Evaluation of Hygiene and Behaviour Change Coalition for COVID-19 Prevention: Inclusion of Disability and Ageing

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TABLE OF CONTENTS

Acknowledgements 2
Research TeamS and Institutions 3
Table of contents 5
Executive summary 8
Acronyms 19
List of tables 20
List of Figures 22
Introduction 24
- Disability and Ageing 24
- Access to Water and Hygiene for people with disability and older people 24
- COVID-19 and vulnerability for disability and ageing population 24
- Water and hygiene for people with disabilities and older people during the pandemic 25
- HBCC interventions 26

Research Objectives 28
Selecting Organizations to evaluate 29
- Methods of selecting organizations 29
- Overview of HBCC interventions of the selected organizations for program evaluation 30

Methods 32
- Study design 32
- Theoretical framework 32
- Evaluation design workshop with the study collaborators 32
- Participatory evaluation design with stakeholders in Indonesia, Kenya and Zambia 33
- Study sites (Indonesia, Kenya, and Zambia) 33
- Study Population 35
- Defining disability and ageing 35
- Staff training and field management 36
- Questionnaire validation and field testing 37
- Screening to identify disabilities 37
- Quantitative data collection 38
- Qualitative exploration 39
- Data analysis 41
- Informed consent and ethical approval 42
- Result dissemination workshops in Indonesia, Kenya, and Zambia 43

Results 44
- Response rate 44
- Disability prevalence 44
- Socio-demographic profile (screening) 46

Socio-demographic profile (survey and spot check) 46
COVID-19 exposure and Vaccination rate 48
Implementation: 50
Implementation process and adaptation 51
Reach and Dose: Interventions received by the participants 51
Implementation process and adaptation 52
Reach and Dose: Interventions received by the participants 52
Mechanism of Impact 60
Behavioral responses: Satisfaction, appropriateness, and inclusiveness 62
Mediators: How the intervention produced impact? 67
Accessibility of HBCC public handwashing stations 72
Barriers to disability-ageing inclusion 76
Context: What contextual factors affect/promote inclusion? 84
Accessibility of household handwashing station 86
Access to assistive devices 90
Economic vulnerability 91
Communication challenges 93
Infrastructural barriers in public places 93
Cultural orientations towards the COVID-19 measures 95
Contexts identified from Photovoice 95
Intervention outcome 100
KAP of People with disability and older people 102
KAP of caregivers 113
Hygiene Behaviour Change during COVID-19 116
Interpretation of Results 118
Conclusion 121
Recommendations 122
Implementation process 122
Reach and Dose 122
Adaptation 122
Mechanism of impact 122
Barriers to inclusion 123
Context 124
Strengths, limitations, and Challenges 127
Reference 128
Appendics 133
Annex 1: Study sites 133

Annex 2: Initial inclusion score 136
Annex 3: HBCC program details 136
Annex 4: Data analysis based on MRC Framework 138
Annex 5: Additional tables 139
Annex 6: Key informant interview guideline 196

EXECUTIVE SUMMARY

Background

People with disability and older people comprise a large proportion of the world's population; around one in seven people has some form of disability [1], and one in eleven people is over 65 years old [2]. These populations also overlap, as approximately 46% of these older people live with disabilities [3]. People with disabilities face multiple exclusions and a range of poor outcomes, including worse health, lower employment, education, and poorer economic status [4] and vulnerability to violence, discrimination, and marginalization [5]. These adverse outcomes may be further enhanced among older people with disabilities, and potentially among women [6]. People with disability and older people also have inequitable access to WASH services [7] and increased difficulties accessing health facilities. During COVID-19, these groups face a greater risk of infection and worse outcomes, including hospitalization, intensive care, the need for ventilation, and death [8, 9]. There are several explanations for the worse COVID-19 outcomes. Many people with disabilities and older people rely on caregivers and so have reduced ability for physical distancing or isolation [10]. Older people and people with disabilities may be at greater risk for poor COVID-19 outcomes due to their greater age as well as a higher prevalence of other key risk factors such as diabetes or cardiovascular disease. Furthermore, people with disabilities may miss important behaviour change messages if communication methods and resources are not accessible, as is frequently the case [11]. They may also face barriers to receiving timely medical care to prevent poor COVID-19 outcomes. Moreover, the secondary impact of COVID-19 may also be more intense for older people and people with disabilities [12] due to disruptions in routine health services [13], employment opportunities [14], and education measures [4].

To limit the transmission of COVID-19 among people (including people with disability and older people) in low and middle-income countries (LMICs), the UK Government and Unilever introduced the Hygiene & Behaviour Change Coalition (HBCC) programme, which aimed to raise awareness of hand hygiene behaviours, mainly to ensure people wash their hands regularly with soap and disinfect surfaces. The programme aimed to reach a billion people using mass media, digital tools, interpersonal communication, face-to-face materials, and training activities. Through the HBCC initiatives, over 250,000 handwashing stations have been installed worldwide, over 450,000 community health workers and teachers have been trained, and more than 78 million hygiene products have been distributed in 60 countries. A key focus of the HBCC program was to take an inclusive, tailored approach to reach vulnerable and marginalized communities (including people with disabilities, older people, and their caregivers). To promote inclusivity and accessibility, HBCC partners directly consulted with people with disabilities and their carers at the planning stage and provided accessible handwashing stations, tailored information contents, activities, and training. [67]. There are 74 projects funded through HBCC across 21 organisations and 37 countries from March 2020 until December 2021. Later, the second stage of HBCC intervention was initiated, which is currently ongoing. COVID-19 has disproportionately impacted the lives of people with disability and older people, and they are more vulnerable to the primary and secondary impacts of COVID-19. It is therefore important to understand how these groups were included in the HBCC interventions and what the outcomes were compared to other populations (people without disabilities and younger adults). Therefore, our study aimed to evaluate the inclusiveness of disability and ageing in HBCC interventions.

Research Aim

Understand the level of inclusion of disability and ageing in the Hygiene and Behaviour Change Coalition (HBCC) intervention, and evaluate the effectiveness of the intervention for these groups.

Research Objectives

Objective 1: Evaluate the inclusiveness, effectiveness, and outcome of HBCC interventions for people with disability, older people, and caregivers in Kenya, Indonesia, and Zambia.

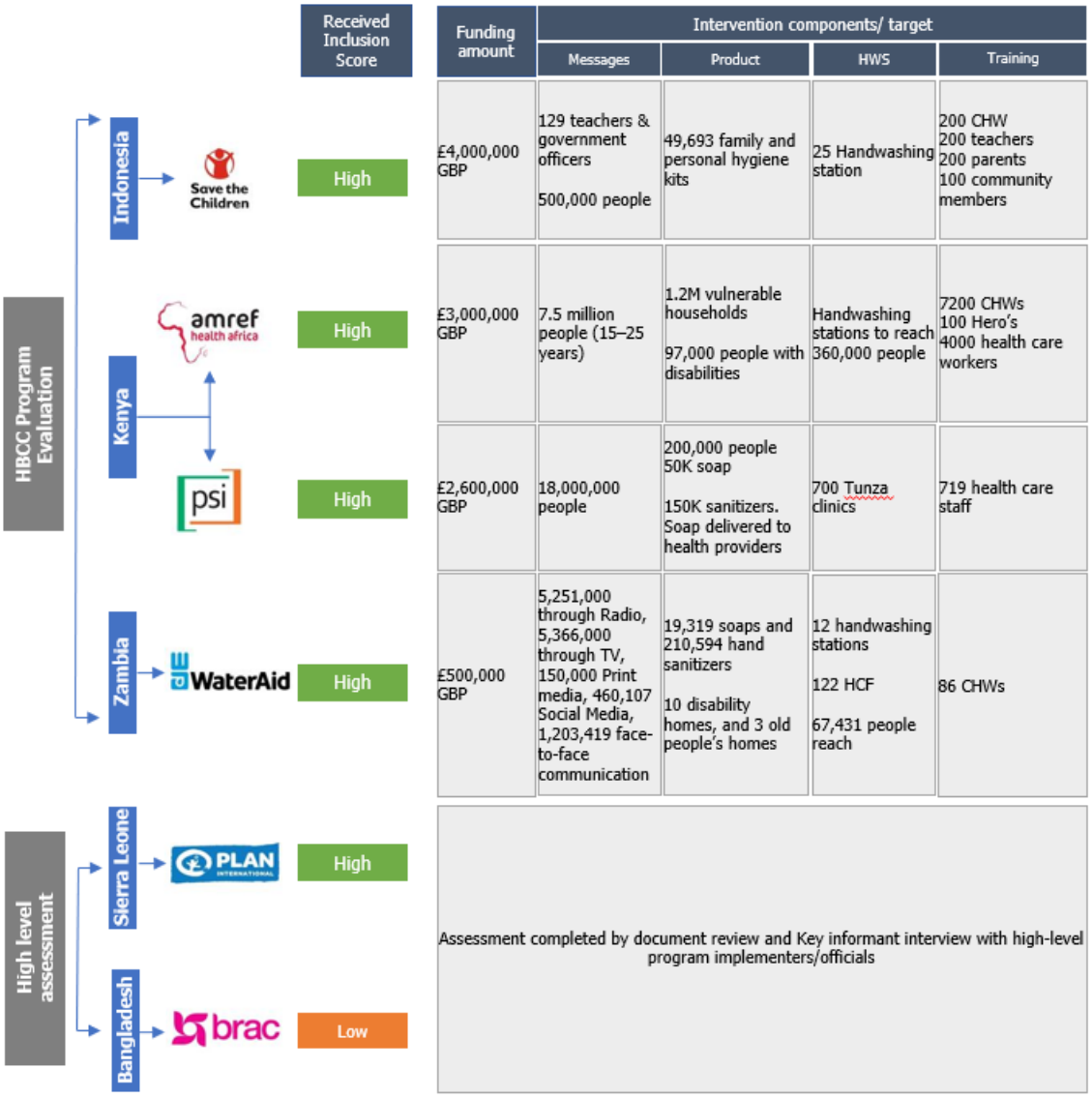
Objective 2: Conduct a high-level assessment on the inclusion of people with disability, older people, and their caregivers in the HBCC-funded projects in Sierra Leone and Bangladesh.

Selecting Organizations to evaluate

From the total of 21 organizations that delivered the HBCC interventions, we selected four organizations from three different countries to undertake direct evaluations (i.e. including programmatic review and qualitative and quantitative data collection in-country)[1]. These were Save the Children in Indonesia, AMREF and PSI in Kenya, and WaterAid in Zambia. We selected these organizations and the particular projects in these countries for direct evaluation that received the highest inclusion score in the disability/ageing category. LSHTM reviewed the documents (including proposals, project overviews, work plans, theory of change, quarterly reports, media and communication contents, results frameworks, and budgets) related to the HBCC-funded projects of all 21 organizations to assess the inclusion of disability, ageing and their caregivers in these programmes. The 'disability-inclusive WASH checklist', which incorporates 15 core concepts of human rights, was applied to these documents and based on the inclusion of core concepts, each reference was scored on a scale of 0-4 (low-high). For each included document, the total and average score was captured based on the number of times each fundamental concept was mentioned. Then the number of references made to each of these 15 core concepts was captured, and the average score was recorded across all documents. A program would be received the highest inclusion score if the references scored 3 or 4 (Specific programme targets and actions identified to address the concept, and Actions and targets monitored and evaluated, with results presented respectively)[15]. We chose those with high scores because we wanted to understand whether programs with the highest inclusion scores were translated into action in the field and to look at the level of effectiveness of these approaches. Activities of the four main evaluation organizations from Indonesia, Kenya, and Zambia are given below (Figure 1).

We also selected two organizations (BRAC in Bangladesh and Plan International in Sierra Leone) to assess inclusion in terms of disability and ageing from program documents and high-level program officials' (program manager, intervention designers, chief supervisor or other leaders of the program implementors) perspective. These organizations and countries were selected based on the initial inclusion score that they received. We selected one organization that received a higher inclusion score (Plan International in Sierra Leone) and another that received a lower inclusion score (BRAC in Bangladesh) to understand what practices and policies seemed to work well and to generate lessons for what should be improved in future. Figure 1 details the activities of the evaluated organisations.

[1] https://www.unilever.com/news/hygiene-behaviour-change-coalition/#modal-e44d783d77d5



	Received Inclusion Score	Funding amount	Intervention components/ target			
			Messages	Product	HWS	Training
Indonesia – Save the Children	High	£4,000,000 GBP	129 teachers & government officers 500,000 people	49,693 family and personal hygiene kits	25 Handwashing station	200 CHW 200 teachers 200 parents 100 community members
Kenya – amref health africa	High	£3,000,000 GBP	7.5 million people (15–25 years)	1.2M vulnerable households 97,000 people with disabilities	Handwashing stations to reach 360,000 people	7200 CHWs 100 Hero's 4000 health care workers
Kenya – psi	High	£2,600,000 GBP	18,000,000 people	200,000 people 50K soap 150K sanitizers. Soap delivered to health providers	700 Tunza clinics	719 health care staff
Zambia – WaterAid	High	£500,000 GBP	5,251,000 through Radio, 5,366,000 through TV, 150,000 Print media, 460,107 Social Media, 1,203,419 face-to-face communication	19,319 soaps and 210,594 hand sanitizers 10 disability homes, and 3 old people's homes	12 handwashing stations 122 HCF 67,431 people reach	86 CHWs
Sierra Leone – PLAN	High	Assessment completed by document review and Key informant interview with high-level program implementers/officials				
Bangladesh – brac	Low					

Figure 1: Selected organizations for the HBCC program evaluation and high-level assessment

Methods

We conducted a mixed-method study (with a matched design) using a participatory evaluation approach in Kenya, Indonesia, and Zambia (Objective 1 countries). We randomly selected the study areas in Objective 1 countries, starting by randomly selecting 18 (12 for Indonesia) small administrative areas from the implementation areas of each project. We then divided each of these areas (which were both rural and urban areas) in each country into clusters of 30 households (40 households for Indonesia) with support from local representatives or inhabitants. We randomly selected one cluster as the study site. Household surveys were undertaken of all individuals in the cluster. The household surveys collected data on the no of household members and socio-demographic information (age, sex, education, employment, marital status, language, ethnicity) of all household members. Then disability screening was undertaken for all individuals in the households using the Washington Group (WG) short set-enhanced [16] consisting of six questions on functional limitations with four added questions on depression and anxiety. More in-depth questionnaires about reach and access to the HBCC intervention components (messages, hygiene products, handwashing stations), knowledge, attitude, practice towards COVID-19 hygiene behaviours, access to handwashing facilities (household and public), as well as information related to household assets and characteristics were completed for each person with disabilities and a comparable age-sex matched person. A spot check was also performed to observe places for handwashing stations in households and public places. Participants aged 18 years or older were surveyed directly except where they could not fully understand the consent process. In this case, we took their assent and their caregiver's consent and did a proxy interview with the caregiver, who reported on behalf of the intended respondent. Participants who were 10-18 years old were interviewed in

the presence of their legal guardian (parents/caregivers), and for the respondents 5-9 years old, their caregivers provided a proxy interview for them (less than five years old was not enrolled for the survey).

For the qualitative aspects of the study, we interviewed people with disability, older people, caregivers, community people, implementing organizations, government representatives and other policymaking stakeholders, representatives of the organizations of people with disabilities (OPDs), schools teachers (in Indonesia), and health care providers (in Kenya and Zambia). A Photovoice ranking exercise was conducted with 6 people with disability and 4 older people, adding 10 people from each of the three countries (Kenya, Indonesia, & Zambia). In Sierra Leone and Bangladesh, we conducted only key informant interviews with HBCC intervention staff members, reviewed programme material, and did not undertake further quantitative or qualitative data collection. The qualitative respondents were selected purposively considering the diversity of functional limitations and the variety of socio-demographic backgrounds to be enrolled. The IDI and Photovoice exercises were done in person, while the KIIs were done virtually. Figure 2 shows an overview of the study population and sample size.

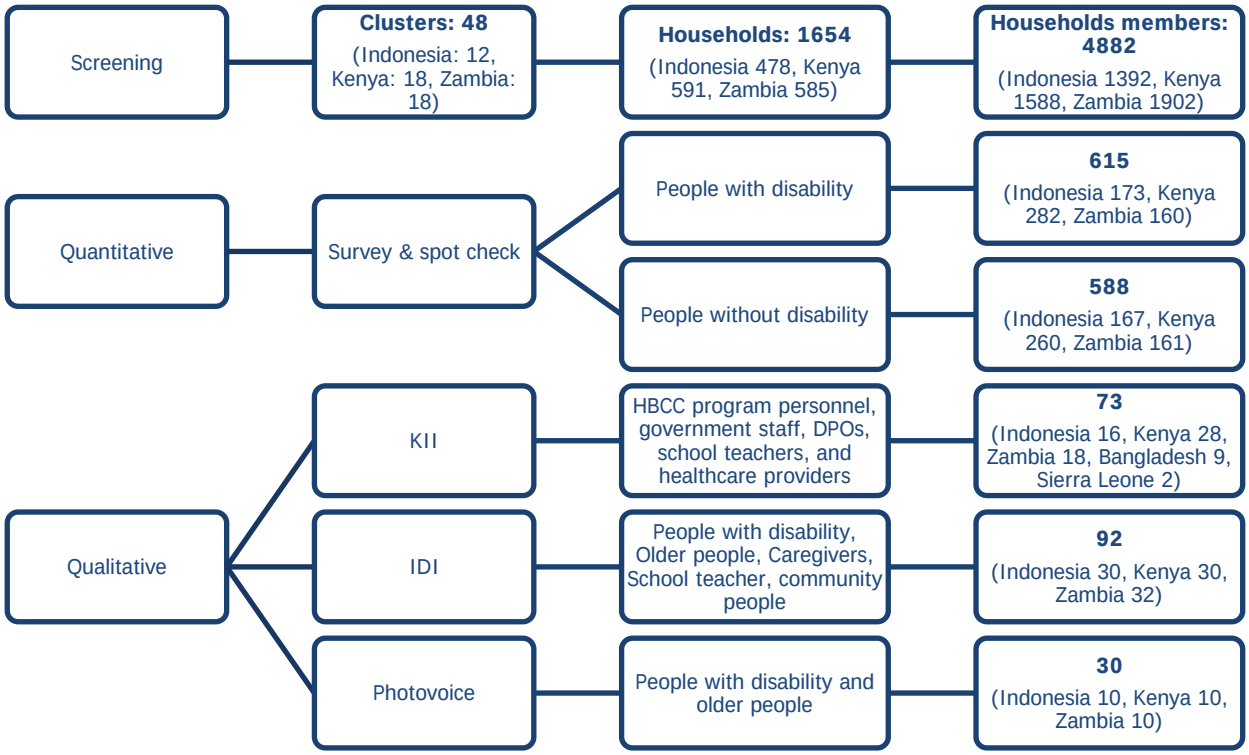


Figure 2: Overall study population and sample size

Data Analysis

We defined people with disabilities as those who answered having “A lot of difficulty” or “Cannot do at al” in at least one category of the first 6 WG questions (short set- enhanced) [16] or reporting both “daily” and “A lot” for any of the questions related to depression or anxiety. We define older people considering the WHO definition of ageing (60 years or more) [17].

For the quantitative data, a socio-economic index was computed using principal component analysis (PCA) considering respondents' asset ownership, household building materials, number of rooms available in the households (excluding bathroom and kitchen), access to handwashing places, education, and employment of the respondents. The derived index was divided into five quantiles (poorest to richest). PCA was conducted separately for each country. We compared people with and without disabilities, or older and younger, using descriptive summary statistics, chi-square test (Pearson/ Fisher exact test) for the categorical variables, t-test for continuous (normally distributed) variables, and a Mann-Whitney test for skewed variables. We then undertook multivariable logistic regression analyses to adjust for different variables. All the individual-level analyses were adjusted for the region and socio-economic status. The analyses were adjusted by estimating robust standard errors to account for the cluster level correlation.

We thematically analyzed the qualitative data using NVivo, and thematic codes were generated inductively and deductively from the transcribed interviews. Before this, the research teams from all three Objective 1 countries prepared an apriori codebook considering the context of individual countries and guiding the qualitative data analysis. Inter- and intra-coding variability was resolved via team discussions. Data triangulation was done by examining the data from the KIIs, IDIs, spot checks, and PhotoVoice and ranking during data analysis for a comprehensive understanding.

Key Findings

Implementation

Process and Adaptation for people with disabilities and older people

To make services accessible for people with disabilities, HBCC interventions in all five (Objective 1 and 2) countries installed customized handwashing stations in public places (Indonesia: foot-paddled water taps and sensors; Zambia: “Happy taps”; Sierra leone: foot-operated handwashing stations, and sensors; Bangladesh: low height basin). In Bangladesh, partner organizations took help from the younger people to disseminate hygiene-related messages to the older people as they were more vulnerable during COVID-19. In addition, partners from Sierra Leone used older people organizations to make aware of the older people in their targeted area. In Kenya, specialized masks were provided for people who had hearing limitations, and in Indonesia, students, parents, and teachers were trained online with the availability of sign language interpreters.

Reach and dose: Intervention received by the participants

Messages

People with disability and older people in all three Objective 1 countries were 3-10% less likely to receive messages than their comparison groups. The overall message reach was 1.6 times higher among female people with disability than male people with disabilities. People from the highest socio-economic groups (richest) were 4.5 times more likely to receive the intervention messages than the poorest. People with disability with primary and secondary education were 2-3 times more likely to receive the messages compared to those (people with disability) who had no education. Message reach also significantly varied by disability type. In Indonesia and Kenya, people with hearing, communication, cognition/remembering and self-care limitations had a significantly lower level of reach (4-27%) of the messages than other functional limitations (mobility, vision, depression, anxiety). In Kenya, people with self-care limitations had 8-13% lower reach than people with other functional limitations.

In all three Objective 1 countries, people with disabilities were 6-11% less likely to receive messages from the community-level campaign. Moreover, the content of the messages rarely discussed the vulnerability and support needed for persons with disabilities and older people, and these messages reached only a few people (mentioned by only 1-3%) in three countries. One of the key reasons for inequitable reach was that the implementing partners did not collect functional limitations or age-specific data to estimate reach by these population sub-groups. Without such data, they could not tailor the messages for these groups. However, Programmes from Bangladesh and Sierra Leone developed and disseminated hygiene behaviours messages with the direct involvement of people with disabilities and older people.

Hygiene Products

In all three objective 1 countries, older people had 6-12% lower reach of hygiene products compared to younger people. In Indonesia, rural people with disability and older people had lower odds of receiving hygiene products compared to their comparison groups in urban areas, while in Kenya and Zambia, rural people with disability and older people were more likely to receive hygiene products. Among people with disability in the Objective 1 countries, the reach of hygiene products was lower for the people who had functional limitations with remembering (23%), hearing (21%) and self-care (17%) compared to other measured difficulties (Vision 35%, Anxiety 37%, Mobility 28%, Depression 28%, Cognition 26%, and communication 26%). KIs from Bangladesh and Sierra Leone mentioned that partner organizations targeted households of people with disabilities and older people while distributing hygiene products.

Handwashing stations

Across the three Objective 1 countries, 22% of the public handwashing stations installed by the selected HBCC grantees (both accessible facilities and those for the general population) were not functioning. In all three countries, the functionality of handwashing stations was hindered by the lack of supply of needed handwashing commodities (e.g., soap, water), lack of management (inadequate focus during design and

execution) after installation, and petty theft of materials (reported in Zambia only). KIIs in Zambia also noted that some districts had limited coverage of handwashing stations due to limited funds for hygiene commodities (for the projects evaluated).

Mechanism of Impact

Behavioural responses: Satisfaction, appropriateness, and inclusiveness

Messages

In all three Objective 1 countries, people with disability and older people were about equally likely (about 90%) to respond positively about the behaviour change messages regarding the acceptability, feasibility, appropriateness, satisfaction, and effectiveness of the hygiene messages as their comparison groups.

Hygiene products

In all three Objective 1 countries, people with disabilities were 4-11% less likely to use the hygiene products delivered to them. People with disabilities also showed 4-10% less satisfaction with hygiene products compared to people without disabilities. However, older people were more likely to use and be satisfied with hygiene products than younger people across the three Objective 1 countries. Among the three Objective 1 countries, people with disability and older people in Kenya reported less use and satisfaction than the other two countries.

Handwashing stations in public places

In terms of using public handwashing stations, most people with disability in Indonesia reported using the handwashing stations regularly (84%) compared to people with disability in Kenya (60%) and Zambia (67%). However, people with disability were 13% less likely to reach the handwashing facilities, water, and cleaning agents without depending on others compared to people without disabilities in all three Objective 1 countries. No significant age-wise disparities were observed in accessing the public place handwashing stations. However, older people were more satisfied with using those handwashing stations in Kenya and Zambia than younger people.

Training

In Bangladesh, grantees provided basic training to their staff, and disability inclusion was a part of that training. During the project, they had monthly meetings and discussed how to work with people with disabilities. However, they did not receive any specific training on disability. On the other hand, Plan International in Sierra Leone brought disabled people organizations to run some sessions regarding people with disabilities, but they did not receive any formal training on disability and older people. Similarly, training provided to the staff in Zambia, Kenya, and Indonesia did not particularly focus on disability or ageing issues.

Mediators: How the intervention produced impact?

Individual mediators

In all three Objective 1 countries, people with disability and older people received the most frequent hygiene messages from their role models (health professionals, family/ caregivers, and political leaders), which positively influenced their hygiene behaviours. In Indonesia and Zambia, visual/audio reminders of hygiene messages, including demonstrating practical examples (hands-on training), acted as effective mediators to influence the hygiene behaviour of people with disability and older people. For people with disabilities in Zambia, consideration of interpersonal communication while delivering intervention components acted as an effective mediator. However, in Bangladesh, hygiene messages were provided by using mics, going door to door, and in Sierra Leone, by sending messages to different people around the selected area. In Indonesia and Zambia, around 70% of people with disability showed positive attitudes towards washing hands, which significantly mediated the effect of interventions (messages/ hygiene products distribution) on changing their handwashing behaviour. In Kenya, people with disabilities' willingness to keep others safe and perceived risk of COVID-19 worked as a mediator in addition to their strong existing habit of washing hands.

Organizational level mediators

In five selected countries (Objective 1 and 2), the impact of HBCC interventions was also mediated by effective collaborations with OPDs (such as AMREF, WaterAid, and Plan International involved OPDs or OPOs in designing/activity of the HBCC interventions) and buy-in from government and non-governmental organizations during the designing and implementation phrase. To create a more inclusive intervention,

partners in Kenya directly involved persons with disabilities in disseminating behaviour change messages, co-creating the training manual and leading the training sessions, and translating the information to braille and sign language, which helped them have a more inclusive intervention. In all five countries (Objective 1 and 2), the intervention-delivering organizations engaged the local communities (Bangladesh: WASH committee, adolescent committee; Sierra Leone: community leaders; Zambia: community-based organizations, community leaders, local authorities; Indonesia: local schools) in delivering interventions that effectively reach the targeted populations.

Accessibility of HBCC public handwashing stations

The accessibility of public handwashing stations installed by the HBCC grantees in Objective 1 countries was observed based on several indicators of accessibility for diverse types of disabilities. Around half of the installed HBCC handwashing stations had entry paths and handwashing station areas without smooth/flat surfaces, were slippery and had inadequate space for wheelchair access. Three-quarters of the entry paths had barriers/obstacles (in the way) for wheelchair entry, and there were no support rails or landmark/guiding rope/tactile markings at the entry path. Overall, 78% and 41% of the handwashing stations had water and handwashing agents (e.g., soap) available, although only 16% and 8% (respectively) of them were easily accessible for wheelchair users or children. The availability of disability-friendly water sources (e.g., 16% foot-operated taps and 3% elbow-operated taps) was also rare across three countries. Among three countries, Indonesia had 40% foot-operated taps, 10% elbow-operated taps and 2% sensor taps, while Kenya (6%) and Zambia (4%) had only foot-operated taps. Around one-quarter of the facilities did not have any lighting at night, and only 20% of handwashing places had distinguishable colour contrast facilities.

Barriers to disability-ageing inclusion

Messages

To practice COVID-19 preventive measures, people with disability and older people face more challenges in remembering and psychologically adapting (e.g., maintaining social distancing, adapting to lifestyle changes, and wearing uncomfortable masks) those measures.

Hygiene products

The cost of the hygiene products was financially burdensome for some people with disability and older people across all three objective-1 countries. In Indonesia, teachers reported that students who were 'mute' and depended on lip reading faced challenges in communicating with others while wearing face masks. While in Zambia, some people with disability and older people reported difficulties with masking at all times. In Zambia, the KIs and IDIs mentioned that some people preferred branded handwashing soap and cleaning agents over regular ones.

Handwashing stations in public places

In all three Objective 1 countries, the main barriers reported by people with disability and older people for not using the public handwashing station were the distance from the home to the handwashing stations. The heights of the handwashing stations installed at public places (HBCC and others) were also not disability or ageing inclusive (put in low or high levels). KIs from Bangladesh, Indonesia, and Zambia reported that installing inclusive handwashing stations is challenging because of the high price, lack of suppliers, and finding/managing a suitable place to install them. The sole focus of the interventions on physical mobility disabilities (e.g., wheelchair users) also hindered the inclusion of diverse types of disabilities (e.g., vision, hearing) and ageing.

Training

In all countries (Objective-1 and 2), KI's mentioned a lack of disability-ageing training for the programme staff during the project. Similarly, in Indonesia, the KIIs mentioned that the disability inclusion program needs extra attention; program staff had to gather knowledge about disabilities and should know how to treat them, which required specific training on them. However, the school teachers from Indonesia also mentioned that the online training was not inclusive for school children with disabilities.

