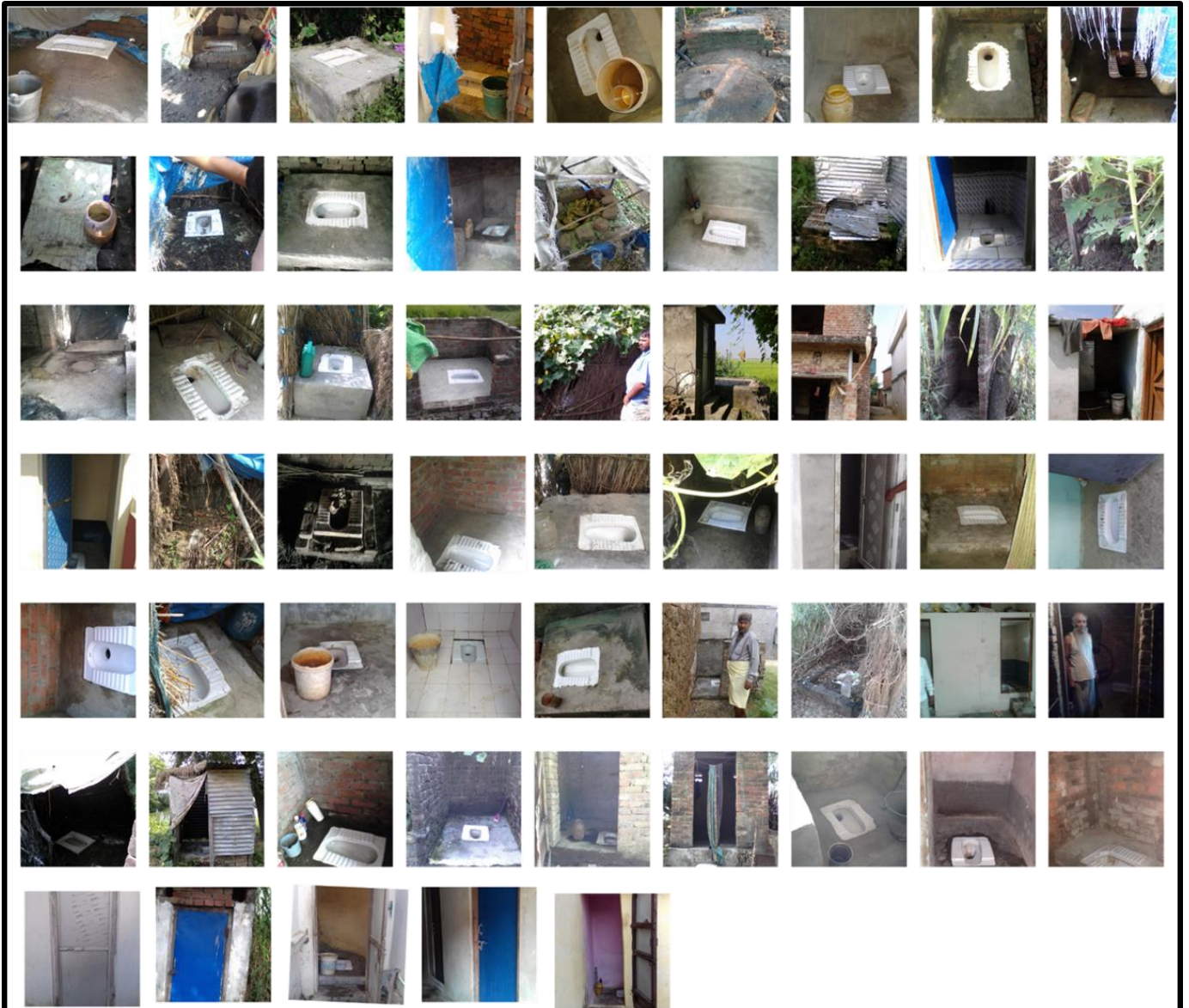
Rautanen & Dishwa (2016a) Do Toilet Subsidies Result in Toilets? Case 764 households of Baluhawa VDC, Kapilvastu District, RWSSP-WN BRIEF 11-2016, www.rwsspwn.org.np/briefs2016

Rautanen & Dishwa (2016b) Sanitation and Change in a Year - Revisiting 217 households in Silautiya-1, Rupandehi District, RWSSP-WN BRIEF 10-2016, www.rwsspwn.org.np/briefs2016

ANNEX I: Toilet photo of Ward 2, Mayadevi GP



ANNEX II: Toilet photo of Ward 4, Mayadevi GP



ANNEX II: Toilet photo of Ward 5, Mayadevi GP