Organizational level barriers

Lack of financial resources was reported to be the main barrier to reaching all the vulnerable groups and limited coverage of the intervention components. According to the Key informants from Kenya, Indonesia, and Bangladesh, the lack of effective mechanisms to maintain the facilities (after installation) and the short duration of the interventions might be a barrier to disability-ageing inclusion as they did not have time to receive feedback from the respondents. While some KIIs from Indonesia also mentioned that the non-consideration of disability-ageing inclusion during the proposal development could exclude them at the implementation stage. However, learning from all five countries shows that less involvement of OPDs and OPOs in program design and implementation also acted as barriers. Overall, a non-inclusive environment (infrastructure, transport system) in society also hindered the inclusion of disability-ageing.

What contextual factors affect/promote inclusion?

Gender

In all three countries, females were slightly more likely to receive intervention messages than males, irrespective of disability and ageing. However, no significant association was observed between message recipients and gender across the three countries. A lower proportion of females received hygiene products compared to males across three countries. However, In Indonesia and Kenya, females exhibited 2-6% more handwashing practices than males, while in Zambia, females had a 6% lower practice of handwashing.

Disability type

Caregivers in Kenya remarked on the lack of tailoring of the behaviour change messages for different types of disability, particularly those with autism or intellectual difficulties. Key informants in Zambia also mentioned that sign language interpreters were used while disseminating hygiene messages, but no tailored approach was considered to reach people with vision limitations. Similarly, findings from Indonesia and Kenya exhibited that people with hearing, communication, cognition/remembering and self-care difficulties had a lower reach of behaviour change messages and hygiene products compared to other types of functional limitations (mobility, vision, anxiety, depression). The intervention-delivering organizations didn't consider the diverse challenges faced by different types of disabilities while delivering the intervention components. For example, the blind relies on physical touch to be guided, yet there are no alternatives for such groups of people, even in the COVID-19 guidelines of 'no contact'. Moreover, while installing handwashing stations, the focus was mainly on people with mobility disabilities (installing low-height basins, ramps for wheelchair access etc.) rather than other types of disabilities. Results from all three objective-1 countries also showed that people with disabilities also had lower accessibility at household handwashing places compared to people without disabilities. Photovoice respondents demonstrated the infrastructural challenges in accessing household handwashing places due to the inaccessible height (lower/higher) of the facility, steep stairs, lack of supporting structure to reach the facility, and the distance from home. In Indonesia, Zambia, and Kenya, some wheelchair users also mentioned facing difficulties in accessing the water and cleaning agents in their households.

Access to assistive devices

The use of assistive devices was low among people with disabilities in the three Objective 1 countries. Around 20% of people with mobility and self-care limitations, around 10% with vision, hearing and communication limitations, and around 5% with remembering functional limitations had access to assistive devices. The high expense of assistive devices was an important contributing factor to lower access. The need for the assistive device was higher among females, people living in rural areas, and people from the poorest economic settings in all three Objective 1 countries.

Economic vulnerability

In Zambia and Kenya, people with disability, older people and their caregivers expressed that the main barrier to inclusion was their economic vulnerability. They lamented the lack of resources to purchase hygiene facilities to make their/the lives of 'special members comfortable and adhere to hygiene requirements. Limited resources also deprived people with disabilities and older people of other services like electricity and internet connection which hindered access to information services (such as TV, radio, social media); this resulted in a lack of information regarding the HBCC preventive messages or general misinformation about COVID-19 prevention. In Kenya and Zambia, people with disabilities and older people had inadequate supply/access to clean water and soap/other cleaning agents to maintain personal hygiene, affecting their hygiene practices.

Communication challenges

In Kenya, some older people who spoke local languages did not understand the intervention messages as they were not translated into local languages. DPO representatives in Kenya reported that messages were not inclusive of diverse disabilities (e.g., people who are deaf, for example, *"there is no way they would do online classes"*).

Intervention outcomes

Knowledge, Attitude, and Practice (KAP) towards COVID-19 preventive measures of the comparison groups

In all three Objective 1 countries, people with disability and older people were less likely to have knowledge about COVID-19 spread, the at-risk population and preventive measures than their comparison groups. Older people were more likely to perceive themselves as a COVID-19-vulnerable population than younger people. People with disability were also less likely to perceive that these preventive measures were effective in reducing COVID-19 infection, and thus they were less likely to practice them. Older people have slightly more positive attitudes towards COVID-19 preventive measures than younger people across three Objective 1 countries. However, there was a significant difference in maintaining these preventative measures between the three countries. In Indonesia and Kenya, people with disabilities were significantly less likely to wash hands with soap, maintain social distancing, and wear face masks than people without disabilities. In comparison, people with disabilities in Zambia reported less practice than people without disabilities in terms of wearing face masks daily. Older people in Zambia were significantly less likely to wear face masks as a COVID-19 preventive measure. The following tables a1 and a2 exhibit few country-specific differences in knowledge, attitude, and practices among people with vs without disabilities and older vs younger people.

Table a1: Knowledge, attitude, practice of COVID-19 preventive measures by disability

Indicators	Indonesia		Kenya		Zambia	
	People with disability	People without Disability	People with disability	People without Disability	People with disability	People without Disability
	N=173	**N=167**	**N=282**	**N=260**	**N=160**	**N=161**
Knowledge of COVID-19 spread: not maintaining social distancing	32 (19)	52 (31)	125 (44)	109 (42)	102 (64)	119 (74)
Strongly agreed with the statement: Maintaining social distancing is an effective way to reduce COVID-19	142 (82)	156 (94)	248 (88)	239 (93)	142 (89)	147 (91)
Practiced hand washing with soap	126 (73)	156 (93)	214 (76)	227 (87)	123 (77)	129 (80)
Used mask every day (reported)	107 (62)	124 (74)	146 (52)	181 (70)	34 (21)	60 (37)

Table a2: Knowledge, attitude, practice of COVID-19 preventive measures by ageing

Indicators	Indonesia		Kenya		Zambia	
	Older	Younger	Older	Younger	Older	Younger
	N=162	**N=178**	**N=246**	**N=296**	**N=102**	**N=219**
Considered older people as most vulnerable to COVID-19	91 (56)	98 (55)	179 (73)	178 (60)	57 (56)	104 (48)
Strongly agreed with the statement: reusing the same mask without washing is unhygienic	145 (90)	152 (85)	215 (88)	253 (85)	83 (81)	186 (85)
Practiced hand washing with soap	131 (81)	151 (85)	201(82)	240 (81)	71 (70)	181 (83)
Used mask every day (reported)	121 (75)	146 (82)	190(77)	237 (80)	60 (59)	165 (75)

Among people with disability, the knowledge, attitude, and practice (KAP) of 3-key COVID-19 preventive measures (handwashing, mask use, social distancing) were strongly positively associated with their socio-economic status. The likelihood of KAP was significantly lower among poorer (1st quantile) people with disability, which was likely to increase with their socio-economic status. In Indonesia and Kenya, rural people with disability were significantly more likely to have the KAP regarding these 3-key measures than urban people with disability. In Zambia, the KAP was lower among rural people with disability.

KAP of Caregivers

Many caregivers reported increased knowledge of COVID-19 preventive behaviours since before the pandemic. However, some in Zambia and Indonesia mentioned that they didn't receive messages relevant to caregiving. Caregivers' practices of motivated by fear of contracting COVID-19 infection and passing it on to older people in the family.

Discussion

The HBCC interventions have impacted the lives of the people in Indonesia, Kenya, Zambia, Sierra Leone, and Bangladesh to practice key hygiene measures to reduce COVID-19 infection. The HBCC interventions were less inclusive for people with disability and older people than for people without disabilities and younger.

The reach of the messages among people with disability and older people was low compared to their comparison groups, especially for people with communication, self-care, remembering, and hearing functional limitations; this indicates inadequate inclusiveness of the messages across disabilities and ageing. Failures in communication to reach people with disability and their caregivers can lead to poor adherence to the practice of public health measures [18, 19]. As the funding mandate did not specifically tell organisations to include people with disability and older people, the interventions did not target these groups. The interventions that considered inclusion did so because they included disability/ageing in all their (non-HBCC) programs (although they still failed to reach the full diversity of disabilities equally). Not collecting functional limitation or age-specific data when estimating intervention reach was likely to be another reason for the unequal reach, as programs could not see whether the intervention was working for people with disability and older people and whether they needed to make adjustments. Age, gender, and disability-segregated data are essential to eliminate discrimination in intervention provision, especially in resource allocation; effective measures in monitoring intervention activities based on inclusive data have been recommended by other studies [20, 21]. On the other hand, the HBCC messages rarely discussed the vulnerability of people with disability and older people to the risk of COVID-19 transmission or whether they need to take any specific measures, despite 75%-83% of COVID-19 deaths have been among older people [22] and death risk is about 1.5 times higher for people with disability [23]. Failing to disseminate these crucial messages indicates the inadequate consideration of disability and ageing in the intervention design. A previous study identified the risk of people with hearing and communication limitations being excluded from mainstream communication media [24]. We found that TV and radio could not effectively reach people with hearing and communication limitations. In contrast, interpersonal communication works better for these groups [25], but the HBCC interventions focused less on that, which led to inequal reach. Involving caregivers could be of use, but the interventions also did not focus there.

There was hardly any difference between people with disability and the comparison groups regarding the appropriateness, understandability, acceptability, feasibility and effectiveness of the hygiene messages. This indicates that the content of the key messages equally considered all people. These messages also invited positive attitudes among people with disability and older people during a time when mass media interventions often presented misinformation and negative attitudes [26, 27]. Previous research suggests that credible role models can improve self-efficacy among people to invite positive behaviour [27], and the HBCC interventions used appropriate role models for people with disability and older people, who corroborated in improving positive attitudes towards COVID-19 measures. The behaviour change messages were the product of successful collaboration between HBCC interventions, governments, and other non-government organizations; this good practice is recommended to continue to have impactful interventions.

HBCC interventions incorporated some inclusivity while installing handwashing stations (e.g., wheelchair access, height-adjusted basins, foot/elbow operated paddle, sensors to access water). However, these were inadequate to ensure universal access, as many of the necessary inclusivity components at the entry path, handwashing area, and during handwashing were unavailable in HBCC-installed handwashing stations. During COVID-19, a lot of WASH guidance did not consider disability inclusiveness, which resulted in the development of non-inclusive handwashing infrastructures [28]. Also, many of the handwashing stations we checked focused more on wheelchair accommodation and overlooked or placed less emphasis on other issues of inclusiveness. Moreover, around one in four installed handwashing stations were not functioning during the

spot check, indicating inadequate infrastructure management. This poor accessibility ultimately reflects lower handwashing practices of people with disability and older people than their comparison groups.

The socioeconomic status of people with disabilities seems to impact their hygiene behaviour as some of them felt financially burdened by trying to follow these hygiene measures. As a result, people with disability who were the poorest had the lowest knowledge and practice compared to other economic groups and people without disabilities (who were the poorest). Unavailability of household-level resources (e.g., running water and resources to buy soap and disinfectants in Zambia and Kenya), limited functioning handwashing with soap in the prescribed manner, and resource constraints in programmes, communities, and households kept the programme focused on addressing the infrastructural challenges related to access to hand-washing facilities but not structural challenges such as poverty and concerns about providing for the basic needs of older and disabled people. Due to poverty and lack of knowledge, most people with disability could not afford assistive devices, which affected disability inclusion. Also, the overall inclusiveness was challenging because of the myriad of disabilities and differing needs, most of which do not find voices and representation in organizations for people with disability (OPDs). Those organizations which involved the DPOs said it worked well for them to invite inclusiveness.

Recommendations

- Focus is needed to cover all functional limitation groups, especially persons with mobility, hearing, self-care, cognition, and communication limitations, to effectively increase the targeted intervention's reach. Collecting data on diverse types of functional limitations and age-groups during intervention need to be considered to estimate and reach the target audience as intended.
- Meaningful participation (strong engagement in the program) of OPDs needs to be ensured in program design and activity through providing funding for collaborative program involvement or at least holding initial workshops with intensive participation from the OPDs.
- Program staff involved in intervention design need intensive training on disability and ageing inclusiveness. The staff involved in intervention delivery and monitoring need project/intervention-specific training on considering disability and ageing during intervention delivery/activity.
- Collaborating with government and non-governmental organizations in designing and implementing activities helped to promote inclusive programs; this should continue in future program design/delivery.
- Future programs need to focus more on interpersonal communication (e.g., door-to-door and using caregivers) while delivering behaviour-change messages to promote inclusiveness.
- While building the handwashing stations, rather than only considering wheelchair users, the focus should be placed on developing adjustable heights for the facilities (put in low or high levels to reach water and soap), the use of disability-inclusive water sources (e.g., tap with sensors, foot paddles, elbow or forearm operated tap), inclusive entry paths, the availability of ramps, tactile marking/landmark/guidance rope, and adequate space for wheelchair accommodation, considering diversities in disability.
- To achieve better reach, adequate allocation of hygiene commodities to address issues specific to people with disability and older people, and enhancing resource channelling and funding with an equitable distribution of limited resources should be considered.
- In the long run, the economic vulnerability of people with disability, some older people and their caregivers need to be addressed through program funds allocated to support their needs to sustain hygiene practices. Low-cost products (e.g., soap, masks) need to be supplied to people with disability and older people.

Conclusion

People with disability and older people have diverse challenges in accessing and maintaining hygiene behaviours, and COVID-19 has increased their challenges. During COVID-19, the UK Government and Unilever initiated the Hygiene and Behaviour Change Coalition (HBCC) intervention to raise awareness of individual hygiene behaviours. This study aimed to evaluate the level of disability-ageing inclusion in HBCC interventions. The evaluation of the study demonstrates that the hygiene behaviour change messages were less inclusive for people with disability and older people compared to people without disabilities and younger people. The lack of effective monitoring of the intervention activities caused by the unavailability of disability-ageing segregated data resulted in the non-inclusive intervention design. The HBCC-installed handwashing stations did not consider universal accessibility. Future interventions should consider developing all disability-friendly handwashing stations, especially accessible entry paths, handwashing places, and water and soap. The program lacked training about disability inclusiveness. Meaningful involvement of OPDs in the designing and implementing phase can ensure more inclusiveness.

ACRONYMS

AMREF	AMREF Health Africa
APHRC	African Population and Health Research Center
B-SCAN	Bangladesh Society for the Change and Advocacy Nexus
CIDRZ	Centre for Infectious Disease Research in Zambia
COVID-19	Coronavirus disease
CRPD	Convention on the Rights of People with disability
FCDO	Foreign, Commonwealth and Development Office
HBCC	Hygiene and Behaviour Change Coalition
HH	Household
icddr,b	International Centre for Diarrhoeal Disease Research, Bangladesh
IDI	In-depth Interview
JMP	Joint Monitoring Programme
KII	Key Informant Interview
LMICs	Low- and Middle-Income countries
LSHTM	London School of Hygiene and Tropical Medicine
MRC	Medical Research Council
ODK	Open Data Kit
OPD/DPO	Organizations of people with disability
PPE	Personal protective equipment
PSI	Population Services International
SC	Save the Children
SDG	Sustainable Development Goal
SES	Socio-economic Status
SMS	Short Message Service
TV	Television
UNAS	Universitas Nasional, Indonesia
UNICEF	United Nations International Children's Emergency Fund
WA	WaterAid
WASH	Water, Sanitation, and Hygiene
WHO	World Health Organization

LIST OF TABLES

Table 1: Overview of the population, data collection and sample size from all countries 41
Table 2: Availability and response rate of the participants for the disability screening 44
Table 3: Country-wise segregation of disability prevalence 46
Table 4: Socio-demographic status of the survey respondents, older people 60+, younger people <60 47
Table 5: Exposure to COVID-19 and vaccination status by disability status 48
Table 6: Exposure to COVID,19 and vaccination status by ageing 48
Table 7: Experiences of people with vs. without disabilities with the messages 62
Table 8: Experiences of older people vs younger people with the messages 63
Table 9: Experiences of persons with vs without disabilities in accessing public handwashing station 65
Table 10: Experiences of older people vs younger people in accessing public handwashing station 66
Table 11: Country-specific factors that acted as cues (disability) 68
Table 12: Country specific factors that acted as cues (ageing) 69
Table 13: Intervention impact from the role models of people with disability and older people 70
Table 14: Country-specific barriers to inclusion (disability) 77
Table 15: Country-specific barriers to inclusion (ageing) 77
Table 16: Assessment of difficulties in accessing public handwashing stations among persons with vs without disabilities 78
Table 17: Difficulties in accessing public handwashing stations among older vs younger people 78
Table 18: Difficulties in accessing household handwashing stations among persons with vs without disabilities 79
Table 19: Difficulties in accessing household handwashing stations among older vs younger people 79
Table 20: Access to household handwashing stations among persons with vs without disabilities and older vs younger people 87
Table 21: Access to assistive devices among different types of disabilities¥ 90
Table 22: Reasons for not using assistive devices by socio-demographics characteristics among person with disabilities 91
Table 23: Country-specific knowledge of how COVID-19 spread (disability) 102
Table 24: Country specific knowledge of how COVID-19 spread (ageing) 103
Table 25: Country specific knowledge of population vulnerable to COVID-19 infection (disability) 104
Table 26: Country specific knowledge of population vulnerable to COVID-19 infection (ageing) 104
Table 27: Country specific knowledge of COVID-19 preventive measures (disability) 105
Table 28: Country specific knowledge of COVID-19 preventive measures (ageing) 106
Table 29: Country-specific key COVID-19 preventive measures followed by the respondents (disability) 110
Table 30: Country-specific key COVID-19 preventive measures followed by the respondents (ageing) 110
Table 31: Country-wise intervention areas and number of selected study sites 133
Table 32: Country and programs with reasons for selection (based on the inclusion score) 136
Table 33: Type and number of the target population under HBCC program in each country 137
Table 34: Country-wise Disability prevalence by types of disabilities 139
Table 35: Characteristics of Person with and without disabilities in the screening 141
Table 36: Country specific socio-demographics characteristics by disability status 144
Table 37: Country specific socio-demographics characteristics by ageing 146

Table 38: Reach and dose of the HBCC intervention delivery components by disability status 147
Table 39: Reach and dose of the HBCC intervention delivery components by ageing 148
Table 40: Reported messages received by disability (based on socio-demographic characteristics) 149
Table 41: Factor associated with reach of behaviour change messages among person with disabilities 150
Table 42: Reported messages received by ageing (based on socio-demographic characteristics) 152
Table 43: Reported hygiene products received by disability status (based on socio-demographic characteristics) 154
Table 44: Factor associated with the reach of hygiene products among person with disabilities 155
Table 45: Reported hygiene products received by ageing (based on socio-demographic characteristics) 156
Table 46: Reported intervention components received with the types of disability 157
Table 47: Components of public place handwashing station observed at different regions (spot check) 158
Table 48: Attitude towards COVID-19 key prevention measures by disability 159
Table 49: Attitude towards COVID-19 key prevention measures by ageing 160
Table 50: Maintenance of different COVID-19 preventive measures by disability status 161
Table 51: Maintenance of different COVID-19 preventive measures by ageing 164
Table 52: Impact of socio-economic status on the COVID-19 knowledge, practice by disability status 167
Table 53: COVID-19 knowledge, practice stratified by gender 172
Table 54: Impact of types of region on COVID-19 knowledge, and hygiene practice by disability status 177
Table 55: Explore the level of ability change in current hygiene practices/behavior by disability status 185
Table 56: Explore the level of ability change in current hygiene practices/behavior by ageing 186
Table 57: Distribution of socio-demographic factors with the change in ability of handwashing practices at household among person with and without disabilities 188
Table 58: Changes to the targeted outcome variables among person with disabilities 190
Table 59: Changes in mediator factors explaining ability change in washing hands at home among person with disabilities 190
Table 60: Changes in mediator factors explaining ability change in maintaining face mask between person with and without disabilities 191
Table 61: Effects of intervention on ability change in washing hands at home via changes in psychosocial factors (mediators) among person with disabilities 191
Table 62: Effects of intervention on wearing mask practice changes in psychosocial factors (mediators) among person with disabilities 192
Table 63: Access to handwashing facilities at household by disability status 192
Table 64: Access to handwashing facilities at household by ageing 193
Table 65: Access to assistive devices among different types of disabilities (country specific) 194
Table 66: Experience with hygiene products among people with disabilities vs without disabilities 194
Table 67: Experience with hygiene products among older vs younger people 195

LIST OF FIGURES

Figure 1: Selected organizations for the HBCC program evaluation and high-level assessment 10
Figure 2: Overall study population and sample size 11
Figure 3: Map of all 37 HBCC intervention countries that involve 21 organizations 27
Figure 4: Selected organizations and countries for HBCC program evaluation and high-level assessment 29
Figure 5: Outline of the MRC framework. 32
Figure 6: Participatory evaluation design workshop in Indonesia 33
Figure 7: Study sites in Indonesia 34
Figure 8: Study sites in Kenya 34
Figure 9: Study sites in Zambia 35
Figure 10: Participation of persons with disability and older people 36
Figure 11: Field monitoring during data collection in Indonesia 36
Figure 12: Researcher from Indonesia during data collection 37
Figure 13: Interviewing a person with disabilities 38
Figure 14: Interviewing an older women 40
Figure 15: Photovoice ranking exercise in Indonesia 40
Figure 16: Study findings dissemination session in Kenya 43
Figure 17: Overall disability prevalence 45
Figure 18: An older person with mobility functional limitation in Kenya 45
Figure 19: COVID-19 exposure and vaccination rate 48
Figure 20: A respondent is showing his COVID-19 vaccination card in Zambia 49
Figure 21: MRC framework: Implementation 50
Figure 22: Received COVID-19 behaviour change messages by disability type (overall) 53
Figure 23: Material for behaviour change messages from WaterAid in Zambia 54
Figure 24: Behaviour change messages receiving medium 54
Figure 25: A person with a disability was watching COVID-19-related behaviour change messages on TV 55
Figure 26: Received behaviour change messages 55
Figure 27: Received hygiene products 57
Figure 28: Functionality of the handwashing stations installed in the HBCC program 58
Figure 29: A non-functional handwashing station in Indonesia 58
Figure 30: MRC framework: Mechanism of impact 60
Figure 31: Participants' experiences towards messages 62
Figure 32: Reported accessibility and satisfaction towards public handwashing station 65
Figure 33: What acted as motivators to maintain COVID measures 68
Figure 34: Received messages from role models 70
Figure 35: Photovoice: An older person in Zambia demonstrating how healthcare workers impacted their COVID-19 behaviour 71
Figure 36: Components available at handwashing entry path 73
Figure 37: Components available in the handwashing area 73
Figure 38: School child is trying to access a handwashing station established in an inappropriate place and height 74
Figure 39: Type of water tap available at the handwashing station 74

Figure 40: Availability of color and light 75
Figure 41: Inaccessible (for people with disability) handwashing station in Zambia 75
Figure 42: Barriers to inclusion 76
Figure 43: A person with a disability in Indonesia explaining difficulties in remembering mask use 77
Figure 44: Barriers to using public handwashing station 78
Figure 45: Barriers to accessing household handwashing facilities 79
Figure 46: MRC framework: Context 84
Figure 47: Inaccessible household handwashing station for People with disability and Older people 86
Figure 48: Inaccessible household handwashing station in Kenya 88
Figure 49: Components available at the handwashing area (household)tors 88
Figure 50: Components available in household handwashing area 89
Figure 51: A person with disabilities facing difficulty in reaching a water source at household 89
Figure 52: Photovoice: An older person with disabilities in Indonesia explaining the physical and economic vulnerability 92
Figure 53: Photovoice caption in Zambia inaccessible handwashing station: “Old model strong tap” 94
Figure 54: Photo of an older person with visual limitation bending to wash hands in Kenya 96
Figure 55: Photovoice Zambia: “Where we find water to drink and bath” 97
Figure 56: Despite challenges, a people with disabilities in Zambia demonstrates how he cleans the surrounding areas and washes clothes to prevent COVID-19 97
Figure 57: 'Unusual Eid' (to express the loneliness of a person with visual functional limitation) 98
Figure 58: It's hard to wear a mask (demonstrating a person with visual functional limitation) 98
Figure 59: Feeling worried because of watching the news on TV 98
Figure 60: MRC framework: Outcomes 100
Figure 61: Knowledge of how COVID-19 spread 102
Figure 62: Knowledge about COVID-19 risk population 103
Figure 63: Knowledge of COVID-19 preventive measures 104
Figure 64: A respondent from Zambia using a face mask to prevent COVID-19 transmission 105
Figure 65: Attitude towards key COVID-19 preventive measures 107
Figure 66: A person with hearing functional limitation in Indonesia showing her attitude towards mask use by others 107
Figure 67: An older adult is washing her hands with soap 108
Figure 68: Practice of the respondents about maintaining COVID-19 preventive measures 109
Figure 69: Using handwashing station at school 109
Figure 70: Practice of people with disability of assistive devices cleaning 110
Figure 71: Handwashing practice of a person with disabilities in Zambia 111
Figure 72: Comparison between KAP of key COVID measures 112
Figure 73: An older person in Indonesia using a mask and cleaning his hands to prevent COVID-19 transmission 113
Figure 74: A caregiver in Indonesia is helping a person with a disability to wear a mask 115
Figure 75: Increased ability to change behaviour 116
Figure 76: A student washing hands in Indonesia 116

INTRODUCTION

Disability and Ageing

People with disability and older people comprise a significant proportion of the world's population; around one in every seven people has some form of disability [1]. One in every eleven people is over 65 years old [2]. These populations also overlap, as approximately 46% of these older people live with disabilities [3]. People with disabilities face multiple exclusions and a range of poor outcomes, including worse health, lower employment, education, and poorer socio-economic status [4] and vulnerability to violence, discrimination, and marginalization [5]. These negative outcomes may be further enhanced among older people with disabilities, and potentially among women [6]. However, these groups often face diverse social, economic, and cultural exclusion and are restricted from full, active, and equal participation in society [29, 30]. The United Nations Convention on the Rights of People with disability (CRPD) calls to ensure the full participation of people with disability in all sectors of society (e.g., health, education, and employment [31]). The World Report on Ageing and Health illustrates a variety of health concerns for older persons experiencing, for example, problems with hearing, eyesight, and movement, and vulnerability to various non-communicable diseases like heart disease, stroke, chronic respiratory disorders, cancer and dementia, coupled with problems of social exclusion [17]. With challenges in health and social inclusion, people with disability and older people have inequitable access to WASH services [7] and increased difficulties when accessing health facilities [32, 33].

Access to Water and Hygiene for people with disability and older people

3.3% of global deaths and 4.6% of global disability-adjusted life years is attributed to inadequate access to improved water and sanitation [34, 35], and thus the Sustainable Development Goal (SDG) 6 emphasizes that everyone has access to safe water and sanitation facilities [36]. According to the data from the WHO/UNICEF Joint Monitoring Programme (JMP) 2020, only 74% of the world's population now has access to safely managed drinking water that is shielded from external contamination, and 54% has access to safely managed sanitation facilities that keep human excreta away from human contact [37]. However, these overall statistics may not represent the vulnerabilities in some specific groups [38, 39], for instance, 15% of the world's population who have some form of disabilities have less access to WASH [40]. A qualitative review shows that communication challenges, social barriers including abuse and stigma, and technical barriers such as structure and distance of the facility are the potential obstacles to accessing WASH for people with disabilities [41, 42]. The presence of social barriers, in addition to the connections between WASH, poverty, and disability, may affect household WASH access. Numerous censuses and household surveys have gathered data on both WASH access and disability, but few surveys have been reported in an inclusive, disaggregated manner. WASH access is typically only assessed at the household level, and earlier research has made use of erroneous definitions of disability. Therefore, comparable quantitative data are still inadequate about whether households have worse access to WASH than households without disabled members [43, 44]. Moreover, in LMICs, people with disabilities frequently encounter additional obstacles to getting WASH services, especially accessing the water they need. Environmental elements like uneven terrain, inadequate infrastructure, or improper facilities make up physical obstacles (such as pump/ tube well handles that are unusable for people with disabilities). Furthermore, institutional hurdles such as WASH sector policies don't address the needs of people with disability or don't allow them to participate in policymaking [42].

COVID-19 and vulnerability for disability and ageing population

In December 2019, the world experienced the first outbreak of SARS-CoV-2 (COVID-19), a highly infectious disease declared a global pandemic in March 2020 by WHO [8]. As of 25th September 2022, over 614.8 million documented cases of COVID-19 and over 6.5 million deaths worldwide [45]. This pandemic has impacted the world's population on a scale not seen for generations. Moreover, it disproportionately impacts vulnerable and marginalized groups, including people with disabilities and older people, who are at the highest risk of getting it and the adverse results [46]. People with disability face a greater risk of infection by the virus and are prone to severe circumstances leading to hospitalization, intensive care, ventilation, or even death [34]. These risks are heightened with age or with the presence of any underlying

medical conditions [9]. A nationwide study in South Korea showed that people with moderate or severe disabilities were six times more likely to die from COVID-19 than people without disabilities [48]. Early research has shown a disproportionate impact and high infection and death rates in psychiatric institutions, social care institutions (orphanages, day-care centers, rehabilitation centers), and institutions for older persons. In some countries, the number of deaths in care homes represented 42% to 57% of all COVID-19 deaths in the primary stage of COVID-19 infection [49].

Many people with disabilities and older adults rely on caregivers and so have reduced ability for physical distancing or isolation [10] and face increased exposure to infected surfaces. Caregivers are usually trained in therapeutic exercises, daily living activities, and assistive devices. Many people with disabilities and older people cannot perform these activities without caregivers, which are an important part of their regular healthcare [50]. Many informal caregivers, typically family members or relatives providing unpaid assistance, reported facing escalating challenges due to increased duties during self-isolation and with support services working at reduced capacity. Many have reported increased stress levels and mental health concerns [51]. Caregivers who are not family members of people with disabilities may leave their job for fear of possible COVID-19 infection [50].

Remote access to services is also reduced for these groups due to a lack of inclusiveness of new technologies to reach those services. Findings from a rapid needs assessment on the impacts of COVID-19 in Iraq showed a heightened sense of fear, confusion, and anxiety among older adults [52]. Also, in a previous study, approximately 92% of the people with disability in Kenya and 100% in Bangladesh perceived their lives were affected by issues like limited transport, restricted movement, lack of available necessities, and lack of contact with schools or social functions during COVID-19 [53]. In Indonesia, people with disability, especially those living remotely, have difficulties accessing personal protective equipment and other necessities [54]. In Zambia, the lack of adequate health and WASH services poses serious challenges and further increases the vulnerabilities of people with disability and older people, especially those with pre-existing conditions such as HIV/AIDS [55]. Secondary impacts of COVID-19 may also be more intense for people with disabilities and older adults [12] due to inequalities in access to health services [13], employment opportunities [14], and education measures [4]. In addition, discrimination and social exclusion [5] may put them at a greater disadvantage, and women with disabilities may be particularly vulnerable to increased domestic violence [6].

Water and hygiene for people with disabilities and older people during the pandemic

Many people with disability depend on carers to perform regular hand washing, bathing, and clothing laundering, which are essential hygiene behaviours against the spread of COVID-19. Moreover, people with disabilities may also have additional WASH needs (incontinence, for example), as well as a greater reliance on assistive devices (such as wheelchairs, handrails, and communication aids) or support from caregivers who may lack technical knowledge or training in WASH support [42].

One of the most important behaviours for disrupting the spread of COVID-19 is frequently washing hands with soap. However, people with disabilities, older adults, and older adults with disabilities, particularly those with severe functional limitations, already face challenges in accessing WASH facilities and often rely on caregivers, especially for collecting water to perform hygiene practices and when using sanitation facilities [56]. This challenge of accessing water and maintaining hygiene practices can be heightened further during COVID-19 restrictions. For instance, certain types of disabilities may require people to touch various surfaces or assistive devices, which may be contaminated, thus requiring more frequent hand washing and cleaning of the assistive devices [42]. Physical functional limitations may hinder thorough hand rubbing, and people with intellectual and cognitive functional limitations may not remember or recognize the significance of hand washing. Caregivers may also provide limited support due to a lack of knowledge, social support, or guidance [57] on the individual's WASH needs [58]. For instance, caregivers in the UK and India have mentioned difficulty explaining the necessity for hand washing, surface cleaning, and social distancing measures to their dependents with autism and dementia, respectively [59, 60].

People with disabilities and older adults frequently face significant barriers to accessing WASH facilities, particularly in low- and middle-income countries. Infrastructure that is not accessible to people with various functional limitations, such as handwashing stations, water pumps, and bathing facilities, is one example of a barrier. Without access, there is a higher chance of getting the illness [41, 42]. During the COVID-19 pandemic, 31% to 62% of older adults in Zimbabwe [61], Iraq [52], Uganda [61], Tanzania [62], Rwanda [63], India [64], and Ethiopia [65] reported that there were not enough WASH facilities.

Additionally, the COVID-19 approach calls for a change in population-level hygiene behaviors (such as washing hands with soap and wearing masks), and advice is frequently disseminated via mass media. People with disabilities may miss important messages if communication methods and resources are not accessible (for example, television announcements delivered without sign language interpretation or closed captioning). Vital information and hygiene promotion materials may be inaccessible to people with sensory or intellectual disabilities; moreover, the communication materials in humanitarian responses are seldom designed to be inclusive [11]. As a result, people with disabilities are at a greater risk of being marginalized during the COVID-19 pandemic due to the changes in the physical and social environment [66].

HBCC interventions

The UK Government and Unilever introduced the Hygiene & Behaviour Change Coalition (HBCC) to limit the transmission of COVID-19 among people in low and middle-income countries (LMICs), including people with disability and older people. This programme aimed to raise awareness of hand hygiene behaviors, mainly to ensure people wash their hands regularly with soap and disinfect surfaces. The programme ambition was to reach a billion people using mass media communication, digital tools, interpersonal communication, face-to-face materials, and training activities. Through the HBCC initiatives, over 250,000 handwashing stations have been installed worldwide, over 450,000 community health workers and teachers have been trained, and more than 78 million hygiene products have been distributed in over 60 countries. A key focus of the HBCC program was to take an inclusive, tailored approach to reach vulnerable and marginalized communities (including people with disabilities, older people, and their caregivers). To promote inclusivity and accessibility, HBCC partners directly consulted with people with disabilities and their carers at the planning stage and provided accessible handwashing stations, tailored information contents, activities, and training. [67]. There are 74 projects funded through HBCC across 21 organisations and 37 countries (Figure 3), which ran from March 2020 until December 2021. Later, the second stage of HBCC intervention was initiated, which is currently ongoing.

COVID-19 disproportionately impacted the lives of people with disability and older people, and they are more vulnerable to the primary and secondary effects of COVID-19. It is therefore important to understand how these groups were included in the HBCC interventions and what the outcomes were compared to other populations (people without disabilities and younger adults). Moreover, there is a lack of evidence to understand the experience of people with disability (along with older people with disabilities), the interventions to reduce exclusion, and the evaluation of its impact, and most previous studies on this topic are of poor quality [68]. To track the impact of the pandemic on people with disability and older people, good quality and comparable data on the inclusiveness of the COVID-19 pandemic response and mitigation strategies is essential [67]. It is also crucial to understand the overall experience, inclusiveness, and accessibility of these people in social settings [68]. Since the HBCC introduced interventions (which included people with disability and older people) to reduce COVID-19 transmission, it is important to understand how effectively and inclusively HBCC interventions are being implemented for people with disability and older people to improve such programs and inform others. A multi-country assessment with an in-depth exploration of the situation of people with disability and older people was conducted in five selected countries (Indonesia, Kenya, Zambia, Sierra Leone, and Bangladesh). This study aimed to evaluate the disability-ageing inclusiveness and effectiveness of the 6 programmes that delivered HBCC interventions to better understand their situation and introduce new guidelines and tools to generate more effective and equitable interventions.

Figure 3: Map of all 37 HBCC intervention countries that involve 21 organizations[2]

[2] https://www.unilever.com/news/hygiene-behaviour-change-coalition/

RESEARCH OBJECTIVES

Objective 1: Evaluate the inclusiveness, effectiveness, and outcome of HBCC interventions (designed to limit the risk of COVID-19 among the general population) for people with disability, older people, and caregivers in Kenya (AMREF, PSI), Indonesia (SCF), and Zambia (WaterAid)

Specific objectives:

i) Measure the level of efforts by the intervention delivering partners to include people with disability, older people and their caregivers in HBCC behaviour change interventions during COVID-19, and the appropriateness/feasibility of those interventions
ii) Understand the level of benefits that were delivered by the interventions to promote hygiene behaviours to limit COVID-19 transmission to diverse groups/ people with disability, older people, and their caregivers, in comparison with the benefits received by people without disabilities and younger adults
iii) Identify the strengths and limitations of existing interventions and the process elements needed to design inclusive hygiene-related interventions for people with disability, older people, and their caregivers (especially in pandemic situations like COVID-19)
iv) To develop recommendations for designing and implementing inclusive WASH interventions that benefit persons with disabilities, older people and their caregivers in current and post COVID-19 settings and future pandemics.

Objective 2: Conduct a high-level assessment on inclusion of people with disability, older people, and their caregivers in the HBCC funded projects in Sierra Leone (Plan International) and in Bangladesh (BRAC, UNHCR)

Specific objectives:

i) Understand the processes Plan International, BRAC and UNHCR have taken to mainstream inclusion and the rights-based approach in their HBCC funded projects.
ii) Document the enablers and challenges of the HBCC funded projects.

SELECTING ORGANIZATIONS TO EVALUATE

Methods of selecting organizations

From the 21 organizations that delivered the HBCC interventions, we selected four organizations from three different countries to undertake direct evaluations (i.e. including programmatic review and qualitative and quantitative data collection in-country) of the disability-ageing inclusiveness in their program. These were Save the Children in Indonesia, AMREF and PSI in Kenya, and WaterAid in Zambia. We also selected two organizations (BRAC in Bangladesh and Plan International in Sierra Leone) to assess inclusion in terms of disability and ageing from program documents and high-level program officials' (program manager, intervention designers, chief supervisor or other leaders of the program implementors) perspectives. The funding partner, LSHTM, reviewed the documents (including proposals, project overviews, work plans, theory of change, quarterly reports, media and communication contents, results frameworks, and budgets) related to the HBCC-funded projects of all 21 organizations to assess the inclusion of disability, ageing and their caregivers in these programmes. The 'disability-inclusive WASH checklist', which incorporates 15 core concepts of human rights, was applied to these documents and based on the inclusion of core concepts, each reference was scored on a scale of 0-4 (low-high). For each included document, the total and average score was captured based on the number of times each fundamental concept was mentioned. Then the number of references made to each of these 15 core concepts was captured, and the average score was recorded across all documents. A program would be received the highest inclusion score if the references scored 3 or 4 (Specific programme targets and actions identified to address the concept, and actions and targets monitored and evaluated, with results presented respectively) [15] (**Annex 2: Initial inclusion score**). These organizations and countries were selected based on the initial inclusion score that they received.

Objective 1:

We selected these organizations (Save the Children, AMREF, PSI, and WaterAid) and the particular projects in these countries for detailed evaluation that received the highest inclusion score (Figure 4) in the disability/ageing category. We chose those with high scores because we wanted to understand whether programs with the highest inclusion scores were translated into action in the field and to look at the level of effectiveness of these approaches.

Objective 2:

For the high-level assessment (Key Informant Interviews with high-level officials), we selected one organization that received a higher score (Plan Int.) and another that received a lower score (BRAC) to understand what practices and policies seemed to work well and generated lessons for what should be changed for the future. To select the country, we considered the availability of our resources and collaborations to implement the evaluation work (Table 32).

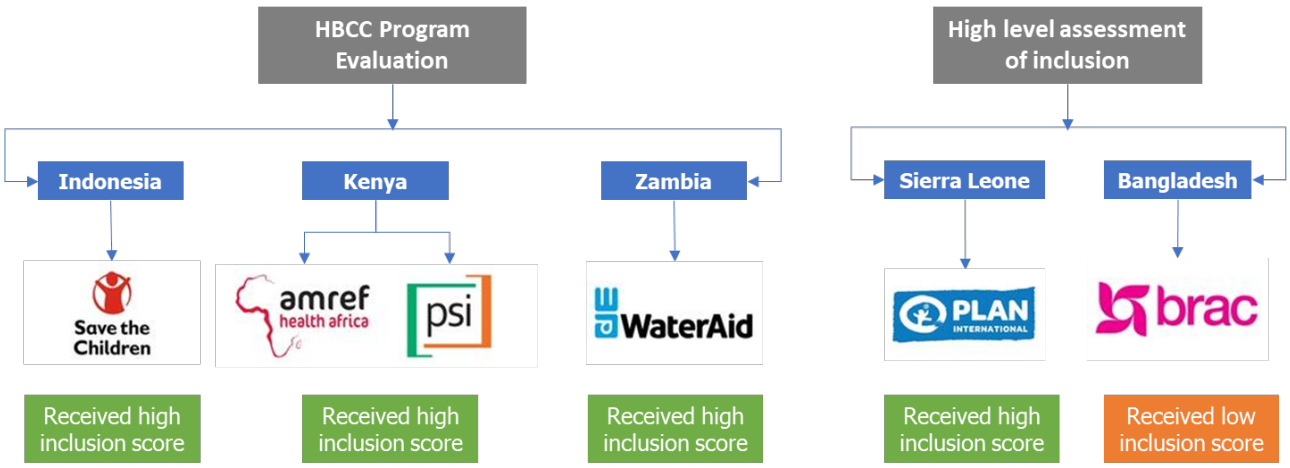


Figure 4: Selected organizations and countries for HBCC program evaluation and high-level assessment

Overview of HBCC interventions of the selected organizations for program evaluation

Intervention detail can be found in **Annex 3: HBCC program**. Following is the overview of the intervention of the selected organizations we directly evaluated.

Indonesia: Save the Children Funds (SCF)

Save the Children Fund (SCF) usually work with vulnerable children around the world, has received a total of GBP 4,002,065 to implement the HBCC interventions in eight different countries. In Indonesia, SCF worked within two specific geolocations: North Jakarta (DKI Jakarta province) and Bandung (West Java province). The primary goal of the HBCC programme was to prevent the spread of COVID-19 among children, caregivers and their families, and wider communities and to build resilience to future outbreaks. This program included girls and boys with disabilities, families of children with disabilities, and their caregivers as the target population. They also engaged people with disabilities and caregivers throughout the planning, rapid review, design, implementation, monitoring and evaluation stages of the programme. This program targeted 20 schools, 1200 families, 400 male and female adult staff and teachers, and approximately 5,600 boys and girls who were the intervention schools' students. This program also used Mass media behavior change intervention, training of the teachers, and hygiene product delivery. This intervention was hoped to reach at least 3 million people through TV and Radio coverage within the intervention area.

The HBCC program of Save the Children Indonesia provided school-based interventions to reduce COVID-19 transmission among the children and their caregivers/parents and to ensure a safe return to school for the students. This intervention provided hygiene products to the children/caregivers and teachers, installed handwashing stations (easily accessible for people with disabilities and children) at the school premises, and provided behaviour change messages in 40 schools, including two schools for children with disabilities. Moreover, several training sessions were provided to the teachers, students, and parents as they were the primary target groups of the intervention. Although SCF did not directly provide intervention to older people, it had some impact on improving COVID-19 preventive behaviour of the family members of children, including older people.

Kenya: AMERF Health Africa (AMREF) and Population Service International (PSI)

AMREF Health Africa, one of the leading organizations working for East Africa, was awarded a total of GBP 3,000,000 to implement HBCC interventions in three different countries, Kenya, Uganda, and Tanzania. AMREF implemented the interventions in 10 different counties across Kenya by delivering Mass communications, Behaviour change programs focused on hand, cough, and environmental hygiene and interpersonal communication, and digital behaviour change activities. This program was hoped to target millions of people living in these counties, including the most vulnerable groups to COVID-19.

AMREF in Kenya targeted the general population (including both disability and ageing groups) in the HBCC program. They provided mass media interventions through billboards, posters, leaflets, flyers, national and local television (including a children's animated puppet series), radio programmes, mobile public address systems, and film vans. They also worked with organisations catering to people with visual and hearing limitations to produce mass media communication materials (posters and fliers) in braille to reach these groups. They installed handwashing stations in their target locations in Kenya. They provided hygiene kits to the people and provided a 'WASH supply' to healthcare facilities.

Population Services International (PSI) was awarded GBP 2.6M and worked in Kenya, Myanmar, South Africa, and Vietnam. In Kenya, PSI worked in the five Most at-risk and affected counties and four high number of cases counties. This intervention program targeted the Health care providers and the general population within the selected counties. Twenty-five million people were hoped to be reached (direct and indirect reach). PSI in Kenya engaged with local creative agencies and media partners; developed digital marketing strategies and utilized websites, search engine optimization, sponsored ads, social media, social listening, and social media influencers to promote behaviour change messages to the general people (including disability and aging

inclusion). They also used interpersonal communication to increase reach. PSI leveraged existing digital tools such as e-Learning platforms to provide timely and cost-effective capacity building/SBC support to healthcare providers on COVID-19-related issues. They also ensured the availability of handwashing facilities in their target areas and used TV, radio, billboard, posters, print and digital media, and social media to disseminate messages to the people.

Zambia: WaterAid

WaterAid, a renowned organization in the WASH sector, awarded a total of GBP 500,000 to implement HBCC interventions in three countries in Africa and two countries in Asia. In Zambia, WaterAid implemented the intervention in Lusaka (capital), Livingstone, Kazungula, Monze, Mwense, Samfya and Mwandi districts. The priority hygiene behaviors implemented were handwashing with soap, respiratory hygiene, social distancing, cleanliness, and referral. This program hoped to reach 6,538,460 people in Zambia and arranged media campaigns, support to decision-makers, and supply of hygiene facilities and materials. Digital, Social and mass media were used for a wider-reaching of the target population.

The HBCC program of WaterAid targeted all people (including both disability and ageing groups) in the program. They actively seek to engage people with disabilities and their caregivers from planning to implementing the program. They provided COVID-19 behaviour change messages using TV, radio, print and social media, and interpersonal communication; delivered hygiene products and installed handwashing stations (accessible for people with disabilities and older people). They also trained healthcare staff and delivered critical WASH infrastructure and commodities in healthcare facilities.

METHODS

Study design

We conducted a mixed-method study (with a matched design) using a participatory evaluation approach in Kenya, Indonesia, Zambia, and conducted key informant interviews (KII) in Sierra Leone and Bangladesh with HBCC implementation officials. We formed an advisory group in each country to support the evaluation design and included intervention delivery partners, DPO representatives, and government representatives from each selected country in the evaluation design. We confirmed with the intervention delivery partners in each country about the delivery methods, the target population number etc. As Bangladesh and Sierra Leone were not our main evaluation countries, we did not initiate advisory workshops there.

Theoretical framework

We guided the study for all five countries (both quantitative and qualitative) using the process evaluation of complex interventions guideline by the Medical Research Council, commonly known as the MRC framework[3]. The framework comprises several broader components of process evaluation, such as Implementation (process, reach, dose, adaptations), Outcomes and unintended consequences, Mechanism of Impact (mediators and participants' experiences), and Contexts. During the data analysis, we categorized the quantitative tools based on the main and sub-categories of the MRC framework and analyzed them to understand both disability and ageing inclusion. For the qualitative analysis, we prepared a codebook deductively using the framework, which was then updated inductively during data input (**Annex 4: Data analysis based on MRC Framework**).

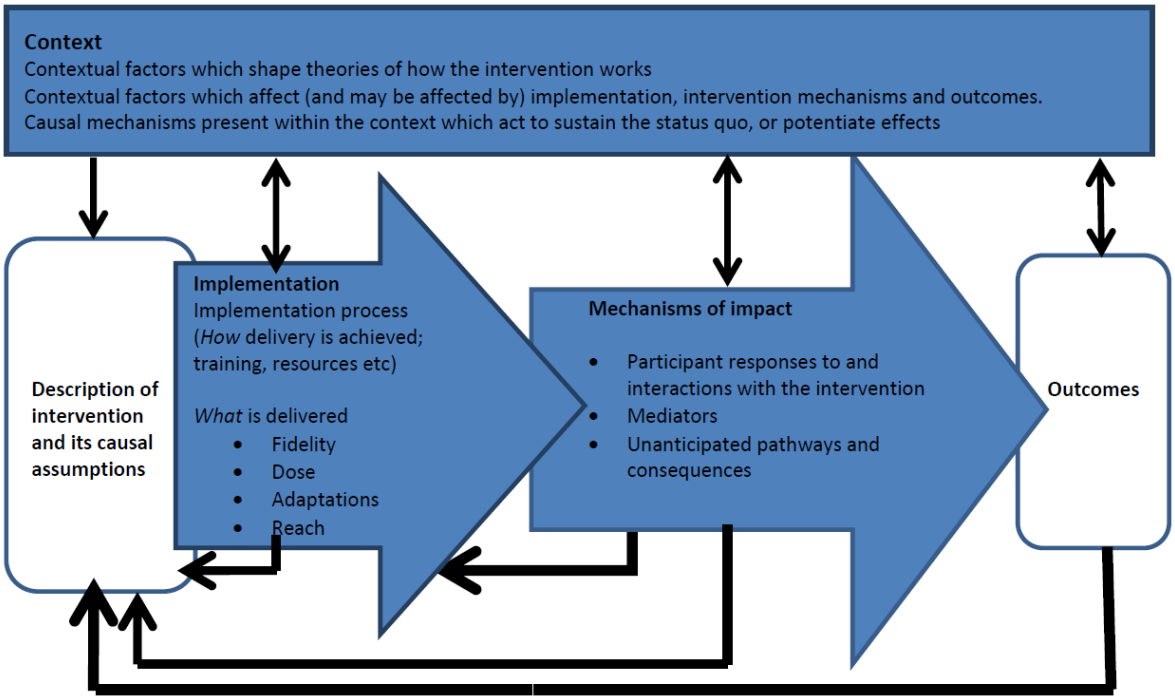


Figure 5: Outline of the MRC framework.

Evaluation design workshop with the study collaborators

We reviewed all HBCC proposals, intervention delivery quarterly reports, disability and ageing inclusion scores by PENDA/LSHTM, and other relevant documents of the selected organizations for evaluation before the design workshop. With the guidance of PENDA/LSHTM, we facilitated the evaluation design workshop where all country partners and LSHTM experts reviewed the study design and provided feedback for further modifications.

[3] https://www.ukri.org/publications/process-evaluation-of-complex-interventions/

Participatory evaluation design with stakeholders in Indonesia, Kenya and Zambia

After developing a standard protocol, each country team, led by the country team, lead from APHRC (Kenya), UNAS (Indonesia), and CIDRZ (Zambia), created an advisory group consisting of at least one member from each of the intervention delivery partners, other relevant organizations' representatives working with disability/ ageing during COVID-19, representatives from DPOs, government staff, and other stakeholders (i.e. experts of behavior change, evaluation or WASH), and organized a workshop (online/hybrid) to finalize the evaluation design. We received feedback from the advisory committee, incorporated their suggestions, and finalized the evaluation design.

Figure 6: Participatory evaluation design workshop in Indonesia

Study sites (Indonesia, Kenya, and Zambia)

Our study only considered the areas where the selected organizations delivered the HBCC interventions. We selected districts/counties through stratified random sampling (e.g. random selection of districts within regions) from each study country. First, we selected three random districts/counties from the intervention areas in each country (two for Indonesia as the intervention was limited to two districts only). Each district/ county was then segregated into the respective country's smallest administrative areas (in Kenya, mtaa mdogo, in the case of Indonesia, desa or kelurahan, and in the case of Zambia, ward). From each of the districts/counties, we randomly selected 6 smallest administrative units/areas, thus bringing the total number of smallest administrative units/areas to 18 in Kenya, 18 in Zambia, and 12 in Indonesia. While selecting the six smallest administrative units from each district/county, we tried to ensure the urban-rural ratio of each country/intervention setting (where applicable) to have a balance. We then divided each of the randomly selected smallest administrative areas (rural and urban areas) in each country into clusters of 30 households (40 households for Indonesia to account for only including two districts) with the support from local representatives or inhabitants and randomly selected one cluster (Annex 1). Thus, our final sample areas for Kenya and Zambia consisted of a cluster of 30 households from each of the 18 smallest administrative areas, while in Indonesia, it was a cluster of 40 households from each of the 12 smallest administrative areas. In Indonesia, as the intervention was focused on schools and their surrounding areas, we went to the nearest locality to select the cluster of 40 households. (Figure 7, Figure 8, Figure 9)

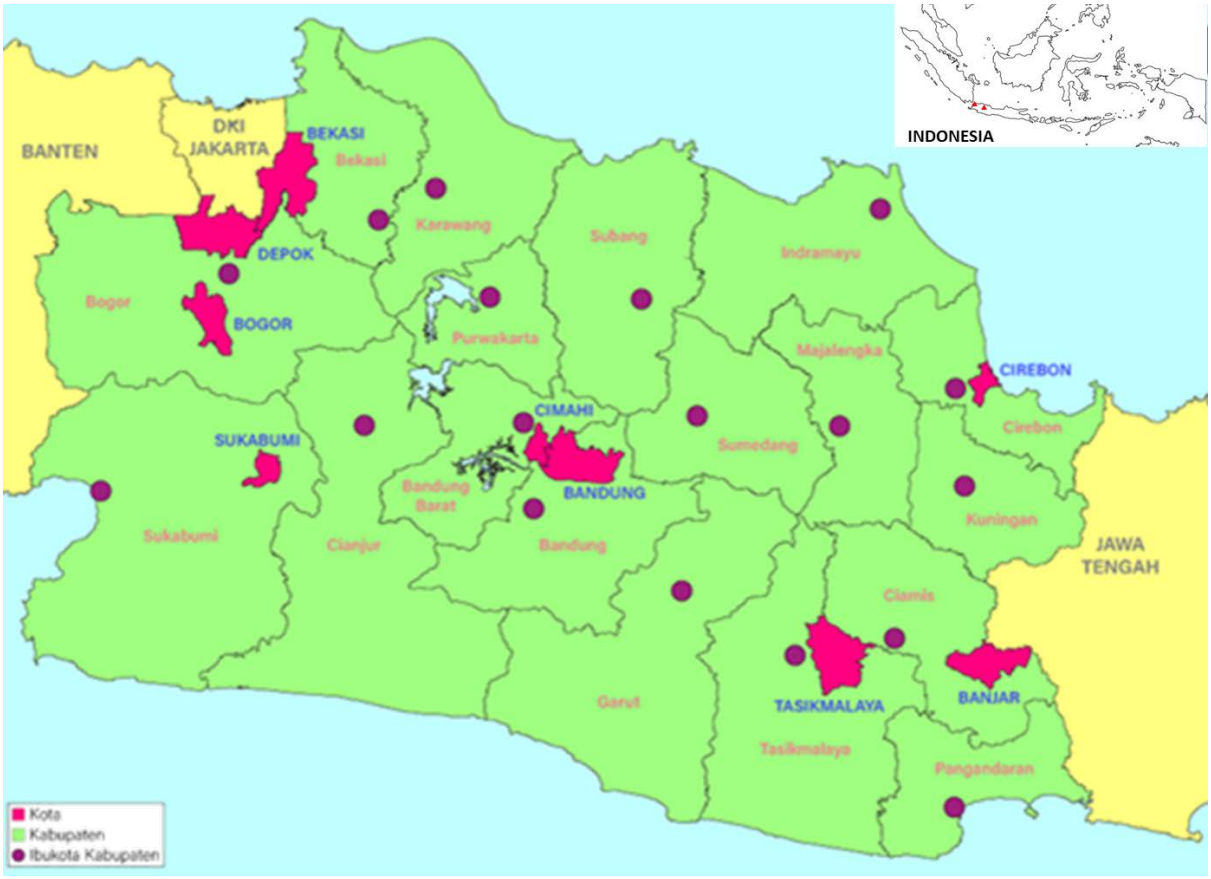


Figure 7: Study sites in Indonesia

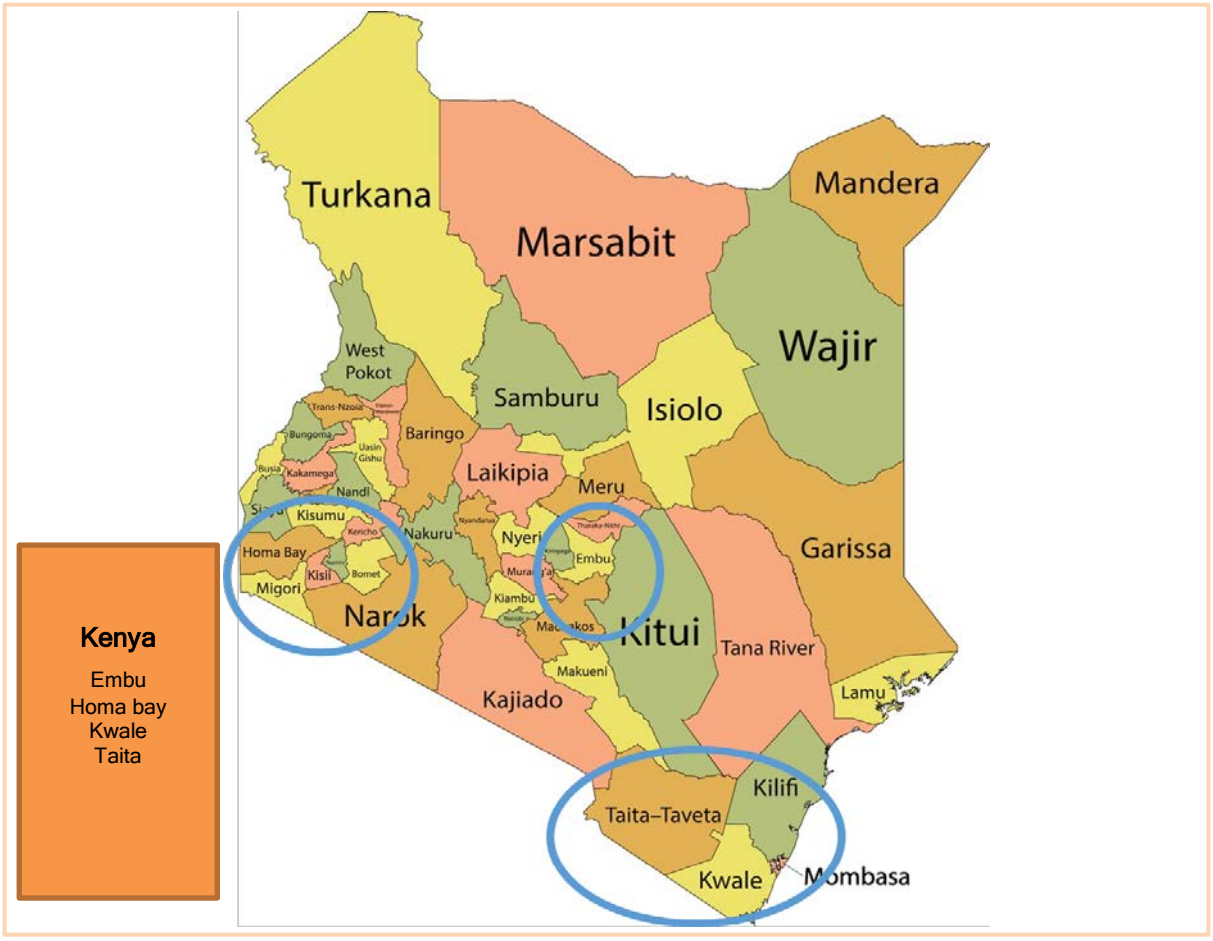


Figure 8: Study sites in Kenya

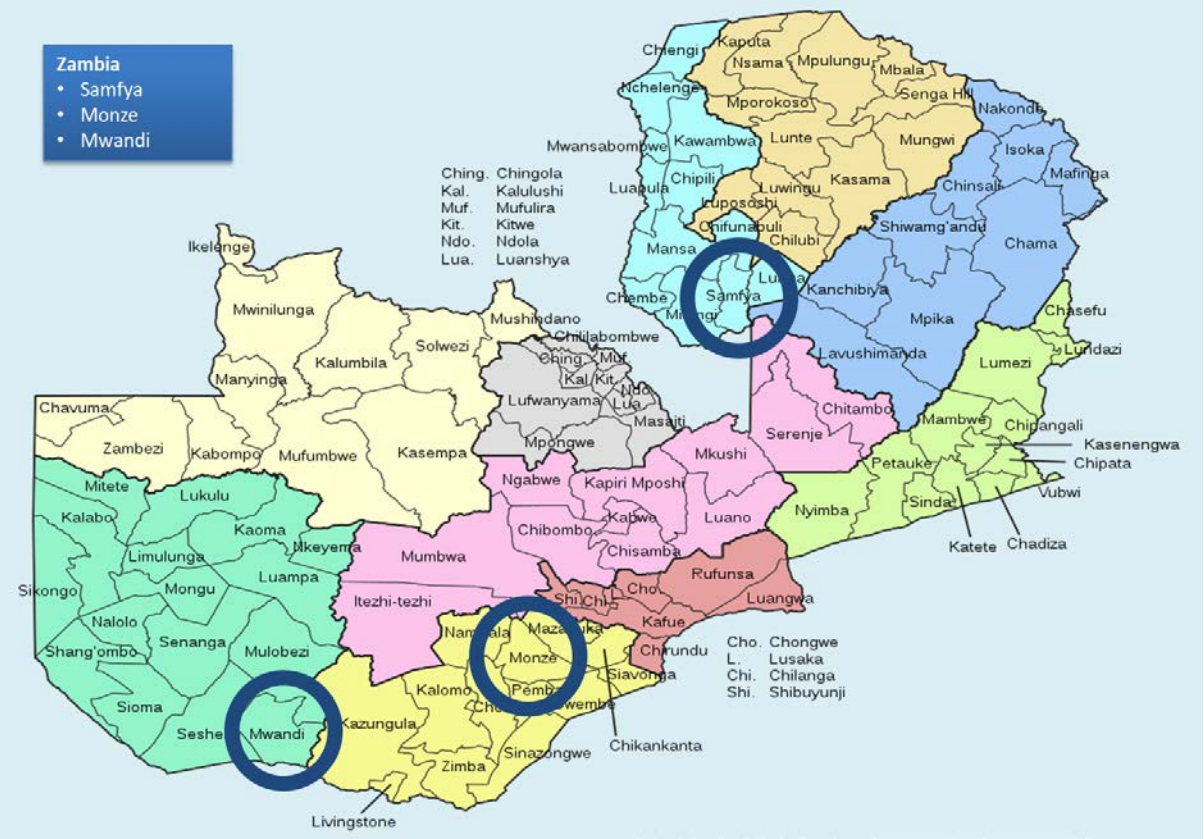


Figure 9: Study sites in Zambia

Study Population

As we sought to understand the inclusion of disability and ageing, we reached both people with disability and older people in our study. For the survey, we reached people with disability and their comparison persons without disabilities, by which we presumed that we would also reach a significant number of older people (as around half of the older people have a disability[4]) and also younger people to compare. For the qualitative interviews, we reached people with disability, older people, caregivers, community people, Intervention delivering partners, government and other policy-level stakeholders, representatives of the organizations of people with disability (OPDs), school teachers (in Indonesia), and Health care providers (Kenya and Zambia).

Defining disability and ageing

To define people with disability, we followed the UN Convention on the Rights of People with disability (CRPD) definition that views people with disability as those who "have long-term physical, mental, intellectual or sensory functional limitations which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others" [69]. To understand/identify the disability, we used the Washington Group short questionnaire set (with two additional questions on depression and two on anxiety) [16], where people with disabilities were counted if they reported that they have 'a lot of difficulty or more' in at least one domain of the six short Washington group questionnaires set or if they experience depression or anxiety 'daily' and 'a lot'. We used the Washington Group Short Questionnaire set (with two additional questions on depression and two on anxiety). To define older people, we considered the WHO definition of ageing, considering people aged 60 or more years as older people [17]. To identify older people, we used self-reported age.

[4] https://www.un.org/development/desa/disabilities/disability-and-ageing.html

Figure 10: Participation of persons with disability and older people

Staff training and field management

To safeguard participants' rights, the research team members were trained on the research protocol and the ethical principles of human subjects research. In the beginning, the core team members of icddr,b completed a 12-hour online training titled "Global Disability: Research and Evidence" offered by LSHTM. All the core research team members from the collaborative organizations participated in online training/discussion sessions from LSHTM to ethically conduct research on disability and ageing while learning how to use the Washington Group Questions to collect data effectively. Before the commencement of data collection activities in all countries, the icddr,b team trained all the country teams (UNAS, APHRC, and CIDRZ) regarding the study protocol, especially the data collection methods, procedures, and activities. In turn, the country teams trained the local data collectors regarding research ethics (especially while dealing with people with disability and older people) and data collection tools and activities. All research study members (including the field-level data collectors) had prior research experience, especially in resource-poor communities.

Figure 11: Field monitoring during data collection in Indonesia

Icddr,b team remotely guided the data collection and other research activities, while the country teams implemented, especially collected data from field sites. Also, a data collection guideline was circulated among the country teams. The core team members from the country teams led the data collection and monitoring activities in all the study sites. The country teams contacted icddr,b teams if needed to resolve any contextual problem during data collection.

Questionnaire validation and field testing

The country teams translated the English version of the data collection tools (e.g. survey, IDI tools) into the local language or the different dialects of the selected study sites in each country. In Indonesia, the data collection tools were translated into Bahasa (the Indonesian national language) and Sunda (the local language of many people in West Bandung). The data collection tools were translated into four languages in Zambia (Tonga, Lozi, Nyanja, and Bemba). And in Kenya, the tools were translated into three languages (Swahili, Luo, Embu). Each country team consulted with an expert in the local language or dialect for appropriate translations. After that, a field test (separate from the main study sites but having similar socio-demographic characteristics) was conducted with each translated tool for validation. To translate the Washington Group questionnaire, we collected the already translated versions; if not available, we translated it for that particular language and tested it during the pilot study.

Screening to identify disabilities

To identify the people with disability and older people, first, we divided each of the randomly selected smallest administrative areas (rural and urban areas) in each country (Kenya and Zambia) into clusters of 30 households and randomly selected one cluster from that. We then visited all 30 households from the cluster from each of the 18 smallest administrative urban/rural areas. In Indonesia, as the randomly selected study sites were based on schools (SCF mostly focused on school-based interventions), we selected a cluster of 40 households (randomly selected) from the nearest locality of the schools. The enumerators/ data collectors enrolled the household members upon their consent, and all available members from each household were interviewed using the Washington Group questionnaire to identify the disability. The data collectors also asked the respondents about their age to identify older people. During the household visit, if any household did not agree to participate, data collectors moved on to the next household.

Figure 12: Researcher from Indonesia during data collection

Quantitative data collection

Survey and spot check

During the disability screening, whenever the data collectors identified people with disability, they (data collectors) enrolled them (people with disability) in the survey upon their consent. For the people with disability that were 10-18 years old, the data collectors interviewed them in the presence of their legal guardians (parents/caregivers), and for the people with disability that were 5-9 years old, their caregivers provided a proxy survey for them (less than 5-year-old was not enrolled for the survey). People with disabilities who were more than 18 years old participated in the interview directly except for the cases where they were unable to understand the consent process fully, and in that case, we took their assent and their caregiver's consent and did a proxy interview with the caregiver who reported on behalf of the persons with the disability. After interviewing a person with a disability, the data collector recruited a person without a disability from the nearest available household with the same gender and age (the age was considered five years older or younger). In the case of older people with disabilities, when a similar age match was not found, a convenient age among older people without disabilities was considered. In the survey, we asked the participants about the level of provision, inclusiveness, effectiveness, and quality of hygiene and behaviour change-related interventions during COVID-19, support from caregivers, and the availability and use of assistive devices. We also asked participants whether they received any hardware (e.g. handwashing stations, soaps, detergents, masks, gloves, PPEs, hygiene kits, sanitizers) and software (e.g. messages from digital media such as mobile SMS, Facebook, Twitter, WhatsApp; messages from mass media and print media such as radio, TV, billboards, banners, newspapers, flyers). We also asked if they received any interpersonal communications from the intervention delivery partners.

Figure 13: Interviewing a person with disabilities

During the survey, we also spot-checked the accessibility of handwashing facilities (including access to soap) of those households to understand the challenges of people with disability and older people and compare it with the people without disabilities and adults aged 18-59 years old. Moreover, while visiting the selected areas, we observed the access to water and hygiene facilities installed and maintained by the intervention-providing organization/s in that area to understand how disabled and older people-friendly those facilities were and how well those were being maintained.

Sample size calculation for the Survey

We assumed that 30% of the general population and 15% of the people with disability had heard about the HBCC intervention messages and calculated our sample size with a design effect of 1.2 and 10% non-response (see Table 5). We estimated that we require 160 people with disabilities and another matched pair of 160 people without disabilities from each country to detect a minimum of 15% difference, or 0.50 effect size, with 80% power. In total, our minimum required survey respondents were 320 in each country. We reached 173 people with disability and 167 people without disabilities in Indonesia, 282 people with disability and 260 people without disabilities in Kenya, and 160 people with disability and 161 people without disabilities in Zambia, counting a total of 615 people with disability and 588 people without disabilities across the three countries.

Qualitative exploration

Key Informant Interviews (KIIs) in five countries

To understand the disability and ageing inclusion from different program and policy level stakeholders, we conducted KIIs with implementers, DPO staff, government level stakeholders, managers from intervention delivery partners, frontline intervention delivering staff, community health workers (where applicable) and teachers (where applicable). We reached the intervention-delivering staff, community health workers and teachers who received the intervention after collecting the list from the respective intervention-delivering organizations. We purposively selected them for KIIs, considering their diversified responsibilities. DPOs and government/policy-level stakeholders were also selected purposively from each country.

We explored what and how the interventions were delivered to the people and the challenges faced during the intervention provision (Annex 6: Key informant interview guideline). We also explored how hygiene behaviour change messages are targeting people with disability, older adults, and caregivers, whether there was any meaningful participation of these groups of people, how these messages differed for people with disability, older people, and caregivers compared to persons without disabilities and younger adults (18-59 years), and how interventions were delivered. We explored the training process of frontline staff, aiming to understand whether frontline staff had training on the specific hygiene-related requirements of people with disability and older people and how to communicate effectively with them. We identified the reasons for including/not including disability and ageing, challenges faced during the design and delivery of the interventions, and how solutions were adopted to mitigate the challenges. Policy-level authorities were asked about their perceptions of disability and ageing to include them in policy designs about COVID-19 intervention delivery. We also explored the level of involvement of DPOs in intervention design, delivery, and policy-level decision-making processes.

In-depth Interviews (IDIs)

To understand the inclusion from the beneficiary level, we conducted IDIs with people with disability, older people, caregivers, school teachers (Indonesia), and community members in three evaluation countries. After the disability screening, the identified people with disability and older people were selected purposively considering diversity in disability type, age and gender (where applicable) and a total of 92 IDIs were conducted from three countries (Indonesia 30, Kenya 30, Zambia 32). We asked caregivers about targeted interventions from the country-specific intervention delivery organization/s and the level of engagement of the caregivers, family members, and community people in the process of maintaining hygiene behaviour and use of assistive devices of people with disability and older people.

Figure 14: Interviewing an older women

PhotoVoice Ranking

From each country, we selected 6 people with disability and 4 older people, coming to 10 people for the PhotoVoice ranking exercise, maintaining the diversity of functional limitations and various socio-demographic backgrounds. We only enrolled adults (18 years or more) in the PhotoVoice exercise and maintained two consent processes for the participants. At the beginning of the PhotoVoice exercise, we completed an initial informed consent, and after the photos had been taken and before the interview was carried out, a second informed consent was taken. Also, we took consent from any third party who may have been captured in the images. During the informed consent process, the participants had the option to use their real names, and not have their faces blurred in the photos. At the beginning of Photovoice, the participants were provided with training on photography ethics and safety while taking pictures in different situations. We then asked the participants to capture five photos representing their daily challenges or activities they prefer to perform and five happy moments of their daily life regarding the COVID-19 measures and handwashing. We then asked them to provide captions and describe the reasons behind taking each photo, followed by a ranking exercise. During the PhotoVoice ranking, participants were asked to select and rank the pictures according to the challenges/happy moments that they regarded to be most severe (1 = most severe, 5 = least severe).

Figure 15: Photovoice ranking exercise in Indonesia

Table 1: Overview of the population, data collection and sample size from all countries

Approach	Data collection tool	Type of respondents	Total sample size	Evaluation study			High-level assessment	
				Indonesia	Kenya	Zambia	Bangladesh	Sierra Leone
Quantitative	Screening	Clusters	48	12	18	18	-	-
		Households	1654	478	591	585		
		Household members	4882	1392	1588	1902		
	Survey and spot check	People with disability	615	173	282	160	-	-
		Persons without disabilities (gender and age-matched)	588	167	260	161	-	-
Qualitative	Key Informant Interviews	Senior-level staff from the intervention-delivering organization	15	3	6	3	2	1
		Frontline intervention delivery staff	26	5	10	5	5	1
		Policy-level authorities (govt.)	8	2	4	2	-	-
		DPOs/Older people organization	8	2	2	2	2	-
		Health care providers	12	-	6	6	-	-
		School teachers	4	4	-	-	-	-
	In-depth Interviews	People with disability	20	-	10	10	-	-
		Students with disabilities (10-18 years)	6	6	-	-	-	-
		Caregivers of people with disability	17	6	5	6	-	-
		Older people	12	-	6	6	-	-
		Caregivers of older people	11	-	5	6	-	-
		Adults and older people with disabilities	6	6	-	-	-	-
		Caregivers of students and adults with disabilities	6	6	-	-	-	-
		School teachers	6	6	-	-	-	-
		Community member	8	-	4	4	-	-
	Photovoice Ranking	People with disability	18	6	6	6	-	-
		Older people	12	4	4	4	-	-

Data analysis

Quantitative data analysis

The survey and spot-check data were collected using a mobile/tablet-based platform (Kobo Toolbox) which the data collectors securely sent to the server. Data were checked for errors daily throughout the data collection. After completion of the data collection, data were cleaned and analyzed using STATA 13.0. Disability prevalence was estimated and disaggregated by the types of disabilities and various socio-demographic characteristics. A socio-economic index was computed using principal component analysis (PCA) considering respondents' asset ownership, household building materials, number of rooms available in the households (excluding bathroom and kitchen), access to handwashing places, education, and employment of the

respondents. The derived index was divided into 5 quantiles (poorest to richest). PCA was conducted separately for each country.

Descriptive summary statistics (frequency, percentage, mean, sd, median, IQR) were reported to show the distribution of the variables disaggregated by disability status and ageing. To assess the association among these groups, a chi-square test (Pearson/ Fisher exact test) for the categorical variables, t-test for continuous (normally distributed) variables, and Mann-Whitney test for skewed variables were used. Univariate and Multivariate regression analysis was conducted to compare different indicators between the people with and without disabilities, and older and younger people. Conditional logistic regression was undertaken in the case of matching case-control data. If conditional regression was not possible due to incomplete matching, multivariable logistic regression was undertaken, controlling for the matching variables of age, and sex. All the individual level analyses were adjusted for the region, and socio-economic status. The analyses were adjusted by estimating robust standard errors, to account for the cluster level correlation. To evaluate the overall scenario of the three countries, all the analyses were also performed on the pooled dataset (three countries combined data). A multilevel regression model was used for the pooled data analysis, considering the random effects for the region and cluster and also controlling the country-level effect in the model.

A mediation analysis was also conducted to identify the potential mediators that may have an impact on the intervention in changing the target hygiene behaviors. Separate mediation models were used for different COVID-19 hygiene behaviors. In the mediation model, the intervention received (yes/no) is considered as the predictor, change in hygiene behavior as the outcome, and different psychological factors as the mediators. Mediator factors that exhibited a significant difference (at 5% level of significance) between the groups who received the intervention or not were included in the mediation analysis. The impact of the intervention via mediators on the targeted behavior change is shown as the indirect effects (a*b) and the direct effect (c) of the intervention process on the targeted behavior change also displayed in the result. The mediation analysis estimated 95% confidence intervals using a bootstrap bias-corrected approach with 1000 resamples.

Qualitative data analysis

For the KII, IDI, and photovoice data, the team took notes and audio recordings of the interviews. If any study respondent objected to an audio recording, the researcher used the notes and expanded the data in detail as necessary. Audio-recorded data from interviews were transcribed into the local language and translated to English. Qualitative researchers analyzed and coded the transcribed interview data under different themes deductively and inductively. The team shared the findings/codes with other team members to come to a common agreement/disagreement and explain their reasoning. Inter- and intra-coding variability was resolved via discussions. All the data was analyzed using NVivo software after preparing the final coding for analysis. During data analysis and interpretation, we conducted data triangulation by examining the data from the KIIs, IDIs, spot checks, and PhotoVoice and ranking to enhance the credibility of the research and align multiple perspectives for a comprehensive understanding.

Informed consent and ethical approval

All the eligible study participants were provided information about the study verbally and in writing, with opportunities to discuss concerns or refuse participation. Informed consent was sought from every participant (family members or caregivers approved on behalf of participants where necessary), and two-staged consent was taken for conducting Photovoice. Additional consent was obtained from participants for any photography. Confidentiality of information was strictly maintained. While enrolling the minors aged 5-9 years or severely sick participants, we learned about their experiences through adult family members and caregivers (proxy survey). Interviews were conducted in a private location, according to the respondent's convenience. The study protocol received ethical approval from icddr,b, as well as respective ethics boards from Indonesia, Kenya, and Zambia.

Result dissemination workshops in Indonesia, Kenya, and Zambia

After completing the data collection and analysis, we conducted a summary workshop with the key findings among the advisory group and developed key recommendations for the three main evaluation countries (Indonesia, Kenya, and Zambia). We also shared artefacts developed by participants (particularly photographs and captions from PhotoVoice activities) with the advisory group. We refined the recommendations based on the suggestions from the advisory stakeholders.

Figure 16: Study findings dissemination session in Kenya

RESULTS

Response rate

Data collectors approached the homes of 5314 people across three evaluation countries (Indonesia: 1407, Kenya: 1814, and Zambia: 2093). 3445 (65%) people were present and thus eligible to complete the survey, and 1624 household members (30%) were not available but had a household member who could complete the survey on their behalf as a proxy. The homes of 245 people (5%) visited had no household members present, and thus no one could act as a proxy on their behalf. Of those people available to be screened for the survey (directly or by proxy), only 187 (4%) refused. Once screened, eligible people were then asked if they consented to participate in the full survey. In total, 340 people participated in the survey in Indonesia, 542 in Kenya, and 321 in Zambia. The local healthcare staff were involved in the enumeration in Zambia, and the local health workers/volunteers guided the data collection team in Indonesia, which might have worked for the high response rate there. (Table 2)

Table 2: Availability and response rate of the participants for the disability screening

Categories	Indonesia Total n (%)	Kenya Total n (%)	Zambia Total n (%)	Overall Total n (%)
Participant's availability status	N=1407	N=1814	N=2093	N=5314
Available¥	877 (62)	972 (54)	1596 (76)	3445 (65)
Not available (proxy to report) *	515 (37)	775 (43)	334 (16)	1624 (30)
Not available (No HH members to report) **	15 (1)	67 (3)	163 (8)	245 (5)
Response rate for screening (initial household visit to identify disability)				
Agreed to participate in screening	1392 (100)	1588 (91)	1902 (99)	4882 (96)
Refused	0 (0)	159 (9)	28 (1)	187 (4)
Total	1392 (100)	1747 (100)	1930 (100)	5069 (100)
Persons considered for the survey (people with disability and their comparisons)* **	343 (25)	551 (35)	322 (17)	1216 (25)
Response rate for the survey				
Agreed to participate in survey	340 (99)	542 (98)	321 (99.7)	1203 (99)
Refused	3 (1)	9 (2)	1 (0.3)	13 (1)

¥ Available after completing two repeated visits
* Proxy was taken after ensuring two visits and/or determining that the persons will not be available during the data collection period.
** Determined after ensuring at least two visits
*** Considered based on the availability of people with disability, and identified comparison persons without disabilities (age and sex-matched).

Disability prevalence

During the disability screening, we reached a total of 4882 people from the three countries, the overall prevalence of disability was 16% (Indonesia 14%, Kenya 21%, and Zambia 13%) (Figure 17). The most commonly reported functional limitation were in the domains of mobility (8%), communication (4%) and vision (4%), while anxiety (2%), and depression (1%) were less frequently reported among the screened participants. Disability prevalence increased with age and was significantly higher among older people (60+ years old) (41%), especially those aged 70+ years (50%), compared to younger people (≤59 years old) (11%). Disability was slightly higher among females (17%) than males (14%). (Figure 17)

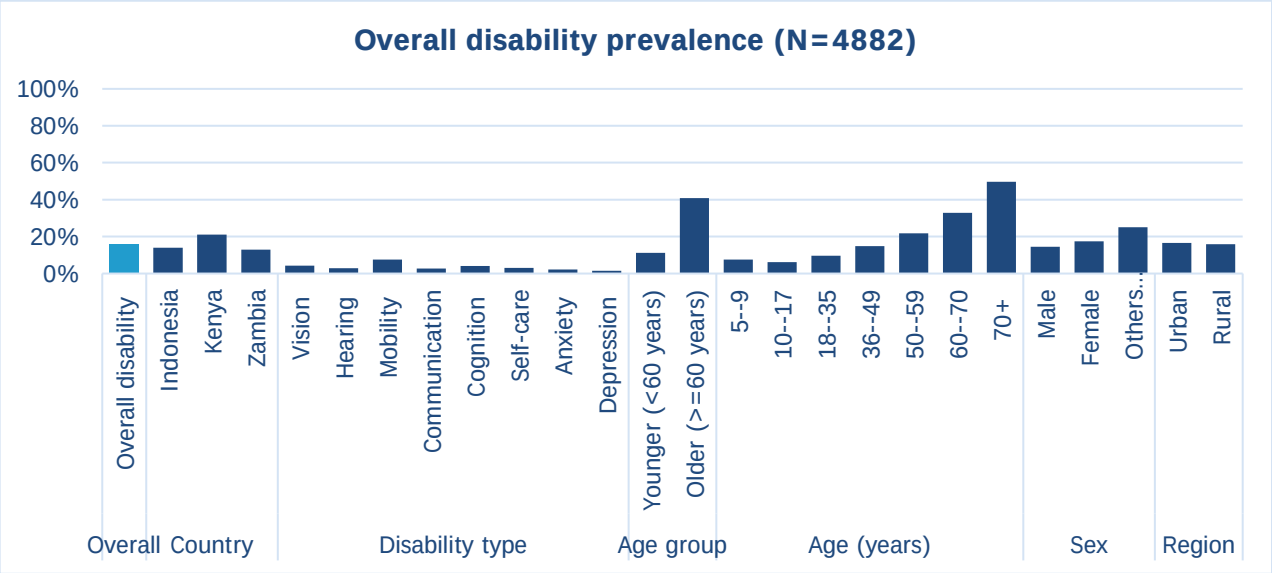


Figure 17: Overall disability prevalence

As for the country-specific prevalence, we found that a higher proportion of older people compared to younger have disabilities in all countries (Indonesia: older 40% vs younger 8%; Kenya: older 45% vs younger 15%, and Zambia: older 36% vs younger 10%), and except for the age group of 5-9 years old, we found that disability increased with age in all countries. Moreover, the prevalence of females with disabilities was slightly higher than the male with disabilities in all countries (Indonesia: female 16% vs male 12%; Kenya: female 22% vs male 21%; and Zambia: female 15% vs male 11%). Regarding the urban-rural difference in disability prevalence, we found that in Indonesia disability rate was higher in urban areas (16%) than in rural areas (13%), while in Kenya, it was higher in rural areas (23%) than in urban areas (19%). In Zambia, no significant rural (14%) vs urban (13%) differences were seen (Table 34).

Figure 18: An older person with mobility functional limitation in Kenya

Table 3: Country-wise segregation of disability prevalence

Variable	Indonesia		Kenya		Zambia	
	N	Disability Prevalence	N	Disability Prevalence	N	Disability Prevalence
Age group						
Younger (<60 years)	1136	94 (8.3)	1251	188 (15)	1676	170 (10)
Older (>=60 years)	256	103 (40)	337	150 (45)	226	81 (36)
Age (years)						
5--9	57	3 (5.3)	98	14 (14)	229	12 (5.2)
10--17	186	10 (5.4)	267	28 (10)	473	19 (4.0)
18--35	384	17 (4.4)	501	62 (12)	547	58 (11)
36--49	322	28 (8.7)	248	48 (19)	277	50 (18)
50--59	187	36 (19)	137	36 (26)	150	31 (21)
60--70	156	51 (33)	169	57 (34)	107	34 (32)
70+	100	52 (52)	168	93 (55)	119	47 (40)
Sex						
Male	675	82 (12)	719	145 (20)	825	94 (11)
Female	716	115 (16)	869	193 (22)	1074	156 (15)
Others	1	0 (0.0)	-	-	3	1 (33)
Types of region						
Urban	678	107 (16)	652	124 (19)	395	54 (14)
Rural	714	90 (13)	936	214 (23)	1507	197 (13)

Socio-demographic profile (screening)

We screened 786 people with disabilities and 4096 people without disabilities (Indonesia: 197 vs 1195; Kenya: 338 vs 1250, and Zambia: 251 vs 1651). The screened participants were well matched on sex (54% female people with disability and 59% people without disabilities) and age (mean age of 4.81 among people with disability vs 4.91 among people without disabilities). The association between the socio-demographic characteristics of the people with and without disabilities showed that disabilities were strongly associated with age and were more common in the older age groups. There was also a significant association between disability and education, and marital status observed. People with disabilities were less likely to have an education than people without disabilities. Adults with disabilities were slightly more likely to have never married/ lived together with a partner. (Table 35)

Socio-demographic profile (survey and spot check)

We enrolled a total of 1203 people (340 in Indonesia, 542 in Kenya, and 321 in Zambia) in our survey, and they are presented based on our two major comparison groups; persons with (615) vs without (588) disabilities and older (510) vs younger (693) people. Most of the respondents were from rural areas (as we had reached more rural sites), and we found a 60:40 ratio of females to males enrolled in our survey. There was no difference between sex or urban/rural population reached among the comparison groups. Among the overall study participants, people with disability were significantly more likely to be the poorest. In contrast, people with disabilities and older people were less likely to have education and access to employment than their comparison groups. Among the people with disabilities, 44% were older people, and among the older people, 53% had a disability. Disability is 1.14 times higher among older people than younger (Error! Reference source not found.).

Similarly, in Indonesia, people with disability were 5.4 times more likely to be in the older age group, though no significant association was observed in Kenya and Zambia. Similar to the overall study participants, people with disabilities in the three specific countries were significantly less likely to be in the middle or richest quantiles. Also, a statistically significant association between disability and employment status was observed

in Indonesia. However, no such statistical relationship observed in Kenya or Zambia. In Indonesia and Kenya, people with disability were significantly less likely to be married/ lived together (Table 36, Table 37).

Table 4: Socio-demographic status of the survey respondents, older people 60+, younger people <60

Variables	Categories	Person with disability n (%) N=615	Person without disability n (%) N=588	AOR (95% CI)	Older people n (%) N=510	Younger people n (%) N=693	AOR (95% CI)
Types of region	Urban	225 (37)	219 (37)	0.98 (0.79-1.23)	184 (36)	260 (38)	0.61 (0.36-1.05)
	Rural	390 (63)	369 (63)	Ref.	326 (64)	433 (63)	Ref.
Sex of the respondent	Male	238 (39)	234 (40)	Ref.	200 (39)	272 (39)	Ref.
	Female	376 (61)	353 (60)	1.01 (0.85-1.21)	310 (61)	419 (61)	0.9 (0.76-1.31)
	Others[a]	1 (0.2)	1 (0.2)	-	0 (0.0)	2 (0.3)	-
Socioeconomic status (SES)	1st quantile (poorest)	152 (25)	91 (16)	Ref.	99 (19)	144 (21)	Ref.
	2nd quantile	123 (20)	116 (20)	**0.63 (0.47-0.85)**	117 (23)	122 (18)	1.25 (0.89-1.76)
	3rd quantile	116 (19)	125 (21)	**0.56 (0.41-0.76)**	94 (18)	147 (21)	0.79 (0.60-1.04)
	4th quantile	116 (19)	125 (21)	**0.54 (0.37-0.78)**	112 (22)	129 (19)	1.04 (0.69-1.58)
	5th quantile (richest)	108 (18)	131 (22)	**0.48 (0.36-0.63)**	88 (17)	151 (22)	0.70 (0.47-1.05)
Education	No education	151 (25)	68 (112)	Ref.	142 (28)	77 (11)	Ref.
	Primary education (1-5)	187 (30)	186 (32)	**0.49 (0.33-0.75)**	153 (30)	220 (32)	**0.35 (0.20-0.59)**
	Secondary education (6-12)	251 (41)	294 (50)	**0.39 (0.29-0.52)**	189 (37)	356 (51)	**0.21 (0.14-0.31)**
	Higher education (12+)	26 (4.2)	40 (6.8)	**0.33 (0.27-0.47)**	26 (5.1)	40 (5.8)	**0.23 (0.13-0.39)**
Employment status	Full-time employment	11 (1.8)	38 (6.5)	**0.18 (0.09-0.36)**	8 (1.6)	41 (5.9)	**0.25 (0.08-0.76)**
	Part-time employment	28 (4.6)	38 (6.5)	**0.45 (0.28-0.71)**	17 (3.3)	49 (7.1)	**0.29 (0.16-0.57)**
	Self-employed	89 (15)	113 (19)	**0.52 (0.33-0.82)**	90 (18)	112 (16)	0.89 (0.62-1.29)
	Home-maker	95 (15)	107 (18)	**0.47 (0.33-0.66)**	99 (19)	103 (15)	0.99 (0.65-1.53)
	Student	48 (7.8)	58 (9.9)	**0.58 (0.38-0.89)**	0 (0.0)	106 (15)	
	Retired	47 (7.6)	45 (7.7)	**0.61 (0.38-0.96)**	88 (17)	4 (0.6)	**26.6 (10.69-65.96)**
	Unemployed	259 (42)	179 (30)	Ref.	186 (37)	252 (36)	Ref.
	Pre-school/ not to school yet[a]	2 (0.3)	0 (0.0)	-	0 (0.0)	2 (0.3)	-
	Other	36 (5.9)	10 (1.7)	**2.58 (1.06-6.21)**	22 (4.3)	24 (3.5)	0.86 (0.4-1.86)
Ageing	Older	272 (44)	238 (41)	**1.15 (1-1.3)**	-	-	
	Younger	343 (56)	350 (60)	Ref.	-	-	
Disability	Person with disability	-	-	-	272 (53)	343 (50)	**1.14 (1-1.31)**
	Person without disability	-	-	-	238 (47)	350 (51)	Ref.

Bold indicates p-value<0.05
8 observations were excluded from the Indonesia data due to the unavailability of matched case-control pair.
[a] Categories that exhibit complete separation, are excluded from the regression analysis.

COVID-19 exposure and Vaccination rate

Around one-third of the respondents suffered from COVID-19 symptoms (we had to use self-reported COVID-19 symptoms rather than confirmed infection due to a lack of testing). No significant difference was seen regarding the exposure to COVID-19 among people with disability vs without disabilities and older people vs younger people across three countries. However, the vaccination rate was lower among people with disability (59%) compare to without disabilities (71%) and this disparity appears more in Indonesia (people with disability: 69%, persons without disabilities: 94%) followed by Kenya (people with disability: 42%, persons without disabilities: 52%) while no disparity was observed in Zambia (people with disability: 78%, persons without disabilities: 78%). Older people received more vaccines in Kenya (Older 51%, younger 43%) and Zambia (older 85%, younger 74%) while younger people received more in Indonesia (older 77%, younger 86%). (Table 5, Table 6, Figure 19Error! Reference source not found.Error! Reference source not found.)

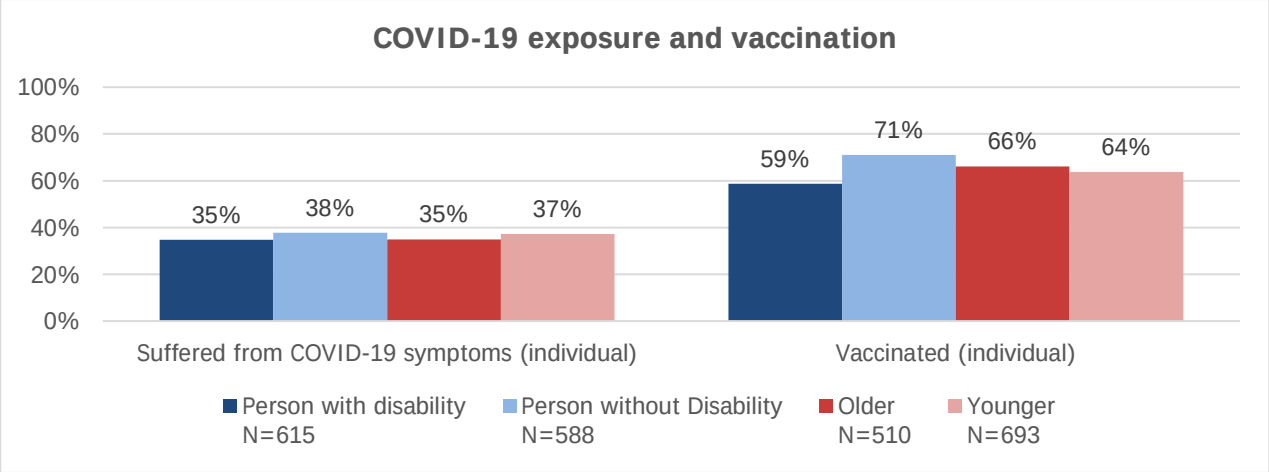


Figure 19: COVID-19 exposure and vaccination rate

Table 5: Exposure to COVID-19 and vaccination status by disability status

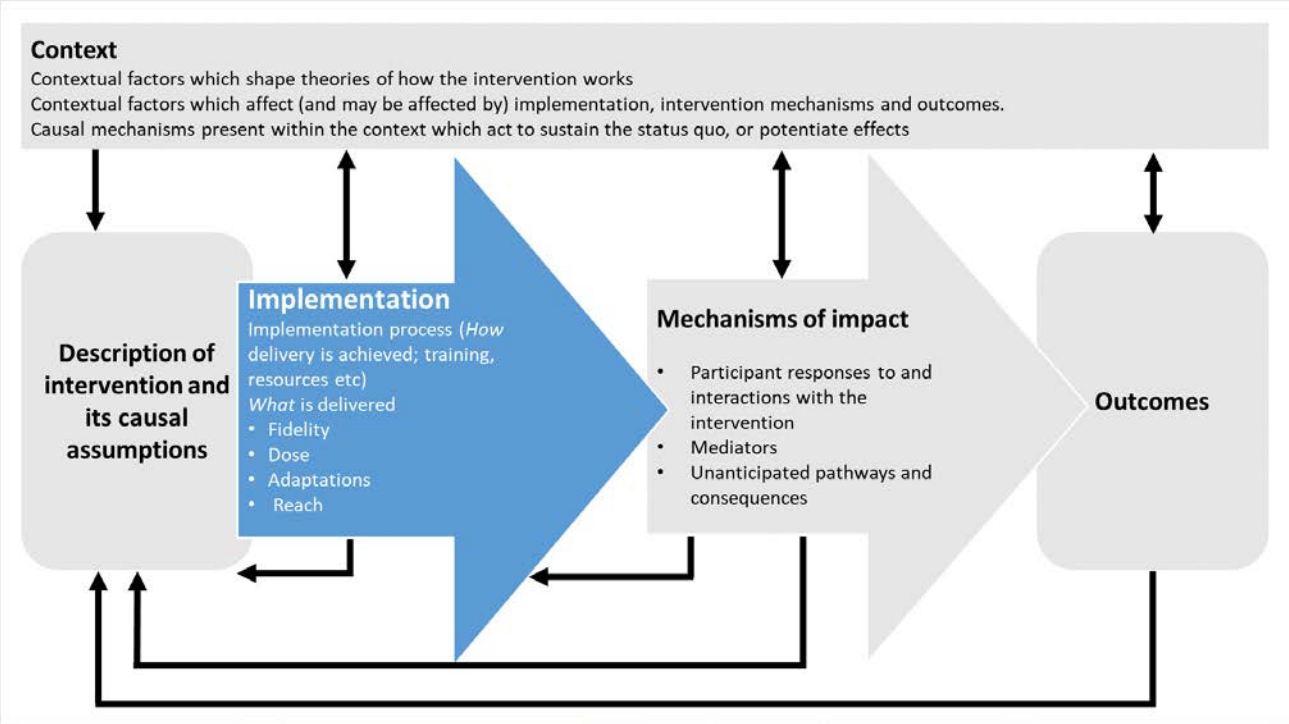
Indicators	Indonesia			Kenya			Zambia		
	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value
	N=173	N=167		N=282	N=260		N=160	N=161	
Suffered from symptoms (individual)	64 (37.0)	68 (40.7)	0.48	33 (11.7)	30 (11.5)	0.95	117 (73.1)	124 (77.0)	0.42
Vaccinated (individual)	120 (69.4)	157 (94.0)	<0.001	117 (41.5)	136 (52.3)	0.012	124 (77.5)	125 (77.6)	0.98

Table 6: Exposure to COVID,19 and vaccination status by ageing

Indicators	Indonesia			Kenya			Zambia		
	Older	Younger	p-value	Older	Younger	p-value	Older	Younger	p-value
	N=162	N=178		N=246	N=296		N=102	N=219	
Suffered from symptoms (individual)	71 (43.8)	61 (34.3)	0.071	28 (11.4)	35 (11.8)	0.87	79 (77.5)	162 (74.0)	0.50
Vaccinated (individual)	124 (76.5)	153 (86.0)	0.026	126 (51.2)	127 (42.9)	0.053	87 (85.3)	162 (74.0)	0.024

Figure 20: A respondent is showing his COVID-19 vaccination card in Zambia

Implementation:



21: MRC framework: Implementation

Key findings

Implementation process and adaptation

- In all three countries, HBCC interventions installed customized handwashing stations (Indonesia: foot-paddled water taps and sensors; Zambia: “Happy taps”) to respond to the needs of people with disabilities.
- In Kenya, specialized masks for persons who had functional limitations with hearing were provided.
- In Indonesia, students, parents, and teachers were trained online with the availability of sign language interpreters.

Reach and Dose: Interventions received by the participants

Messages

- Overall, 90% of people from three countries (Indonesia 88%, Kenya 96%, and Zambia 87%) received behaviour change messages.
- People with disability and older people were 3-10% less likely to receive messages than their comparison groups in all three countries.
- Message reach was 1.6 times higher among female people with disability compared to male people with disability.
- People belonging to the highest socio-economic groups (richest) were 4.53 times more likely to receive the intervention messages than the poorest.
- People with disability who have primary education and secondary education were 2-3 times more likely to receive the messages compared to those people with disability who have no education.
- Message reach also significantly varied by disability type. In Indonesia and Kenya, people with hearing, communication, cognition/remembering and self-care difficulties had a lower level of reach (4-27%) of the messages than other functional limitations. In Kenya, people with self-care difficulties had 8-13% lower reach than other functional limitations.
- Most people receive messages through TV/radio programs, and community-level campaigns. However, in Indonesia and Zambia, people with disabilities were significantly less likely to receive messages from the community-level campaign, and social media.
- All the country programs rarely discussed the vulnerability and support needed for people with disability and older people and these messages reached only a few people (mentioned by only 1-3%) in three countries.
- Implementing partners did not collect disability or age-specific data to estimate reach by these population sub-groups. As they could not see whether intervention was working for people with disability and older people or not, they could not make them more tailored for these groups

Hygiene products

- Among all three countries, product recipients were higher in Indonesia (60%) compared to Kenya (17%) and Zambia (15%) irrespective of their disability and ageing. In Indonesia, people mostly receive masks (60%), followed by sanitizer (35%), and soap (10%).
- In all three countries, people who had functional limitations people with disability hearing, self-care, and communication (except Zambia) were least likely to receive hygiene products than other types of disabilities.
- People with disability who had full-time employments were more likely to receive hygiene products than others.
- In Indonesia, rural people with disability had nearly 60% lower odds of receiving hygiene products, while in Kenya and Zambia, rural people with disability were significantly more likely to receive hygiene products compared to urban people with disability.

Handwashing stations

- Twenty two percent of the public handwashing stations (installed by the HBCC programs) were not functioning (spot check). In Kenya, we found more non-functional infrastructure (28%) than Indonesia (19%) and Zambia (21%).
- In all three countries, lack of supply of handwashing commodities, water, and lack of maintenance of the handwashing facilities were reported as the reasons for the non-functional handwashing stations.
- In Zambia, inadequate allocation of funds for hygiene commodities (of the projects being evaluated) resulted in limited coverage of hand washing stations in some districts.

Implementation process and adaptation

The selected HBCC interventions performed diverse country-specific activities to invite COVID-19 behavior change. However, their key activities can be classified into the following two categories- hardware and software activities.

Hardware activities included the installation of handwashing facilities in public places such as schools, clinics, police stations, bus stops, and marketplaces, as well as the reconstruction of water and sanitation facilities. It also consists distribution of hygiene kits, e.g., handwashing soap, face masks, hand sanitizers, handwashing buckets, and cleaning materials.

Software activities included training of target beneficiaries in COVID-19 prevention, hygiene behaviour, infection prevention and control, and soap making; dissemination of messages on hygiene behaviour using mass media (TV, radio, public address system), print (posters), interpersonal (e.g. musicians/influencers, door-to-door campaigns, religious places), and social media (e.g., Facebook, WhatsApp).

The key informant (program personnel) shared how they considered disability-ageing inclusion and made the necessary and contextual adaptations.

Indonesia

- Trained the students, parents, teachers (including those who teach students with disabilities), and healthcare providers
- Shifted to online training to reduce the risk of COVID-19 transmission and used sign language interpreters during the training
- Installed customized hand washing stations with foot-paddled water taps and sensors in schools for students with disabilities
- Written/visual instructions were provided to the students with the steps of handwashing

Zambia

- Modified hand washing facilities to respond to the needs of people living with disabilities (wheelchair access) and to suit children

Kenya

- Provided special handwashing facilities called 'Happy taps', disinfectants, and masks to institutions for children with disabilities
- Provided specialized masks for persons with hearing functional limitations.

> ***"We tried to come up with masks for the hearing functional limitation…those that have a clear panel around the mouth so that they [persons with hearing functional limitations] can lip read" (Key informant, AMREF, Kenya).***

Reach and Dose: Interventions received by the participants

Three major intervention components delivered in all countries were i) Providing behaviour change messages, ii) Providing hygiene products ii) Installing handwashing stations in public settings. The following demonstrates the reach/dose of these key intervention activities.

Messages

COVID-19 behaviour change messages reached around 85% of the people with disability and older people from the three countries (Indonesia 82-85%, Kenya 83-85%, and Zambia 94%). No significant socio-demographic (in terms of region, types of region, age, or sex) difference was seen among the comparison groups receiving messages. In Kenya and Zambia, among the message recipients, there was a significant

association between disability, education and employment status. In Indonesia, among the message recipients, disability shows a significant association only with education. (Table 40). Message recipients also significantly varied with ageing by their socio-demographic characteristics in all three countries individually. In Kenya and Zambia, older people who were female lived in rural areas, and retired were more likely to receive messages, while in Indonesia opposite of it was observed (Table 42).

Among people with disability, message reach was higher among females, who belonged to the highest socio-economic groups (richest). In Indonesia, a stronger association between disability and socio-economic status was observed, but in Kenya and Zambia, no such association was exhibited. However, in any of these three countries, no significant relationship between people with disabilities' education level, employment status and their message recipients was observed. The reach of the intervention messages didn't significantly vary by type of disability. Although a little difference was observed in message reach across the types of disabilities, people who had functional limitations with communication (70%), selfcare (74%), remembering (75%), and hearing (80%) were 5-20% less likely to receive messages than other functional limitation groups. (Figure 22) However, in Indonesia and Zambia, people with functional limitations in vision, cognition, and self-care had a significantly lower reach of the messages than other types of disabilities (mobility, hearing, depression, anxiety). No significant association between message received and types of disabilities was observed in Kenya. (Table 41, Table 38 **,** Table 39**,** Table 46)

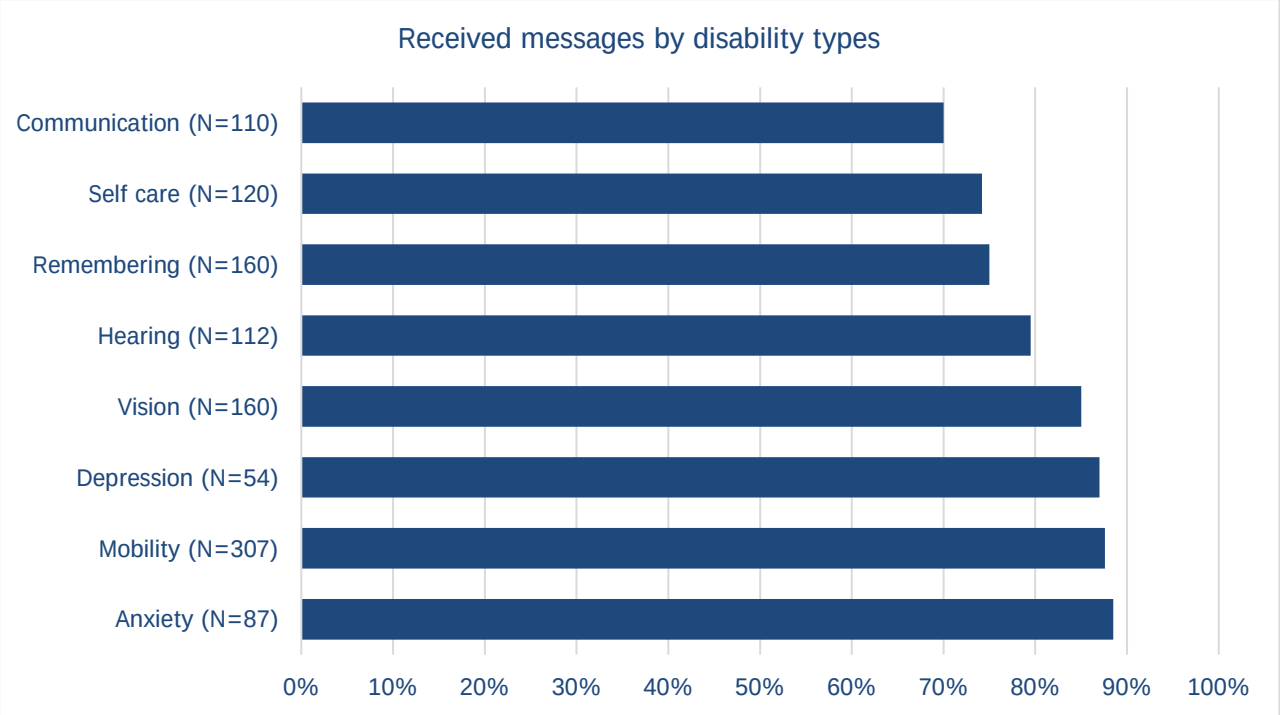


Figure 22: Received COVID-19 behaviour change messages by disability type (overall)

Figure 23: Material for behaviour change messages from WaterAid in Zambia

Most study participants received messages from TV/radio and community-level campaigns. However, the reach of these two delivery mediums was slightly lower for people with disabilities and older people. (Figure 24) In Indonesia and Zambia, people with disabilities were significantly less likely to receive messages from community-level campaigns and social media. However, in Kenya, no statistically significant relationship between disability and mediums was observed. (Table 38) In all three countries, older people were significantly less likely to receive messages from social media and educational media. While in all three countries, community-level campaigns reached older people 1-4% more frequently than younger people. (Table 39)

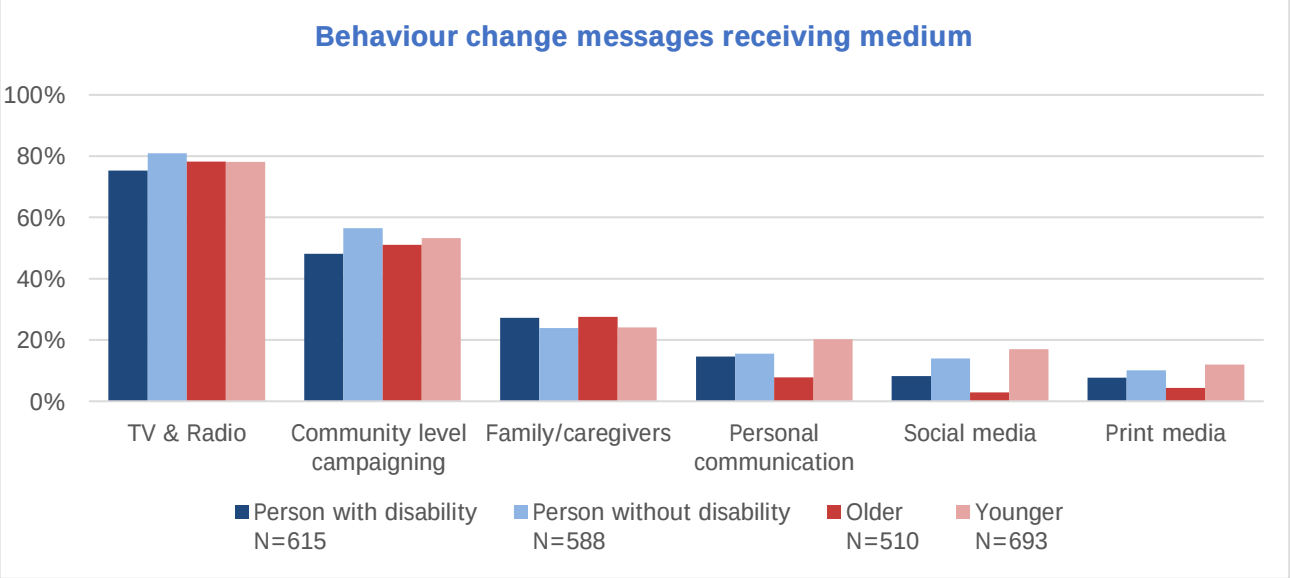


Figure 24: Behaviour change messages receiving medium

Figure 25: A person with a disability was watching COVID-19-related behaviour change messages on TV

Mask-wearing, frequently washing hands with soap/sanitizer, and maintaining social distancing were the key messages which had significantly lower reach among people with disability and older people compared to their comparison groups. (Figure 26) However, In Kenya and Zambia, the reach of these key messages was significantly associated with lower odds of disability, while no such association was found in Indonesia (Table 38: Reach and dose of the HBCC intervention delivery components by disability status). There was also a significant association exhibited by ageing with the reach of these messages in Indonesia and Zambia (Table 39). Moreover, the behaviour change messages regarding the necessity of cleaning assistive devices or the vulnerability and support required for people with disability and older people were rarely mentioned and had poor reach among these groups (only 1-3% of people were reached) across three countries. However, people with disabilities received 1.35 times more messages from the HBCC intervention delivery than their comparison group. In Kenya, people with disabilities were significantly less likely to receive messages from the government. However, no significant difference was observed in the other two countries (Table 38: Reach and dose of the HBCC intervention delivery components by disability status).

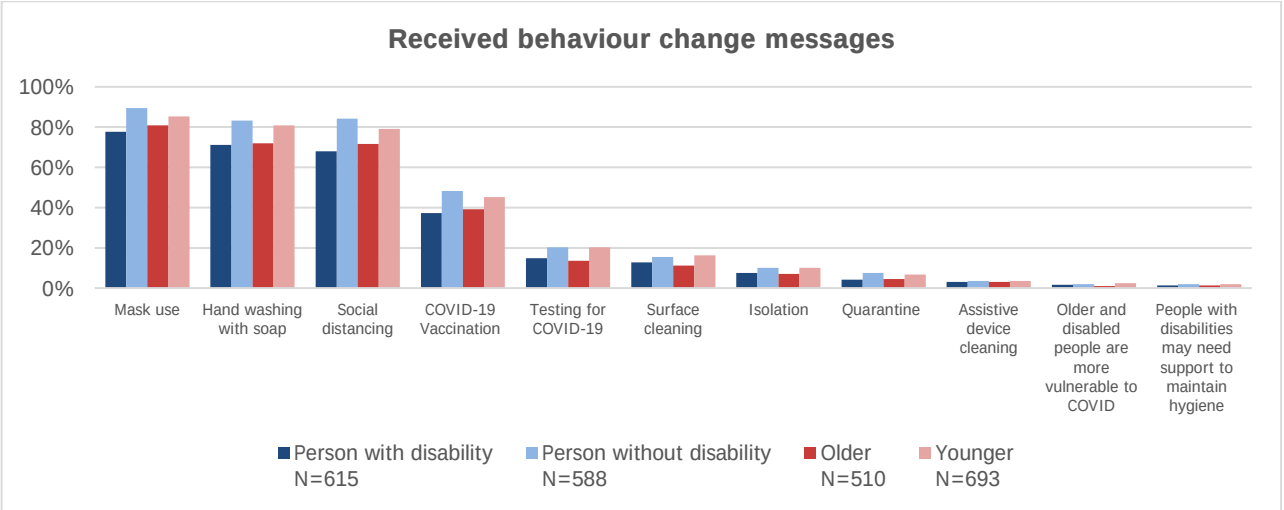


Figure 26: Received behaviour change messages

During the IDIs, the caregivers (Zambia) also raised concerns that the behaviour change messages circulated during COVID-19 had no specific guidance for people with disability and older people. While people with disabilities confirmed receiving messages through radio, TV, phone, and print (pamphlets, posters) media, they (People with disabilities) found interpersonal communication more effective, while some mentioned door-to-door campaigns.

> ***"Initially, the messages we got from the radio were not easy because there was no chance or opportunity to ask questions so that we could understand more about it. But the one we received while talking to them face to face allowed us to clarify anything that we did not understand because if you don't understand, then you are not able to do the right thing to protect yourself, so we asked where we were not clear, and that is how we managed to abide by what was required of us to keep safe." (Caregiver, Zambia)***

The qualitative findings show why the intervention reach was not similar for diverse functional limitation groups or didn't circulate messages focused on the vulnerability of people with disability and older people. The KIIs (program personnel) from Indonesia mentioned that the HBCC program was not explicitly focused on disabilities and older people; it mainly concentrated on schools and adjacent communities. That's why they did not provide any tailored intervention to these groups. They also said one intervention might not be suitable for all functional limitation groups. For instance, sign language interpreters were used to ensure the messages were delivered to everyone, but the student with vision limitations did not get the messages.

> ***"The HBCC program was not focused on people with disability or the elderly; instead, they [Implementers] were meant for schools and the community, and they [Implementers] go through the regional health facility" (Key informant, Indonesia).***

> ***"So, I can't say that we have a particular demographic group in mind that was targeted because the target was just members of the public. But of course, bearing in mind that people with disabilities were specifically targeted, as part of inclusiveness of the design of those handwash stations." (Key informant, zambia)***

In Zambia, the KIIs responded that although they reached children, older people, and people with disability through both generalized and targeted approaches, they or their implementing partners did not collect functional limitation or age-specific data to estimate reach. As they could not see whether the intervention was working for people with disability and older people, they could not tailor them to these groups. Moreover, some key informants in Zambia reported that the HBCC interventions did not reach older people due to the absence of a partner organization that works with older people. In addition, our qualitative findings from Kenya showed that the intervention partners did not have any interventions specifically targeting older people. They expected that the mentioned interventions for the general population (aged 30 to 65) also extended to older persons. According to one of the key informants, the older people were reached '*as a secondary audience'*.

Hygiene products

Around one-fourth of the overall people with disability received masks, around 12% received alcohol-based hand sanitizers, and less than 10% received soap during COVID-19. In Indonesia, among people with disability and older people, almost 60% received masks, while around 35% received sanitizer, and only 10% received soap. However, in Kenya and Zambia, a few proportions of people with disability and older people reported receiving soap (Kenya: 7%, Zambia: 2%), sanitizer (Kenya: 4%, Zambia: 7%), and masks (Kenya: 15%, Zambia: 12%). In all three countries, 7-23% more people with disability and 4-9% more older people received hygiene products at home compared to the comparison groups. Although in Indonesia and Zambia, the differences weren't statistically significant. (Table 38, Table 39).

The hygiene product distribution was almost similar between the comparison groups regardless of their socio-demographic status in any country. However, in all three countries, a significant difference was observed between disability/ ageing and the socio-demographic characteristics of those who received hygiene products. In Indonesia, rural people with disabilities and older people had lower odds of receiving hygiene products. While in Kenya and Zambia, rural people with disabilities and older people were significantly more likely to receive hygiene products than urban people with disabilities/ older people. There was also a significant difference in product reach by ethnicity and employment status in Kenya and Zambia. No significant association was observed in product reach among people with disabilities/ older people by their socio-economic status in all three countries. (Table 44, Table 43, Table 45).

In all three countries, people with disabilities who had vision limitations were more likely to receive hygiene than people without vision limitations. Among other types of disabilities, people who had difficulties in self-caring (except Indonesia), cognition, and hearing (except Kenya) were less likely to receive hygiene products across three countries. However, types of disabilities were not significantly associated with the reach of hygiene products in all three countries separately. (Table 44, Table 46, Figure 27)

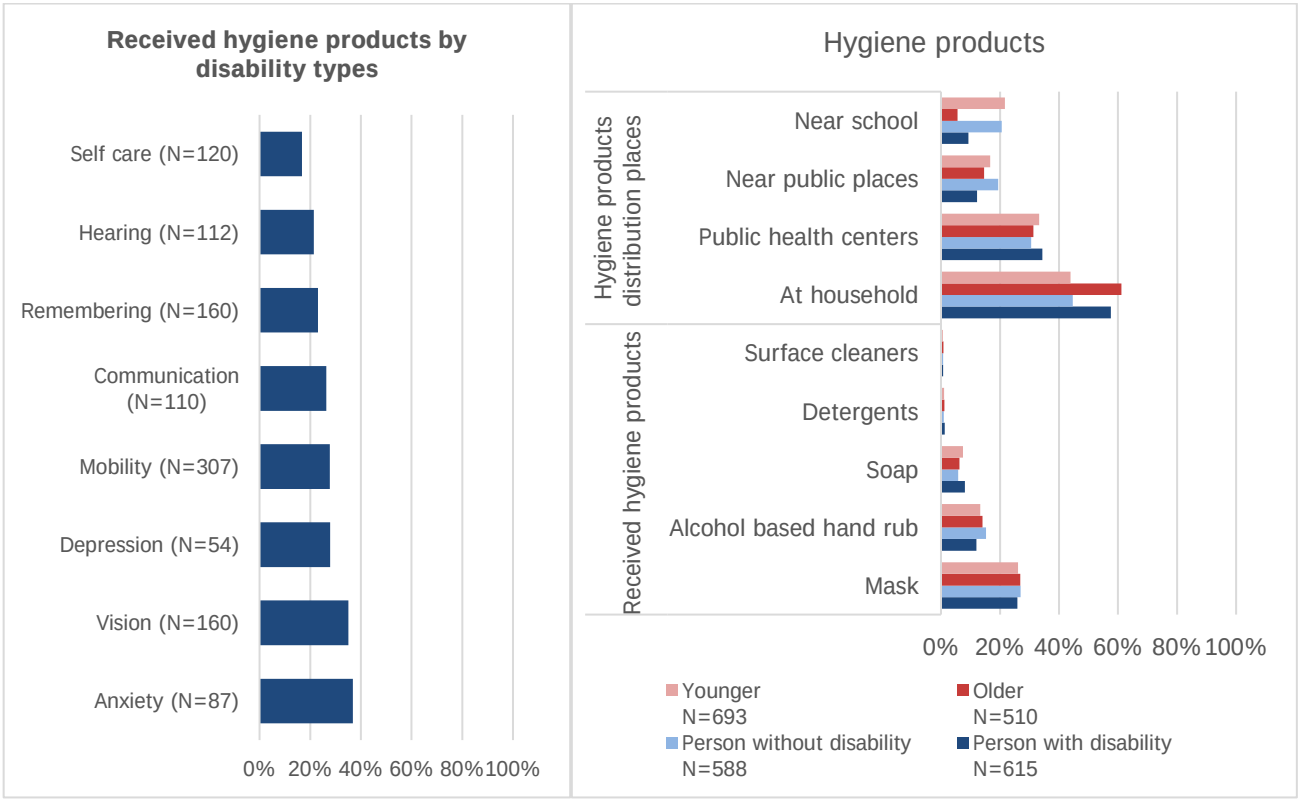


Figure 27: Received hygiene products

Handwashing stations

We spot-checked 160 handwashing stations installed by the selected HBCC grantees in three countries (Indonesia 52, Kenya 51, and Zambia 57). We found 22% of those handwashing stations were not functioning during the data collection period. In Kenya, we found more non-functional infrastructure (28%) than in Indonesia (19%) and Zambia (21%). In Indonesia, the functionality of the handwashing stations installed in West Bandung areas was significantly 36% lower compared to North Jakarta. Similarly, in Kenya, a higher percentage of non-functional handwashing stations were found in Embu (67%) compared to Homabay, Kwale, and Taita Taveta (72%-80%). While in Zambia, Samfya had the lowest functional handwashing station (72%) compared to Monze (88%) and Mwandi (83%). (Table 47**,** Figure 28)

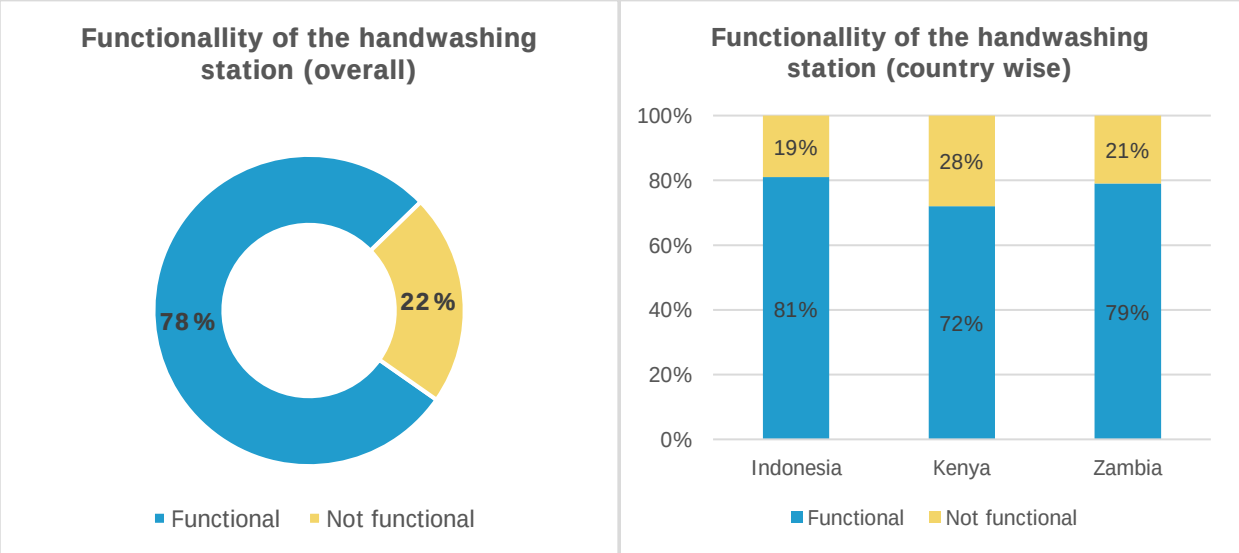


Figure 28: Functionality of the handwashing stations installed in the HBCC program

Figure 29: A non-functional handwashing station in Indonesia

During the qualitative exploration in Zambia, all categories of respondents mentioned seeing handwashing infrastructure in clinics and schools. However, they thought the hand washing facilities did not significantly impact COVID prevention because they were set up in a few public places.

The Key Informants in Zambia reported inadequate allocation of funds for hygiene commodities resulted in limited coverage of hand washing stations in some districts.

> *"I would say that is a weakness because of the obvious limitation of funds; we couldn't cover every public place. So, we had a limited number.' (Key informant, Zambia)*

Learning from all countries shows that the lack of supply of needed handwashing commodities, lack of management after installation, and petty theft of the materials hindered the functionality of handwashing stations.

In Zambia, while the demand for handwashing infrastructure increased, there was no provision to supply needed commodities such as soap and water. Moreover, the key informants expressed some concerns regarding the theft of commodities like sanitizers, hand-washing soap, and handwashing buckets, with few solutions for ensuring equal access while maintaining the security of these products. Such petty theft reflects poverty in the community and the household.

In Zambia and Indonesia, the lack of maintenance of the handwashing facilities once damaged was a concern. Caregivers disclosed some hand-washing facilities had broken down and were not operational. Some community members reported broken taps due to frequent use at newly installed handwashing facilities. Also, while the installed hand washing taps were made disability-inclusive with foot paddles and sensors, in many cases, the equipment became damaged and was never replaced without proper maintenance.

> *"Good devices but, without maintenance or…. maybe (without knowing) how to maintain and others, at the end the censors don't work." (Teacher, Indonesia)*

Mechanism of Impact

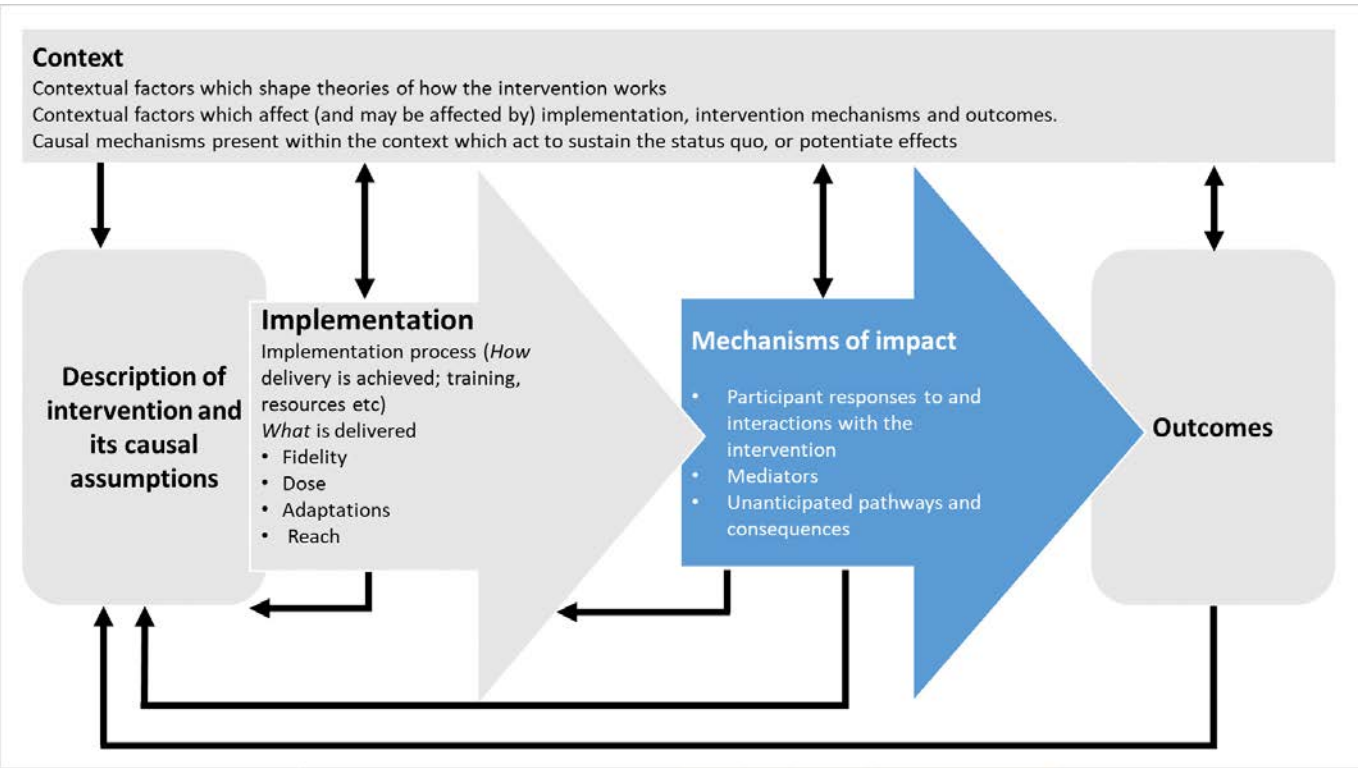


Figure 30: MRC framework: Mechanism of impact

Key findings

Participants behavioral responses: Satisfaction, appropriateness, and inclusiveness

Messages

- In all three countries people with disability and older people had about the same likelihood to respond positively in terms of acceptability, feasibility, appropriateness, satisfaction, and effectiveness as their comparison groups.

Public handwashing stations

- In all three countries, a higher proportion of people with disability and older people (more than 80%) were reported to reach the handwashing facility, water, and cleaning agents without depending on others.
- Person with disabilities in Indonesia were more reported (84%) to use the handwashing station regularly compared to person with disabilities in Kenya (60%) and Zambia (67%).
- In Kenya and Zambia, older people were little more reported to be satisfied than the younger people, while in Indonesia, younger were more satisfied than older.

Mediators: How the intervention produced impact?

- In all three countries, people with disability psychological factors (strong habit of washing hands, positive attitude towards washing hands, willingness to keep others safe, and perceived risk of COVID-19) significantly mediated the effect of the intervention (message/ handwashing cleaning agents' distribution) on changing their handwashing behaviour.
- In every country, people with disability and older people received most frequent hygiene messages from their role models (health professionals, family/ caregivers, and political leaders) which positively influence their hygiene practices.
- Visual/audio reminders along with demonstrating practical examples (hands-on training) were reported to be more effective for people with disability and older people in Indonesia and Zambia.
- The impact that HBCC intervention produced in the five selected countries was mediated by effective collaborations with and buy-in from government and non-governmental organizations. Such as AMREF, WaterAid, and Plan International involved OPDs or OPOs in designing/activity of the HBCC interventions which helped them have a more inclusive intervention by enabling them to identify the challenges faced by people with disability and older persons.
- In Kenya, involving people with disability and older people as influencers in message delivery worked well to invite inclusiveness.

Accessibility of HBCC public handwashing stations

- Around half of the **entry path** and **handwashing station area** of installed HBCC handwashing stations had no smooth/flat surface, were slippery and had inadequate space for wheelchair access. While three-quarters of the entry path had barriers/obstacles (in the way) for wheelchair entry; No consideration for support rails, landmark/guiding rope/tactile marking at the entry path.
- 78% of handwashing stations had water availability but 16% was easily accessible for wheelchair users or children, while the availability of handwashing agents (e.g. soap) were 41%, but only 8% of these were easily reachable.
- The availability of disability-inclusive water sources were also rare. Only 16% of the handwashing stations had foot-operated taps, and 3% had elbow-operated taps; sensor taps were available only in 2% of the handwashing stations in Indonesia.
- Availability of colour contrast to distinguish handwashing places was very low (20%) while around one-fourth did not have any lighting facility for the night.

Barriers to disability-ageing inclusion

- Older people (compared to younger) in Zambia had more challenges in remembering and adapting the COVID-19 preventive measures and following these measures was also financially burdensome for some of them.
- The main barriers reported by people with disability and older people in all three countries for not using the public handwashing station were the distance from the home to the handwashing stations and the heights of the installed handwashing stations (put in low or high level) in many of the places.

- KII from Indonesia, Zambia and Bangladesh reported that installing inclusive handwashing stations is challenging because of the high price, lack of suppliers, and finding/managing a suitable place to install them.
- 6-8% of people with disability face difficulties accessing their household handwashing places due to the unavailability of assistance in three countries.
- According to the Key informants from Kenya, Indonesia, and Bangladesh, the short duration of the interventions, lack of training on disability ageing inclusion, lack of effective mechanism to maintain the facilities, lack of awareness among the community were acted as barrier to disability-ageing inclusion handwashing stations.
- Learning from all five countries shows that less involvement of OPDs and OPOs in program design and implementation also acted as barriers and more involvement acted as facilitators for inclusion.
- Learning from Kenya shows that the interventions tend to focus on visible physical disabilities (e.g. wheelchair users) which excluded the inclusion of diverse types of disabilities.
- Overall, non-inclusive environment (infrastructure, transport system) in society also hindered the inclusion of disability.

Behavioral responses: Satisfaction, appropriateness, and inclusiveness

Experience with behaviour change messages

In Indonesia and Kenya, there was less difference (3-6%) among the people with vs without disabilities and older vs young people regarding the appropriateness, understandability, acceptability, feasibility, and effectivity of the hygiene messages. While in Zambia, the difference was around 15% irrespective of disability and ageing. During the intervention, hygiene messages appeared appropriate and accessible for about 90% of people with disability in all three countries. According to them, they were also significantly effective in preventing COVID-19. In all three countries, a statistically significant association between people's positive responses regarding intervention messages' feasibility, effectiveness and disability were observed. While a significant association between ageing and experiences of the messages were observed only in Zambia. (Figure 31, Table 7, Table 8)

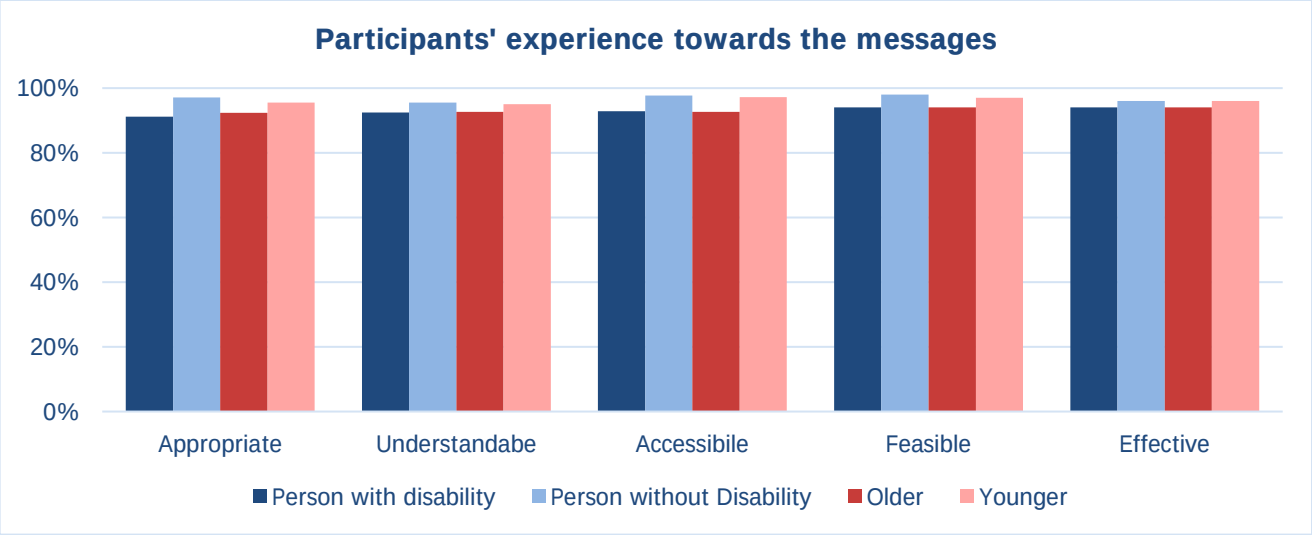


Figure 31: Participants' experiences towards messages

Table 7: Experiences of people with vs. without disabilities with the messages

Indicators	Indonesia			Kenya			Zambia		
	Person with disability N=143	Person without Disability N=156	AOR (95% CI)	Person with disability N=231	Person without Disability N=239	AOR (95% CI)	Person with disability N=160	Person without Disability N=161	AOR (95% CI)
Appropriateness of the messages	138 (97)	155 (99)	0.18 (0.02-1.23)*	210 (91)	228 (95)	0.47 (0.22-1.0)*	139 (87)	157 (98)	**0.11 (0.02-0.53)**
Understandability of the messages	137 (96)	155 (99)	0.17 (0.01-1.80)	214 (93)	224 (94)	0.83 (0.43-1.60)	143 (89)	152 (94)	0.43 (0.14-1.32)
Accessibility of the messages	135 (94)	156 (100)	0.07 (0.004-1.19)*	218 (94)	231 (97)	0.62 (0.23-1.68)	143 (89)	156 (97)	**0.2 (0.05-0.84)**

Feasibility of the messages	137 (96)	155 (99)	**0.29 (0.15-0.53)**	218 (95)	232 (97)	**0.39 (0.24-0.66)**	495 (80)	540 (92)	**0.25 (0.09-0.67)**
Messages are effective to reduce COVID19	135 (95)	150 (96)	**0.39 (0.25-0.62)**	214 (92)	227 (95)	**0.44 (0.27-0.73)**	142 (89)	154 (96)	**0.27 (0.08-0.89)**

Table 8: Experiences of older people vs younger people with the messages

Indicators	**Indonesia**			**Kenya**			**Zambia**		
	Older N=138	Younger N=161	AOR (95% CI)	Older N=210	Younger N=260	AOR (95% CI)	Older N=102	Younger N=219	AOR (95% CI)
Appropriateness of the messages	134 (97)	159 (99)	0.42 (0.06-2.76)	197 (94)	241(93)	1.22 (0.51-2.91)	85 (83)	211 (96)	**0.19 (0.06-0.59)**
Understandability of the messages	133 (96)	159 (99)	0.31 (0.03-3.23)	197 (94)	241 (93)	1.20 (0.49-2.93)	87 (85)	208 (95)	**0.31 (0.10-0.94)**
Accessibility of the messages	131 (95)	160 (99)	**0.11 (0.01-0.99)**	199 (95)	250 (96)	0.74 (0.16-3.41)	87 (85)	212 (97)	**0.19 (0.06-0.61)**
Sufficiency/ feasibility of the messages	136 (98)	156 (97)	0.81 (0.53-1.23)	198 (94)	252 (97)	0.63 (0.36-1.13)	84 (82)	209 (95)	**0.23 (0.11-0.48)**
Messages are effective to reduce COVID19	133 (96)	152 (94)	0.86 (0.58-1.28)	198 (94)	243 (93)	0.82 (0.48-1.41)	85 (83)	211 (96)	**0.20 (0.08-0.52)**

People with disability and older people reported receiving the messages well while expressing that it increased their perceived severity of COVID-19 and improved hygiene practices to avoid getting and transmitting the virus until the government said otherwise.

> ***"Yes, they are good preventive measures, and they are really helping us because once they give us those messages … Eeh! We have seen very few cases concerning COVID-19. Yes, which means they are working nicely." (Older people, Zambia)***

Though it was generally easy for the respondents to understand the COVID-19 messages provided through various media, few respondents, especially older people, reported that they could not understand the messages clearly. However, since the messaging was frequently repeated, some respondents could understand them later. For example, it was noted from six respondents of Embu and Kwale that they did not understand the messages at first, but they were able to understand them later.

> ***"I could understand but not everything… especially the first times I could not understand clearly". [People with disability, Kenya].***

A few caregivers of the older persons and the people with disability from Kwale and Embu thought these messages were not easily understandable. They felt that understanding the messages was difficult for the very old and severely affected people with disabilities.

> ***"For me, I could understand, and it was easy, but not for [the people with disabilities] since he is mentally challenged" [Caregiver, Kenya]***

> ***"It was easy. But for the uneducated, it was difficult [Older people, Kenya]."***

Other respondents, however, stated that they needed more explanation of the information or that they did not understand all the information given. These respondents alluded to preferring that the information be relayed to them individually.

> ***"It is not practical when you hear it from the radio compared to interacting with the person one on one" [People with disability, Kenya]***

Appropriateness: According to Key Informants, the use of local radio stations to disseminate hygiene messages led to wide coverage, which helped to increase interest in washing hands, including among the general population. All caregivers had come across some COVID-19 messaging through the radio, television, posters and physical demonstrations of handwashing and sanitizing practices, distancing and correct wearing of masks. Posters were distributed in communities and other places like schools. Caregivers cited hospitals and medical professionals as important sources of information after the radio, television, and poster messages,

even though they did not link the COVID-19 messaging to the HBCC. In comparison, people with disabilities confirmed receiving messages through radio, TV, phone, and print (pamphlets, posters) media.

The messaging on food hygiene, toilet cleanliness, and cough etiquette reflects earlier directives, while vaccine messages reflect more recent contact. However, some interviewees remarked on the lack of tailoring for different types of people, particularly those who had difficulties understanding or addressing the fact that many people who know or think they can't get that disease are not bothered. Additionally, they felt that messaging without appropriate support to practice the directives did not help:

> *"You teach somebody, you don't even ABCD [an expression meaning something], and you leave him like that, so you may not take an interest in buying that, he'll take it as a joke, let me say like that. It's better if you people teach, give very little as an example, do ABCD [an expression meaning something] and if you say give them, they say let me try to do this, (inaudible segment) that's the difference." (Older people, Zambia)*

Key Informants mentioned that organizations have been quite deliberate in working with marginalized groups like people with disability and people that are excluded. However, recipients of COVID-19 prevention messages and products perceived them to be generic and not tailored by age or ability.

> *"Your group, which has come now, is more direct on the disability and old people. But that one was covering everybody. Yes. It was not selective to say no; the old people first heard it and what it was just for everybody, the way they say in Lozi 'Kaufela' [everybody] (Person with a disability, Zambia)*

Key Informants said that people with disabilities images were included in behaviour change communication messages, and people living with disabilities were invited to attend dissemination meetings for the mid-term assessment of the HBCC intervention. While one person with a disability was reached both at home and school with messages, he did not perceive them to be tailored for people with disabilities, for example, with provision for braille or sign language. Other Key Informants agreed that while COVID-19 provided a platform for integrating different people with disabilities, some were left out and that inclusion was an afterthought dictated by the COVID-19 pandemic.

> *"There is not much inclusiveness, especially when it comes to even the context of COVID-19. We have been trying, fighting, and doing our level best to be inclusive for the people with disabilities." (Key informant, Zambia)*

Only one older disabled person noted messaging specific to caring for older people but lamented that no provisions were made to make older persons more independent, for example, by providing bicycles or walking sticks. One disabled person confirmed being told to take care of those over 50 years old:

> *"They said that CORONA would attack and kill people, especially those that are above 50, so they are not supposed to be up and about, they need to be home, and they are the ones who are the first priority to get vaccinated against it so that they may not end up sick .... we were told that if they happen to be sick, they should immediately be rushed to the health facility." (Person with disability, Zambia)*

Community members felt that COVID-19 messages were for general people and not specific to older people or people with disabilities. They highlighted the differences in disability that made it difficult for facilities to be all-encompassing.

Experiences with hygiene products

In all three Objective 1 countries, people with disabilities were 4-11% less likely to use the hygiene products delivered to them. People with disabilities also showed 4-10% less satisfaction with hygiene products than those without disabilities. However, older people were more likely to use and be satisfied with hygiene products than younger people across the three Objective 1 countries. Among the three Objective 1 countries,

people with disability and older people in Kenya reported less use and satisfaction than the other two countries. (Table 66, Table 67)

Experiences with public handwashing stations

Around 70% of people with disability and older people use the public handwashing station regularly. Among all three countries, people with disabilities in Indonesia were more reported (84%) to use the handwashing station regularly compared to people with disabilities in Kenya (60%) and Zambia (67%). (Figure 32) In all three countries, a higher proportion of people with disability and older people (more than 80%) reported reaching the handwashing facility, water, and cleaning agents without depending on others. However, almost 13% more people without disabilities could access those facilities independently compared to people with disability. These accessibilities seemed to be almost similar for each of the three countries separately. A statistically significant association between disability and access to public handwashing stations (reach the facility, water, and cleaning agents) was observed in Kenya and Zambia.

No significant age-wise disparities were observed in accessing the public place handwashing stations combinedly or separately among the three countries. Among the three countries, 13% more people with disabilities and 10% more older people in Indonesia shared positive experiences accessing public handwashing facilities compared to the other two countries. In Kenya and Zambia, older people were little more reported to be satisfied than the younger (90% vs 89%; 88% vs 85% respectively), although, in Indonesia, younger were slightly more satisfied than older (94% vs 96%). However, no statistical significance was exhibited between people's satisfaction with public handwashing station and their disability (Table 9, Table 10).

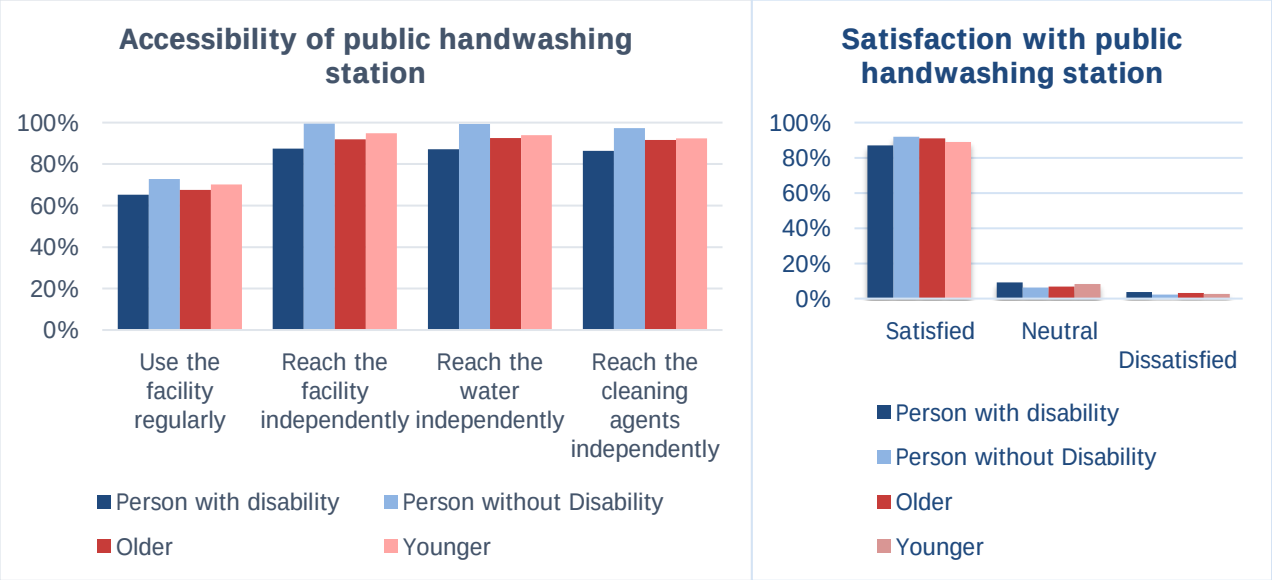


Figure 32: Reported accessibility and satisfaction towards public handwashing station

Table 9: Experiences of persons with vs without disabilities in accessing public handwashing station

Indicators	Indonesia			Kenya			Zambia		
	Person with disability N=55	Person without Disability N=69	AOR (95% CI)	Person with disability N=215	Person without Disability N=208	AOR (95% CI)	Person with disability N=112	Person without Disability N=135	AOR (95% CI)
Use the facility regularly	46 (84)	51 (74)	2.88 (0.78-10.66)	128 (60)	149 (72)	**0.57 (0.41-0.77)**	75 (67)	100 (74)	0.71 (0.38-1.34)
Reach the facility	54 (98)	69 (100)	0.21 (0.01-5.58)	184 (86)	206 (99)	**0.06 (0.01-0.21)**	96 (86)	135 (100)	**0.02 (0.001-0.37)**
Reach the water	54 (98)	69 (100)	0.21 (0.01-5.58)	185 (86)	205 (99)	**0.08 (0.02-0.28)**	94 (84)	135 (100)	**0.02 (0.001-0.32)**
Reach the cleaning agents	53 (96)	69 (100)	0.16 (0.01-3.85)	183 (85)	203 (98)	**0.13 (0.04-0.37)**	94 (84)	129 (96)	**0.13 (0.03-0.64)**
Level of satisfaction									
Very satisfied	11 (20)	14 (20)	1.02 (0.58-1.79)	62 (29)	79 (38)	0.81 (0.45-1.47)	35 (31)	46 (34)	0.97 (0.58-1.62)

satisfied	40 (73)	53 (77)	ref.	125 (58)	112 (54)	ref.	59 (53)	72 (53)	ref.
Neutral	3 (5)	2 (3)	2.06 (0.35-12.02)	20 (9.3)	14 (6.7)	1.40 (0.69-2.85)	12 (11)	10 (7.4)	1.49 (0.53-4.19)
Dissatisfied	1 (2)	0 (0)	-	7 (3.3)	2 (1.0)	3.53 (0.59-21.03)	6 (5.4)	7 (5.2)	1.07 (0.34-3.37)
Very dissatisfied	-	-	-	1 (0.5)	1 (0.5)	1.0 (0.06-17.23)	-	-	-

Table 10: Experiences of older people vs younger people in accessing public handwashing station

Indicators	Indonesia		Kenya		Zambia	
	Older N=49	Younger N=75	Older N=193	Younger N=230	Older N=67	Younger N=180
Use the facility regularly	40 (82)	57 (76)	122 (63)	155 (67)	47 (70)	128 (71)
Reach the facility	49 (100)	74 (99)	175 (91)	215 (94)	60 (90)	171 (95)
Reach the water	49 (100)	74 (99)	175 (91)	215 (94)	62 (93)	167 (93)
Reach the cleaning agents	48 (98)	74 (99)	177 (92)	209 (91)	58 (87)	165 (92)
Level of satisfaction						
Satisfied	46 (94)	72 (96)	173 (90)	205 (89)	59 (88)	153 (85)
Neutral	2 (4)	3 (4)	17 (8.8)	17 (7.4)	2 (3.0)	20 (11)
Dissatisfied	1 (2)	0 (0)	3 (1.6)	8 (4.5)	6 (9.0)	7 (3.9)

All categories of respondents mentioned seeing handwashing infrastructure in clinics and schools. While one older person with disabilities confirmed that the water point of that clinic was easy to access due to its design features:

> ***"Like the one at the clinic, I didn't need anybody. I just looked at it ... the way it operates, … using a foot pump ... the water comes out from the tank. Then you wash your hands, close it just like that ... to me, it was easy...." (Older People, Zambia)***

Satisfaction:
Handwashing programs have been running for years, but very few have achieved their objective partially, and the targeted human behavior change was never achieved fully. However, the HBCC program during the pandemic made people more aware of cleanliness and helped them to change their behaviour. This program has brought a significant change in human behaviour. Through these changes, the HBCC program will also help decrease other infectious diseases along with the spread of COVID-19.

> ***"So HBCC program a response to Covid-19 but the impact can actually be much more than that… Let's say, with hand washing, the number of diarrhoea cases will also drop." (Key informant, Indonesia)***

In Zambia, IDIs with people with disability showed that while most households were able to make their water stations at the house entrance and used ash in the absence of soap, some aspired for branded handwashing soap and cleaning agents. The key informants also noted similarly that the beneficiaries preferred branded commodities.

> ***"There are things which we are supposed to be ... to do in our homes. But the problem is maybe we can't afford it because of no liquidity, no money. There are things which are needed like to clean detergents for toilets, use the maybe Ajax, Jik, and so on. (Person with disability, Zambia)***

Appropriateness:
Community members felt that hand washing facilities were for general people and not specific to older people or people with disabilities. They highlighted the differences in disability that made it difficult for facilities to be all-encompassing.

One person with disabilities confirmed being part of a design workshop; however, he never saw the design produced. Nonetheless, the workshop brought home the realization that all types of disabilities should be considered in classroom settings to ensure everyone feels that they are part of the group. All the caregivers (participants) disclosed that they never participated in the design of hand-washing facilities. They mentioned that government officials from the social welfare had registered households with aged and people with disabilities but had not returned for any program activities. However, one Key Informant advised that access for all is good for all and cautioned against separating sub-populations such as people with disabilities and elderly persons who live integrated within society as it may lead to stigma and discrimination. As for gender, addressing the needs of people with disability and older people should take a unified, integrated approach rather than working with each group separately without taking the other along.

A respondent from Plan International thought that the interventions they provided were sustainable. They observed behaviour change among the community people, which they said would be sustainable for a long time, and people were using the handwashing stations also.

> ***"In terms of the messages that we put out, I think they are very much sustainable in the sense that we see now that there is a change in behaviour. When it comes to handwashing, wherever you go, now, you see, even disabled people move in with hand sanitizer, or wherever they go, they wash their hands". (Key informant, sierra leone*)**

Mediators: How the intervention produced impact?

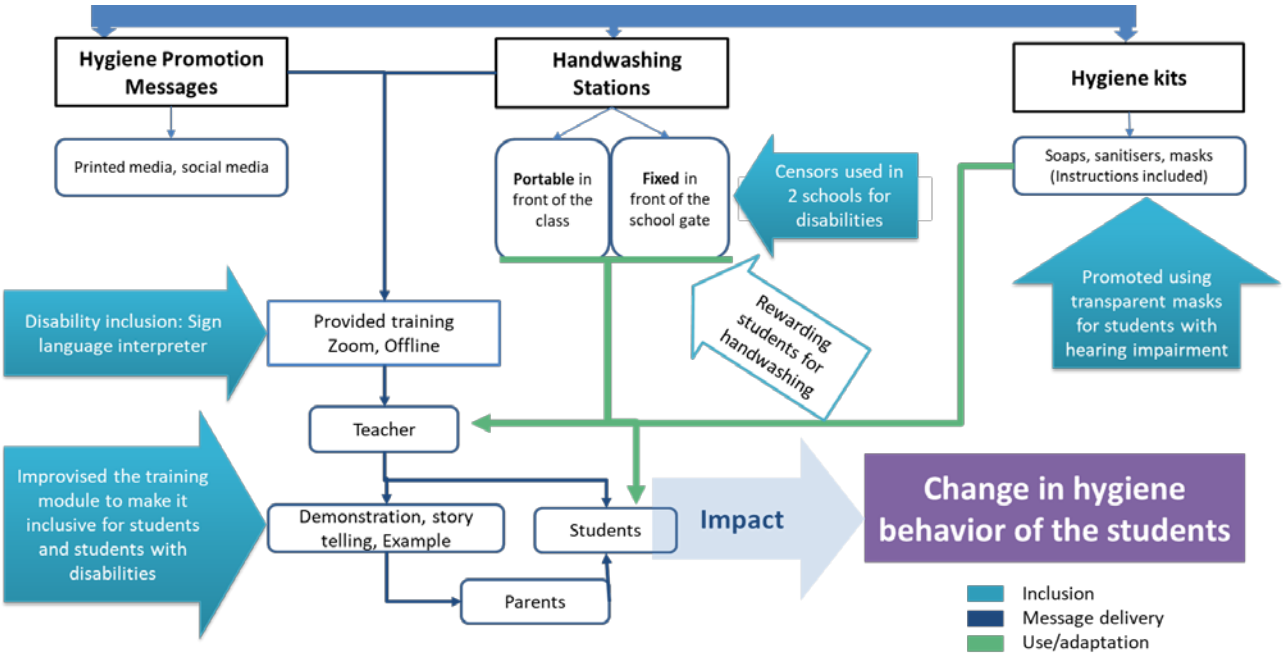


Figure: Example of mediated impact from Indonesia

More than 70% of the people with and without disabilities, older, and young people, stated that they feel safe, confident, and comfortable while maintaining the COVID-19 preventive measures. They considered these measures effective in reducing COVID-19 across the three countries separately. Also, these people felt it unhygienic not to maintain the preventive measures. Moreover, in all three countries, around 60% of people with disability and older people had a strong existing habit of practising COVID-19 behaviour, and they also stated that these measures were convenient to practice. More than 50% of these groups maintained the measures as they saw other people were maintaining. While around 40-50% of people with and without disabilities, older and younger people, feel that it is vital to practice COVID-19 measures to be accepted and respected in the community. People without disabilities and younger people perceived the risk of COVID-19 more than people with disability and older people. The tendency to keep others safe was more prevalent among people without disabilities and younger people.

Visual/audio reminders were reported to be more effective (around 80%) in Indonesia and Zambia than in Kenya for people with disability and older people. In Indonesia, a less proportion of people with disability and older people (around 2-3%) considered that the maintenance of these preventive measures was financially burdensome, while in Kenya (around 20%) and Zambia (around 30%), this proportion was higher. In all three countries, around 15-20% of people with disability and older people reported that the maintenance of these COVID-19 preventive measures was challenging for them, while this proportion was higher in Zambia for older people (29%). (Table 11, Table 12, Figure 33)

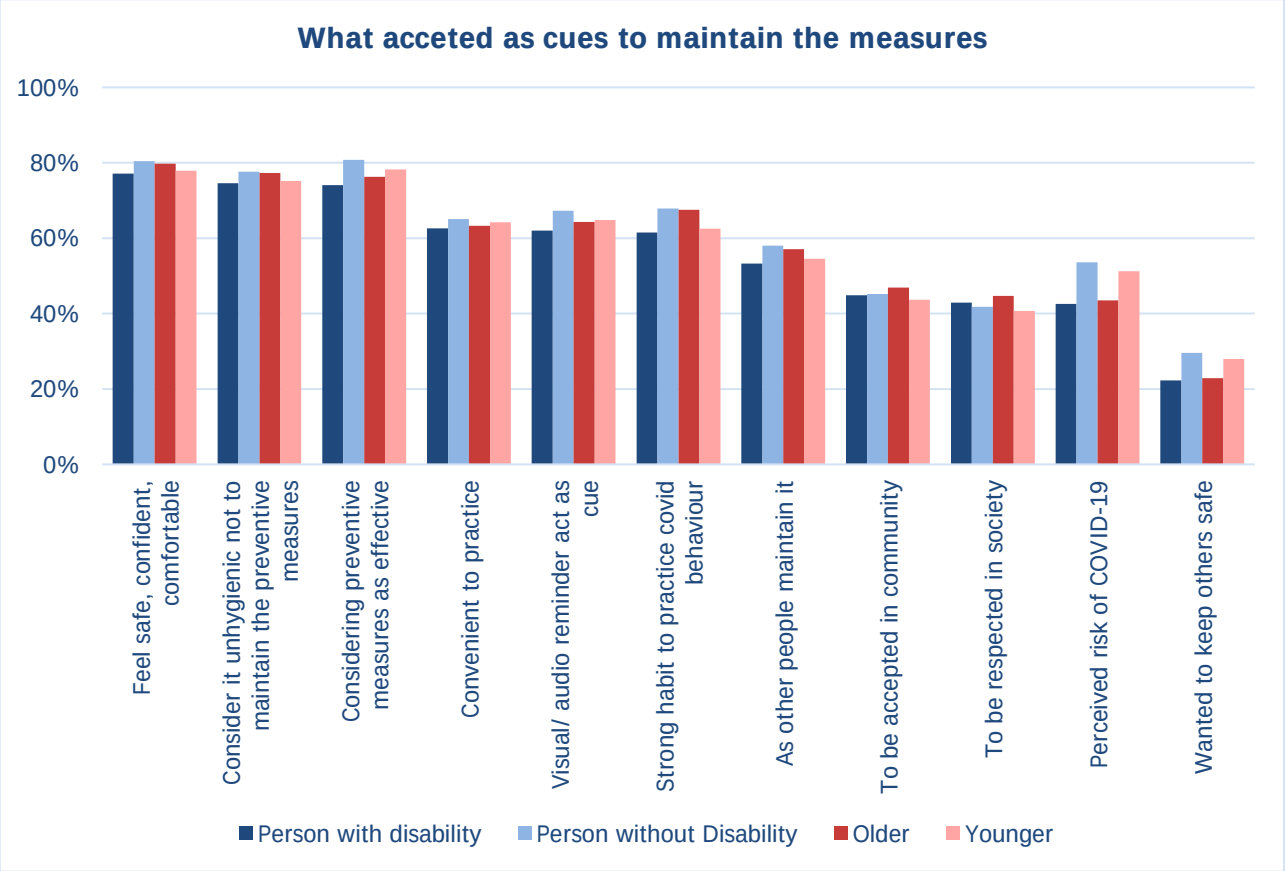


Figure 33: What acted as motivators to maintain COVID measures

Table 11: Country-specific factors that acted as cues (disability)

Factors	Indonesia		Kenya		Zambia	
	Person with disability	Person without Disability	Person with disability	Person without Disability	Person with disability	Person without Disability
	N=173	N=167	N=282	N=260	N=160	N=161
Psychological factors Attitude						
Maintaining COVID-19 preventive measure is effective way	128 (74)	139 (83)	213 (76)	211 (81)	115 (72)	125 (78)
Unhygienic not to maintain	125 (72)	134 (80)	211 (75)	199 (77)	123 (77)	123 (76)
Strong habit to practice covid behaviour	108 (62)	124 (74)	179 (64)	172 (66)	91 (57)	103 (64)
Want to keep others safe	55 (32)	68 (41)	40 (14)	48 (19)	42 (26)	58 (36)
Perceived risk of COVID-19	-	-	147 (52)	184 (71)	115 (72)	131 (81)
Norms/ social influence						
To be respected in society	73 (42)	82 (49)	105 (37)	71 (27)	86 (54)	93 (58)
To be accepted in community	88 (51)	106 (64)	101 (36)	66 (25)	87 (54)	94 (58)
Other people maintain it	116 (67)	134 (80)	104 (37)	89 (34)	108 (68)	118 (73)
Self-regulation						
Challenging to remember	54 (31)	45 (27)	124 (44)	149 (57)	71 (44)	60 (37)

Challenging to maintain	24 (14)	21 (13)	57 (20)	47 (18)	37 (23)	33 (21)
Feel safe, confident, comfortable	145 (84)	154 (92)	207 (73)	198 (76)	122 (76)	121 (75)
Convenient to practice	120 (69)	127 (76)	170 (60)	156 (60)	95 (59)	100 (62)
Financially burdensome	5 (2.9)	3 (1.8)	60 (21)	63 (24)	44 (27)	39 (24)
Visual/ audio reminder act as cue	128 (74)	135 (81)	146 (52)	142 (55)	107 (67)	119 (74)

Table 12: Country specific factors that acted as cues (ageing)

Indicators	Indonesia		Kenya		Zambia	
	Older N=162	Younger N=178	Older N=246	Younger N=296	Older N=102	Younger N=219
Psychological factors Attitude						
Maintaining COVID-19 preventive measure is effective way	128 (79)	139 (78)	192 (78)	232 (78)	69 (68)	171 (78)
Unhygienic not to maintain	126 (78)	133 (75)	193 (79)	217 (73)	75 (74)	171 (78)
Strong habit to practice covid behaviour	108 (67)	124 (70)	177 (72)	174 (59)	59 (58)	135 (62)
Want to keep others safe	49 (30)	74 (42)	37 (15)	51 (17)	31 (30)	69 (32)
Perceived risk of COVID-19	-	-	144 (59)	187 (63)	78 (77)	168 (77)
Norms/ social influence						
To be respected in society	74 (46)	81 (46)	93 (38)	83 (28)	61 (60)	118 (54)
To be accepted in community	93 (57)	101 (57)	88 (36)	79 (27)	58 (57)	123 (56)
Other people maintain it	109 (67)	141 (79)	104 (42)	89 (30)	78 (77)	148 (68)
Self-regulation						
Challenging to remember	54 (33)	45 (25)	118 (48)	155 (52)	54 (53)	77 (35)
Challenging to maintain	24 (15)	21 (12)	45 (18)	59 (20)	30 (29)	40 (18)
Feel safe, confident, comfortable	146 (90)	153 (86)	190 (77)	215 (73)	71 (70)	172 (79)
Convenient to practice	114 (70)	133 (75)	160 (65)	166 (56)	49 (48)	146 (67)
Financially burdensome	5 (3.1)	3 (1.7)	51 (21)	72 (24)	34 (33)	49 (22)
Visual/ audio reminder act as cue	122 (75)	141 (79)	136 (55)	152 (51)	70 (69)	156 (71)

A multiple mediation analysis was conducted among people with disabilities to explore the psychological factors that mediate the effect of the intervention (recipients of behaviour change messages or hygiene products) and leads to changes in the targeted hygiene behaviours (change in handwashing practice, wearing face-mask during COVID-19). Only the psychological factors which show a significant association (at 5% level) with the intervention were included in the model. (Table 58, Table 59, Table 60)

We have separately computed two different models for the targeted behavior change variables change in handwashing practices and practices of wearing face-mask during COVID-19. Our findings suggest that there is a significant indirect effect of the intervention (message/ handwashing cleaning agents distribution) on changing people with disabilities' handwashing behaviour which was significantly mediated by the individual's psychological factors: positive attitude towards washing hands, the strong existing habit of washing hands, desire to keep others safe, and the perceived risk of COVID-19. In Indonesia, individuals' positive attitude towards washing hands, and their strong existing habit of washing hands, while in Kenya, along with these two factors, their tendency to keep others safe, perceived risk of COVID-19 significantly mediated the relationship between intervention and changes in handwashing behaviour. However, in Zambia, only their strong habit of maintenance significantly mediated the relationship (Table 61)

Multiple mediation models for the effects of intervention (message/ mask distribution) on wearing face masks revealed the indirect effects of the psychological factors; 'wearing the mask is effective in prevention', 'unhygienic not to wash mask', 'feel safe and confident to wear mask' were significantly mediated the effect of the intervention on changing the practice of face mask maintenance. In Indonesia and Zambia, it is observed that the effects of interventions weren't significantly mediated via none of these psychological factors

in changing individuals mask wearing practices. However, in Kenya, only people with disabilities have a positive perception that wearing a mask is effective prevention and could significantly mediate the effect of the intervention on changing the practice of face mask maintenance. (Table 62)

Role models worked as mediators

In all three countries, people with disability and older people mostly considered the health care professionals as their role models, followed by Family/caregivers and political leaders to receive COVID-19 preventive hygiene messages. In each country, these groups of people received hygiene messages from their considered role models. In Zambia, healthcare professionals provided hygiene messages to 70% of the people with disability and older people, which was the highest among the three countries. Whereas in Indonesia, around 40-50% of people with disability and older people received messages from their caregivers during the intervention. **(**Table 13**,** Figure 34)

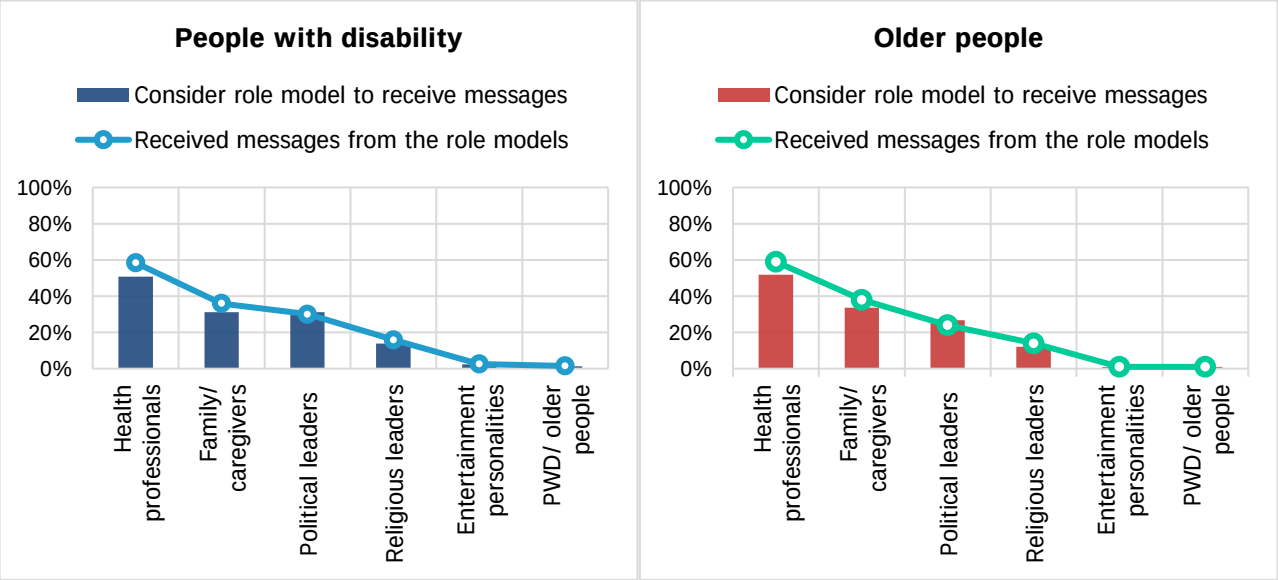


Figure 34: Received messages from role models

Table 13: Intervention impact from the role models of people with disability and older people

Indicators	Indonesia		Kenya		Zambia	
	Consider role models (N=173) n (%)	Influenced by the role models (N=143) n (%)	Consider role models (N=282) n (%)	Influenced by the role models (N=231) n (%)	Consider role models (N=160) n (%)	Influenced by the role models (N=160) n (%)
Disability group						
Political leaders	64 (37)	47 (33)	44 (16)	41 (18)	83 (52)	73 (46)
Health professionals	54 (31)	54 (38)	147 (52)	147 (64)	111 (69)	111 (69)
Religious leaders	5 (2.9)	5 (3.5)	32 (11)	32 (14)	48 (30)	48 (30)
Entertainment personalities	5 (2.9)	5 (3.5)	4 (1.4)	4 (1.7)	5 (3.1)	5 (3.1)
Family/ caregivers	68 (39)	68 (48)	73 (26)	73 (32)	51 (32)	51 (32)
People with disability/ older people	1 (0.6)	1 (0.7)	0 (0.0)	0 (0.0)	7 (4.4)	7 (4.4)
Ageing group	**N=162**	**N=138**	**N=246**	**N=210**	**N=102**	**N=102**
Political leaders	46 (28)	33 (24)	38 (15)	31 (15)	52 (51)	42 (41)
Health professionals	53 (33)	53 (38)	139 (57)	139 (66)	72 (71)	72 (71)
Religious leaders	5 (3.1)	5 (3.6)	26 (11)	26 (12)	30 (29)	30 (29)
Entertainment personalities	1 (0.6)	1 (0.7)	2 (0.8)	2 (1.0)	2 (2.0)	2 (2.0)
Family/ caregivers	74 (46)	74 (54)	76 (31)	76 (36)	22 (22)	22 (22)
People with disability/ older people	3 (1.9)	3 (2.2)	1 (0.4)	1 (0.5)	1 (1.0)	1 (1.0)

"I am also happy when we are visited by health workers, like **the way you have come to visit us**. I learn a lot and **I feel very much recognized** by people.... I feel that when you have retired, people no longer think of you so in the way that it has happened today, **it makes me very happy.**" (Mwandi-01)

Figure 35: Photovoice: An older person in Zambia demonstrating how healthcare workers impacted their COVID-19 behaviour

Collaborations between HBCC, government, and NGOs:

The impact that HBCC intervention produced in the five selected countries was mediated by effective collaborations with and buy-in from government and non-governmental organizations.

> ***"We directly implemented projects, of course, with high involvement of community leaders and also the department (government), which we'll call the dinar Koba, a national emergency response to COVID-19. So that was the key area that we worked with on that project. (Key informant, Sierra leone)***

Involvement of OPDs in program design and activity

AMREF, WaterAid, and Plan International involved OPDs or OPOs in designing/activity of the HBCC interventions, which helped them have a more inclusive intervention. Working with the OPDs and OPOs enabled the identification of challenges faced by people with disability and older persons, which experts may not have thought about

> ***"What worked well is that we have continued working with Zambia Agency for People with disability (ZAPD) even in the other projects. Key lessons from the project have been carried on to other hygiene interventions within the country program. So, for example, we developed the Kutuba campaign, which has been our flagship for hygiene as WaterAid. So, I think that's something that we have been able to build on" (Key informant, Zambia)***

> ***"Ken Samuel, which is called the one family disability. It's a group that has a network of several disabled groups. So we involve them in the message development, we're involved in the message development, and when we had radio programs and television programming, we want to send out messages on disability. So we involve them in the message development and the dissemination of some of these messages across".(Key informant, Sierra Leone).***

On the other hand, as the SCF and BRAC did not involve the OPDs, the staff thought that partnering with the OPDs could make the project more inclusive and successful.

"As disabled people organizations are experts with these people and they have the experience to handle these people, they can provide training to us on how to handle these people and how to communicate with them. And also, these organizations work at the root level, so if they can work with us through partnership, the final outcome of the project would be better and more engaging. I think, by including those organizations, those who are falling behind in society, we can take everyone under the project easily". (Key informant Bangladesh)

Engagement of the local communities

All the intervention-delivering organizations engaged the local communities to disseminate the 'hardware' and 'software' effectively. For instance, BRAC formed community-level committees that consist of the local religious leaders, chairmen, members, adolescent girls, and boys. They helped them to select suitable places for building handwashing stations and managing the water sources for the stations.

"To implement this program, we affiliated with the local member, chairman, Upazila council member, market committee, and mosque committee. Among other committees, there was another adolescent committee consisting of boys and girls. They worked under the WASH committee and also helped us to implement the program. (Key informant, Bangladesh)

Practical demonstrations and interactions with the target population

KIIs from Indonesia show that demonstrating practical examples (hands-on training) of hygiene practices and their effects dissemination by the frontline intervention staff can improve the behaviour of the participants, including children with disabilities. SCF made direct interactions with the children (including children with disabilities) to encourage them to wash their hands properly by providing practical examples of how it affects the reduction of germs which they thought improved students' insight about hygiene behaviour.

"The point is we were trying to open these children's insight, why is it important to wash our hands. So, we used props such as pepper and water; pepper acted as germs, so when we sprinkled it into the water, it wouldn't dissolve; it would stay on the surface. But when we added soap, the pepper spread away from the soap. So that's how germ works on our hands, it might look clean, but it's not. (Key informant, Indonesia)

Involving people with disability and older people as influencers

In Kenya, the partners involved people with disability in their interventions, e.g. by including them as influencers in the behaviour change messaging, co-creating the training manual and training sessions, leading the training sessions, and translating the information to braille and sign language, which worked well for them.

Kenya says people with disabilities were also part of the approaches used in delivering information.

"We had the tallest person in Kenya ...which is also a form of disability….he is a celebrity within the disability community. He was an influencer who could easily communicate to people with disability" (Key Informant, Kenya)

Accessibility of HBCC public handwashing stations

Our data collectors observed the handwashing stations established in public places during COVID-19. We observed several indicators of accessibility for people with different types of disabilities. Flatness or smoothness, slipperiness, adequate space for wheelchair movement, availability of ramp, guidance rope, and presence or absence of support rails at the entry path were recorded during the observation. Around 58% of the overall handwashing station's entry path was smooth, whereas 56% of the entry path was not too slippery. Indonesia had the lowest (29%), and Zambia had the highest (74%) smooth entry path; however, in the case of non-slippery entry paths, Indonesia ranked high (67%) among the three countries. The entry path of the Indonesian public place handwashing seriously lacks (only 25% available) space for wheelchair movement. While in Zambia, 43% of the observed hand washing station had adequate space for wheelchair movement, with a serious lack of ramp facility availability (6%). This spot-check showed around 17-30% of handwashing stations had no physical barriers/ obstacles for wheelchair entry across three countries. This study found a severe lacking of support rails, landmark/ guiding ropes/ tactile marking at the entry path of the observed handwashing stations in all three countries. Only 8% of the public place handwashing stations in Kenya have the facility of support rails at their entry path. (Figure 36, Table 47)

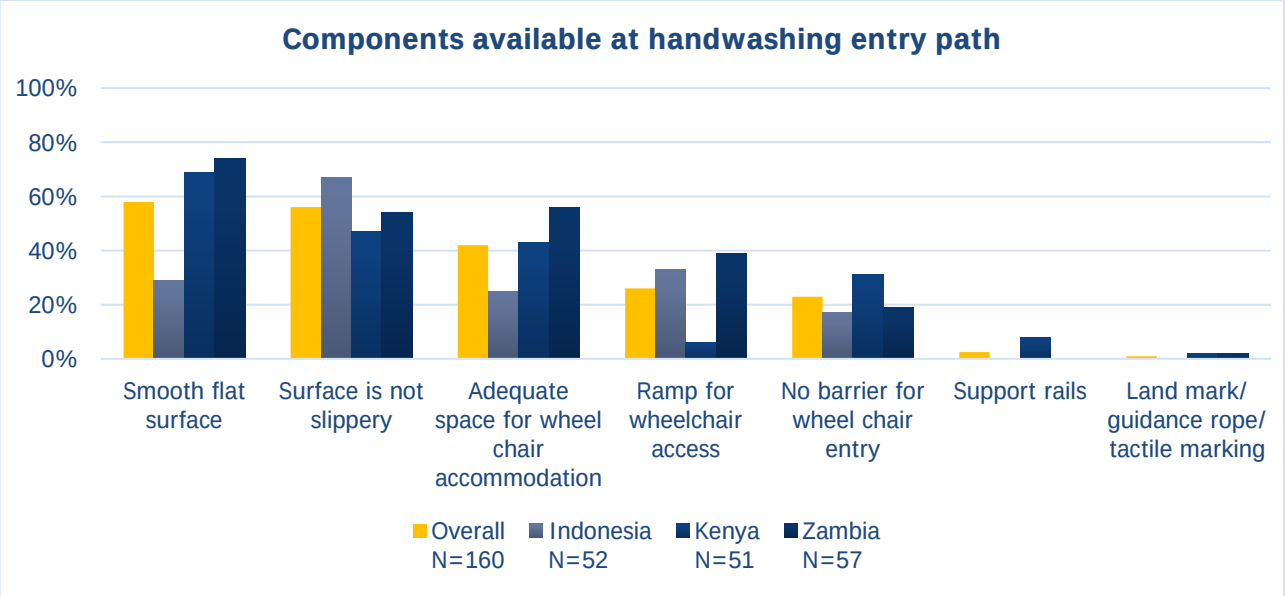


Figure 36: Components available at handwashing entry path

Spot-check of the inside part of the public place handwashing stations demonstrated almost 79% of the overall station wasn't slippery surface area; however, only 44% of the overall handwashing station have a smooth flat surface at the inside part of the station. Kenya ranked the lowest (35%), whereas almost half of Zambia's handwashing stations have smooth flat surfaces. Only 4% of the Zambian handwashing stations in public places have handwashing agents, whereas, in Indonesia, 65%, and in Kenya, 45% have cleaning agents. In contrast, there was more lack of water availability observed in Kenya (31%), compared to Indonesia (15%) and Zambia (21%). More than 69% of these stations were visibly clean when checking all three countries. However, no sitting arrangement was observed in Kenya, while only 2% in Zambia and 12% in Indonesia had the sitting arrangement. In Indonesia and Kenya, around 10% of the stations in public places had easily accessible water and handwashing agents for wheelchair users or children. While in Zambia, 25% of the handwashing places had easily accessible water points, only 4% of the stations had reachable handwashing agents for wheelchair users or children. (Figure 37, Table 47)

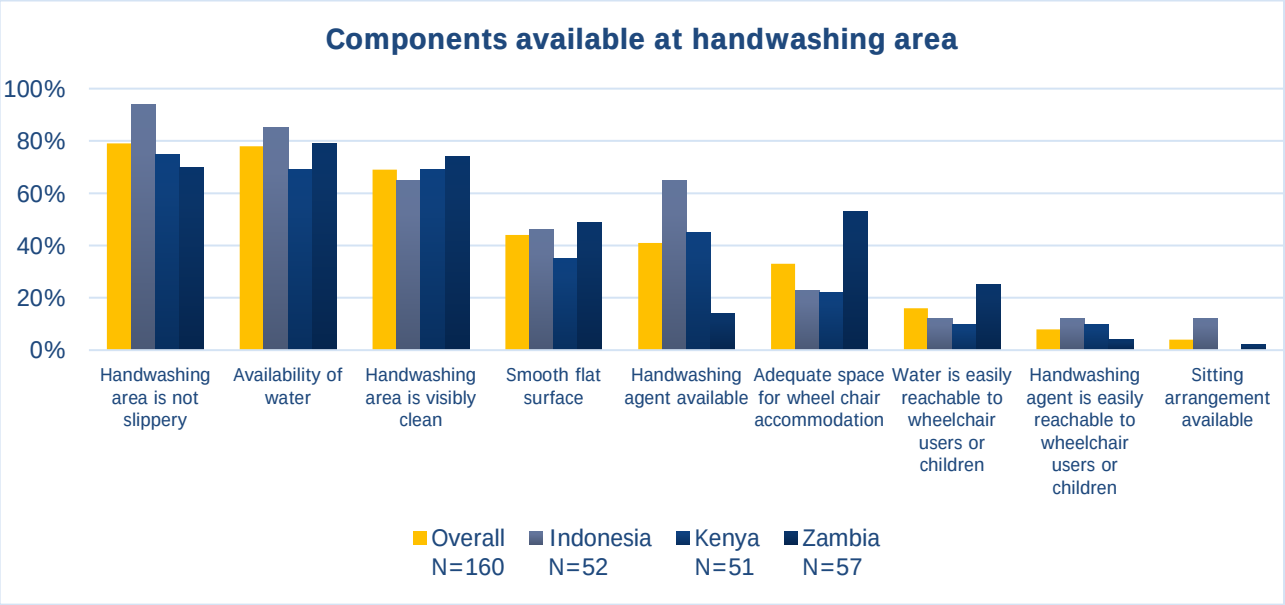


Figure 37: Components available in the handwashing area

Figure 38: School child is trying to access a handwashing station established in an inappropriate place and height

Our spot-check revealed that 53% of the overall handwashing station at public places used regular taps to supply water; only 16% of these stations had a foot-operated tap. 40% of the public place handwashing stations in Indonesia consisted of the foot-operated tap; on the other hand, the presence of foot-operated taps was very low in Kenya and Zambia, 6% and 4%, respectively. Elbow-operated taps were rarely found in the overall hand washing stations (3%); however, around 10% of the public hand washing stations had this facility in Indonesia. (Figure 39, Table 47)

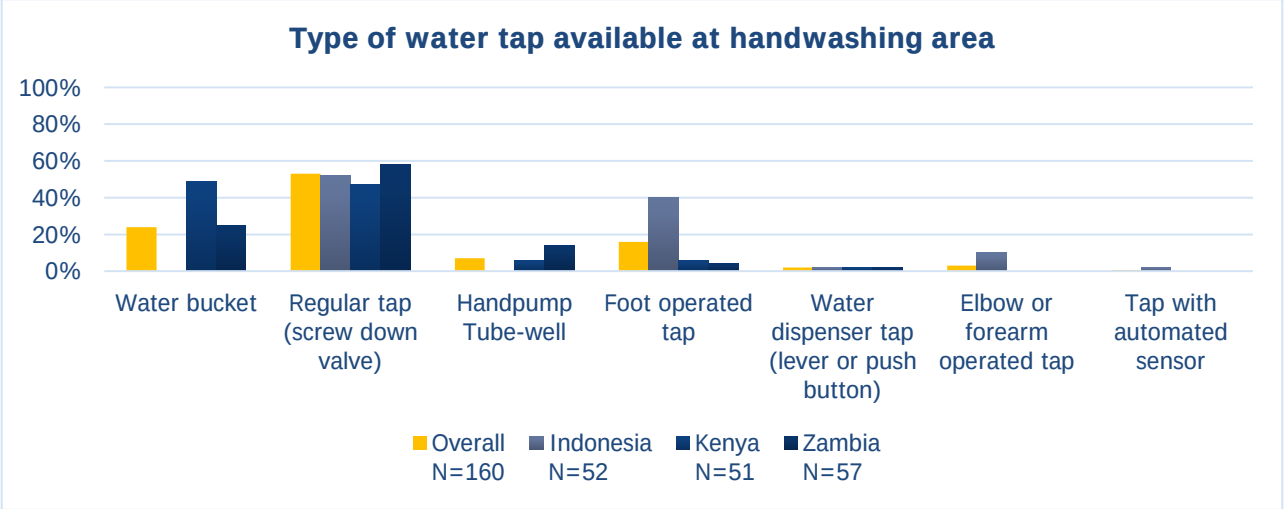


Figure 39: Type of water tap available at the handwashing station

Spot-check under this evaluation study also checked the availability of daylight, night light, and color contrast at the public handwashing stations. 81% of the overall handwashing stations had daylight facilities; however, these percentages were highest in Indonesia (100%) and lowest in Kenya (65%). Only 20% of the overall handwashing station had the availability of color contrast to support the low-eye vision. Indonesia scored lowest (4%), while no color contrast was available at North Jakarta's handwashing station; however, Kenya has the highest score (29%) of all observed public place handwashing stations. 27% of the overall public place handwashing stations have a night light facility, whereas only 12% of handwashing stations from Indonesia have this facility which is the lowest among the three countries. Despite the low availability of daylight facilities at the handwashing stations in Kenya (43%), it has the highest night light facility among the three countries. (Figure 40, Table 47)

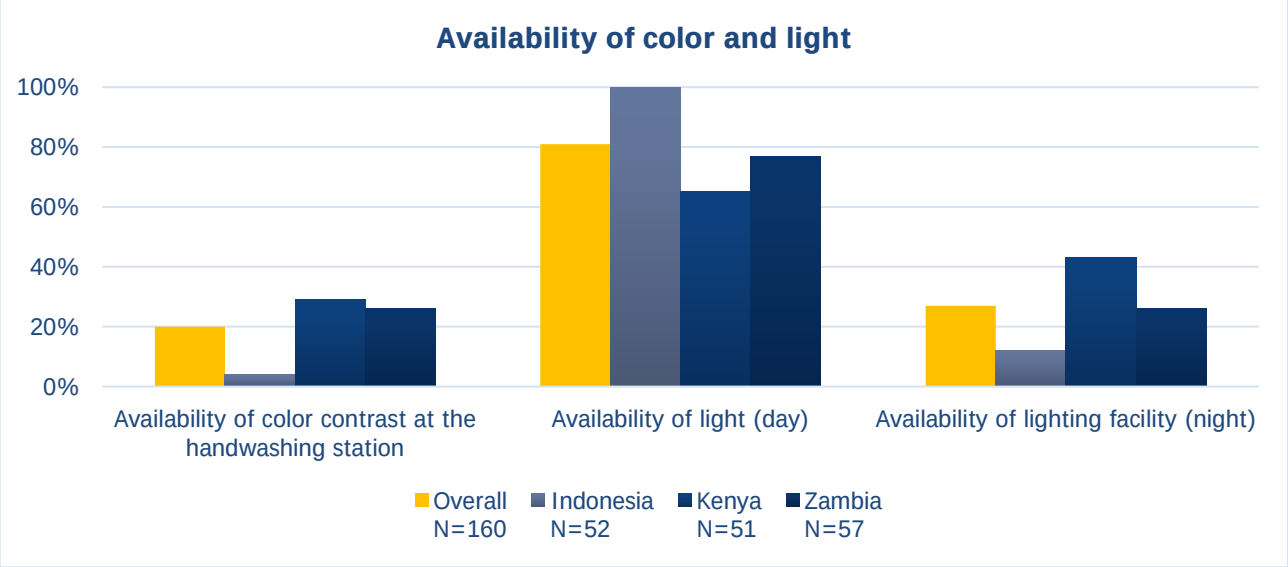


Figure 40: Availability of color and light

Figure 41: Inaccessible (for people with disability) handwashing station in Zambia

Accessible handwashing stations

Key informants from Bangladesh, Indonesia, and Zambia stated that they had made different approaches to providing support to people with disability during the implementation of the program. They also made disability-inclusive handwashing facilities and provided instructions for washing hands properly.

> ***He eh… hand-washing facility… So, objects that we provide for students with disability are… err… disability-friendly objects… for example, some facilities are operated using a foot pedal… the height is also not very high, so students who use wheelchairs can have access… (Key informant, Indonesia)***

In Indonesia, Save the Children used customized stations with sensors for people with disability.

> ***For students with disabilities, we provided customized washing stand with the sensor. (Key informant, Indonesia)***

In Bangladesh, during that time, BRAC built handwashing stations in different places where mass gatherings occurred, for example, markets, schools, the Upazila health complex, and other public places. They took

water supply from different facilities, such as schools, and took a commitment to them that making a station would not help unless they used it properly. Also, they built the station in a way that people with disability could access them.

> ***We have handwashing stations made of steel frames. There were always three basins. What we have done, if it (the basin) is at the side of the road, we have just lowered it down. So that children, disabled people and if there are any older people can use it initially. The rest of the two (basin) had a regular height, and one had a low height. In any other places, for example, in front of the police station, in front of the Upazila office, in front of the Upazila health complex, and into the market, where we installed (the handwashing station) and from any direction if anyone has to access the handwashing station, then it will start with the low height basin. Also, persons with wheel chairs can use the stations. (Key informant, Bangladesh)***

In Zambia, some Key Informants mentioned that people with disabilities provided insights on what was meaningful for disabled people during the co-creation and co-design of hand washing facilities. For instance, people with disabilities through Health Help Zambia were involved in designing WaterAid's modules for hygiene and behaviour change and facilitated sessions in schools, public places, and health care facilities.

> ***"Someone is in a wheelchair; how then would they be able to wash their hands? So, we came up with an innovation to look at an inclusive handwashing facility which can easily be accessed by people living with disabilities" (Key informant, Zambia)***

While designing handwashing stations, some caregivers opted to have People with disabilities use sanitizers instead of water due to the challenges posed by their disabilities in using handwashing stations

> ***"I cannot say it was too high to reach because even young children were able to reach and wash their hands there. It is his condition that makes him not able to reach the handwashing point. He is in a wheelchair, so I have to go and get the water and wash his hand because he cannot do anything on his own. So instead, I had to buy the sanitizer [Caregiver, kenya]."***

Barriers to disability-ageing inclusion

Messages

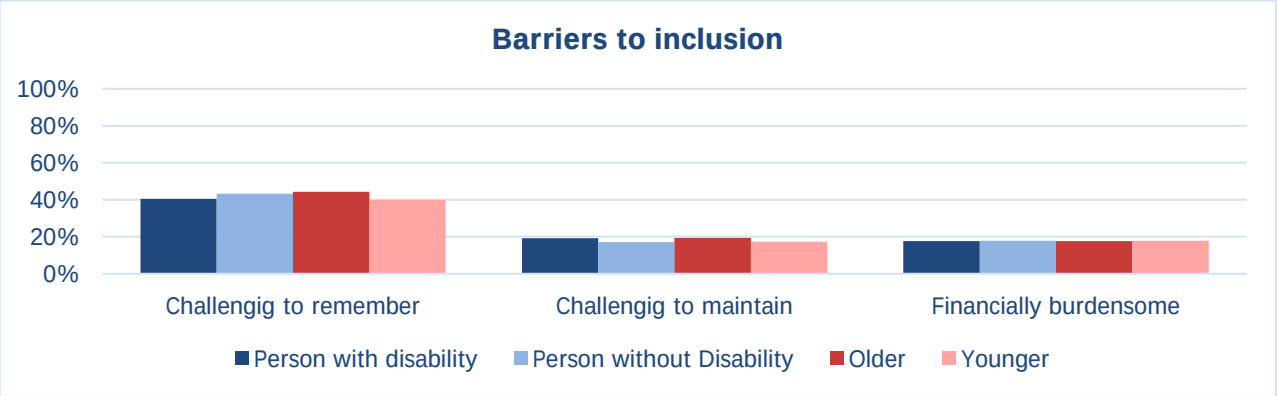


Figure 42: Barriers to inclusion

Around 40% of the people with and without disabilities, older and younger people, consider these preventive measures challenging to remember (Figure 42). In Indonesia, 4-8% more people with disability and older people and in Zambia, almost 13-18% more people with disability and older people reported facing challenges to maintaining these measures than their comparison groups. However, in Kenya, people without disabilities and younger were more reported to face a challenge in remembering these measures. In Kenya and Zambia, around 20% of people with disability and older people found these measures financially burdensome, while only 3% in Indonesia considered the same. (Table 14, Table 15)

Figure 43: A person with a disability in Indonesia explaining difficulties in remembering mask use

Table 14: Country-specific barriers to inclusion (disability)

Factors	Indonesia		Kenya		Zambia	
	Person with disability	Person without Disability	Person with disability	Person without Disability	Person with disability	Person without Disability
	N=173	N=167	N=282	N=260	N=160	N=161
Challenging to remember	54 (31)	45 (27)	124 (44)	149 (57)	71 (44)	60 (37)
Challenging to maintain	24 (14)	21 (13)	57 (20)	47 (18)	37 (23)	33 (20)
Financially burdensome	5 (2.9)	3 (1.8)	60 (21)	63 (24)	44 (28)	39 (24)

Table 15: Country-specific barriers to inclusion (ageing)

Indicators	Indonesia		Kenya		Zambia	
	Older N=162	Younger N=178	Older N=246	Younger N=296	Older N=102	Younger N=219
Challenging to remember	54 (33)	45 (25)	118 (48)	155 (52)	54 (53)	77 (35)
Challenging to maintain	24 (14)	21 (12)	45 (18)	59 (20)	30 (29)	40 (18)
Financially burdensome	5 (3.1)	3 (1.7)	51 (21)	72 (24)	34 (33)	49 (22)

Barriers to accessing public handwashing stations

The distance from the home was the main barrier to not using the public handwashing station (reported). Interestingly, people without disabilities were more likely to perceive distance as the key barrier to accessing the handwashing station than their comparison group. Among all three countries, only half of the people with disabilities (42%) and older people (55%) in Kenya were likely to perceive distance as the main barrier compared to Indonesia (around 80%) and Zambia (71%). Comparatively, in Kenya, more people without disabilities (33% more) perceived the handwashing station's distance as the main barrier compared to people with disabilities. Public handwashing stations not suitable for people with disabilities were also considered a barrier by almost 10% regardless of their disability and ageing. Among all three countries, people with disabilities in Zambia had a higher (32%) perception towards these barriers, while a similar pattern was observed in Indonesia (20%) and Kenya (23%). And more older people in Kenya (16%) considered their public handwashing station not suitable for older people, while no older people in Zambia reported that. (Table 16, Table 17, Figure 44)

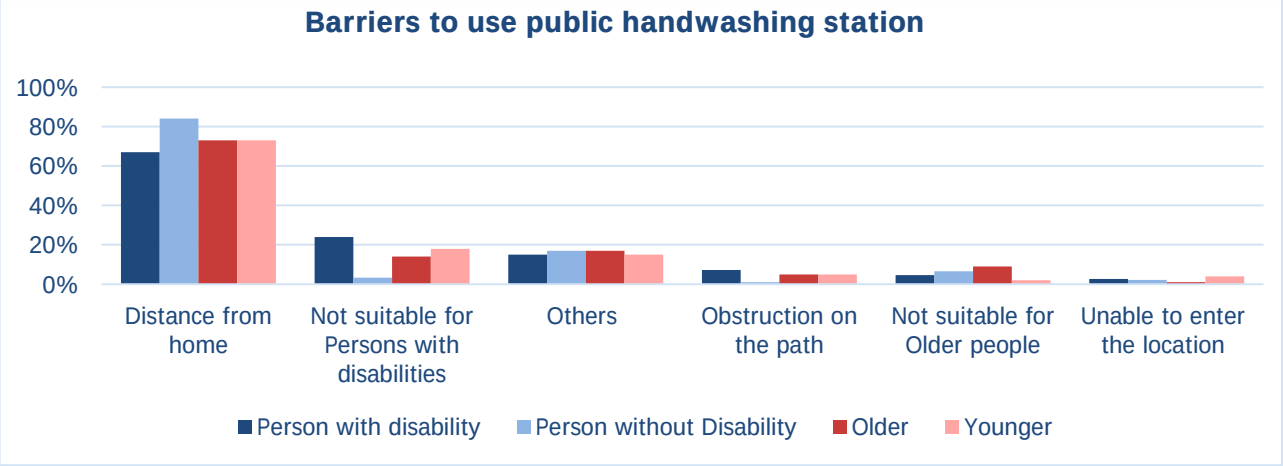


Figure 44: Barriers to using public handwashing station

Table 16: Assessment of difficulties in accessing public handwashing stations among persons with vs without disabilities

Indicators	Indonesia		Kenya		Zambia	
	Person with disability N=79	Person without Disability N=47	Person with disability N=43	Person without Disability N=36	Person with disability N=31	Person without Disability N=9
Distance from home	62 (78)	43 (91)	18 (42)	27 (75)	22 (71)	7 (78)
Obstruction on the path	9 (11)	0 (0.0)	1 (2.0)	1 (3.0)	1 (3.0)	0 (0.0)
Unable to enter the location	1 (1.0)	0 (0.0)	2 (5.0)	2 (6.0)	1 (3.0)	0 (0.0)
Not suitable for People with disability	16 (20)	1 (2.0)	10 (23)	2 (6.0)	10 (32)	0 (0.0)
Not suitable for Older people	4 (5.0)	1 (2.0)	3 (7.0)	5 (14)	0 (0.0)	0 (0.0)
Others	2 (3.0)	2 (4.0)	17 (40)	12 (33)	4 (13)	2 (22)

Table 17: Assessment of difficulties in accessing public handwashing stations among older vs younger people

Indicators	Indonesia		Kenya		Zambia	
	Older N=62	Younger N=64	Older N=38	Younger N=41	Older N=17	Younger N=23
Distance from home	52 (84)	53 (83)	21 (55)	24 (59)	12 (71)	17 (74)
Obstruction on the path	4 (6.0)	5 (8.0)	1 (3.0)	1 (2.0)	1 (6.0)	0 (0.0)
Unable to enter the location	1 (2.0)	0 (0.0)	0 (0.0)	4 (10)	0 (0.0)	1 (4.0)
Not suitable for People with disability	9 (15)	8 (13)	3 (8.0)	9 (22)	4 (24)	6 (26)
Not suitable for Older people	4 (6.0)	1 (2.0)	6 (16)	2 (5.0)	0 (0.0)	0 (0.0)
Others	0 (0.0)	4 (6.0)	18 (47)	11 (27)	2 (12)	4 (17)

Barriers to accessing household handwashing station

Around 4-6% of people with disability and older people couldn't access their household handwashing place due to lack of assistance. In all three countries, these barriers were similarly reported (Indonesia: 8%, 6%; Kenya: 6%, 2%, Zambia: 5%) by people with disability and older people. Almost 10% or higher of people with disability and older people reported that they face difficulties accessing the water or cleaning agents at their handwashing place, which is available in an area that is not easily reachable without others' assistance. These barriers were mostly reported in Zambia (24%, 22%) among people with disabilities and (18%) and

older people (16%) than in other countries. Approximately 10% of younger people also considered the lack of accessibility of water (11%, 10%) and cleaning agents (8%, 9%) as a barrier to accessing their household handwashing station in Kenya and Zambia, respectively. (Table 18, Table 19, Figure 45)

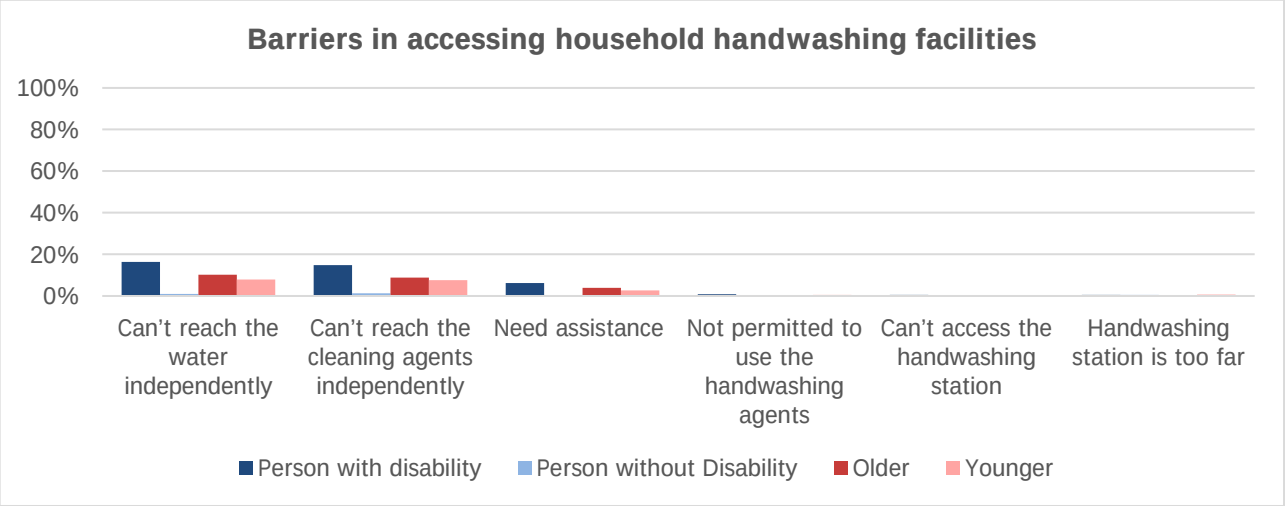


Figure 45: Barriers to accessing household handwashing facilities

Table 18: Assessment of difficulties in accessing household handwashing stations among persons with vs without disabilities

Indicators	Indonesia		Kenya		Zambia	
	Person with disability N=173	Person without Disability N=167	Person with disability N=282	Person without Disability N=260	Person with disability N=160	Person without Disability N=161
Need assistance	14 (8.1)	0 (0.0)	16 (5.7)	1 (0.4)	8 (5.0)	0 (0.0)
Can't access the handwashing station	1 (0.6)	0 (0.0)	2 (0.7)	2 (0.8)	0 (0.0)	0 (0.0)
Handwashing station is too far	2 (1.2)	0 (0.0)	1 (0.4)	3 (1.2)	0 (0.0)	0 (0.0)
Not permitted to use the handwashing agents	1 (0.6)	0 (0.0)	4 (1.4)	0 (0.0)	0 (0.0)	0 (0.0)
Can't reach the water independently	10 (5.8)	0 (0.0)	52 (18)	6 (2.3)	39 (24)	0 (0.0)
	N=170	**N=165**	**N=256**	**N=250**	**N=135**	**N=135**
Can't reach the handwashing agents independently	13 (7.7)	5 (3.0)	41 (16)	1 (0.4)	29 (22)	1 (0.7)

Table 19: Assessment of difficulties in accessing household handwashing stations among older vs younger people

Indicators	Indonesia		Kenya		Zambia	
	Older N=162	Younger N=168	Older N=246	Younger N=296	Older N=102	Younger N=219
Need assistance	10 (6.2)	4 (2.2)	5 (2.0)	12 (4.1)	5 (4.9)	3 (1.4)
Can't access the handwashing station	1 (0.6)	0 (0.0)	1 (0.4)	3 (1.0)	0 (0.0)	0 (0.0)
Handwashing station is too far	0 (0.0)	2 (1.1)	1 (0.4)	3 (1.0)	0 (0.0)	0 (0.0)
Not permitted to use the handwashing agents	1 (0.6)	0 (0.0)	0 (0.0)	4 (1.4)	0 (0.0)	0 (0.0)
Can't reach the water independently	7 (4.3)	3 (1.7)	27 (11)	31 (11)	18 (18)	21 (9.6)
	N=160	N=175	N=231	N=275	N=75	N=195

Can't reach the handwashing agents independently	9 (5.6)	9 (5.1)	20 (8.7)	22 (8.0)	12 (16)	18 (9.2)

In Kenya, most respondents (n=11) mentioned that the handwashing facilities were placed at the right height for all age groups and thus could be used by most population groups, including the elderly and children. These respondents confirmed that they had used the handwashing stations without much difficulty.

> *No, it was put in the right size. You didn't have to struggle to reach it. You could just bend a little and wash your hands because it was high and not too low [Person with disability, Kenya]*

However, the caregivers from both Homabay and Taita Taveta Counties noted that older people often needed assistance in using the handwashing facilities (e.g. to open the taps)

> *She needed assistance in operating the equipment because she was elderly. So, she had to be assisted to open and close the tap [Female caregiver, kenya]*

> *They put it at a low level for anyone to reach, but since she is elderly, you have to assist her because she cannot bend easily to open the tap. She can access it, but she has to be assisted [Caregiver, Kenya].*

One respondent, commenting on the appropriateness of the handwashing facilities for people with disability and older people, noted that the needs of people with disabilities might differ. Therefore, most facilities were at the right level for older people and people with disabilities. Still, some handwashing facilities may need to be designed differently for people with different difficulties.

> *A disabled person is different. For a disabled person who crawls, you have to design the hand washing facility at a lower level for them to wash their hands, but for the elderly, if the hand washing facility is hung there, then they will just wash their hands [Older people, kenya]*

Program time was too short to adopt inclusive approaches

Some key informants from Kenya, Indonesia, and Bangladesh reported that the short duration of the interventions might be a barrier to covering a range of issues, including the inclusion of disability and ageing. They could not take feedback and see whether the intervention was working since the program duration was short.

> *"I did not cover my whole Upazila. I did cover a few villages, and others were unable to cover. If we get this project in the future, we want to cover the remaining all and also want to include disabled persons and want to complete the work more extensively. From the head office, we were instructed to cover 4 out of 7 Upazila. If the project extends, we can do more extensive work and spread more awareness-related work". (Key informant, Bangladesh)*

> *"The challenge was the project was too fast. We couldn't really see the impact. Also, the modules, other than that, so far so good." (Key informant, Indonesia)*

Installing inclusive handwashing stations is challenging because of the high price and lack of suppliers, and suitable place

In Indonesia, one of the main challenges is the availability of disability-inclusive materials and the equipment's price. The price of custom equipment for people with disability is more than the regular ones, and it costs a lot of money to sustain a project. In Zambia, the lack of implementing partners and partnerships created gaps in coverage in certain areas. Finding a suitable place to build handwashing stations in Bangladesh was challenging due to the water supply issue.

> *"If we compare the price of hand washing facility for people with disability with the regular one, the custom one is more costly… with the regular hand wash facility, we*

only need to prepare a bucket and a tap … however, the facility for students with disability cost millions."(Key informant, Indonesia)

"Yes, if we're talking about inclusion, the designs should be appropriate for targeted people because when we distributed the hand washing stand, it took us almost six months to search for the station itself since not many vendors specifically designed for inclusion groups. Sometimes we also search for institutions focusing on inclusion groups, even though they may not necessarily have it." (Key informant, Indonesia)

We also face challenges about where handwashing should be built. For example, when we went to market place, we faced problems locating places; also, at the bus stops, we faced similar issues. (Key informant, Bangladesh)

Lack of awareness and shortage of staff for maintaining the handwashing station

In Indonesia, the community people were unaware of maintaining the handwashing stations. Children play with them, also not using the station regularly and lack of care made the station unusable. The teachers stated that they received handwashing stations with pedals and sensors so that students with disabilities could use them, but the equipment was not working due to the lack of proper maintenance.

"Because if you pay attention, there is no more hand washing station here; it's taken out and was used only when the case was high... as time passed, the regularity decreased, only kids are here, and they use it to play. So, it really depends on the people, actually. People who are not accustomed to washing their hands before the pandemic may lose the behaviour after the pandemic is over." (Community people, Indonesia)

Lack of knowledge of the partner organizations about people with disabilities

In Indonesia, the KIIs mentioned that disability inclusion needs extra attention, and the program personnel had limited knowledge about it. To include this group in the program, they had to gather knowledge about them and how to treat them accordingly.

"The staff also must understand about inclusion, how to treat inclusion people, while I don't have the basic knowledge regarding that." (Key informant, Indonesia)

Staff training did not focus/include disability ageing issues

In Indonesia, the intervention delivery staff mentioned that they needed the training to take care of more people with disability and older people. In Bangladesh, BRAC provided basic training to their staff, and disability inclusion was a part of that training. During the project, they had monthly refresher meetings that discussed on disabilities. But they did not receive specific training on disability from any OPDs/ DPOs. On the other hand, Plan International in Sierra Leone brought the disabled people organization to run some sessions regarding people with disabilities, but there was no proper training. In Kenya, the training contents lacked involvement of topics related to people with disability and older people

"What we did was to bring these organizations and run some sessions of eye-opener, but not really like full-blown training. It was not like a specific training on understanding these issues, more like briefing within them to understand that this is part of my inclusion approaches that we're using; not only disabilities will have spoken about gender equality issues, but also people who seem to be discriminated communities are being considered." (Key informant, Sierra leone)

We provide training to the staff after recruitment. Suppose they are given basic training, and disability inclusion is also a part of the basic training. So initially we have provided training. We provided the refreshers (training) in the middle of the project. In that refresher, disability inclusion is a part. Then we conduct monthly meetings at different times. In these meetings, we focus on disability inclusion. (Key informant, Bangladesh)

Not mentioned in the proposal about the inclusion of people with disability and older people

KIIs from Indonesia mentioned that as the main proposal didn't mention anything about working with disabilities and older people, they didn't specifically target them as their focus groups to reach.

> *"Since the Proposal to Lifebouy for HBCC didn't mention about the work with the disability and elderly, we can't help but wonder why they use HBCC. HBCC is activity focused to schools." (Key informant, Indonesia)*

Resource constraints

Key Informants from Zambia noted that COVID-19 prevention interventions neglected specific sub-populations of people with disabilities, such as those with functional limitations in vision, hearing, and intellectual or cognition. When the hardware was installed, for instance, handwashing facilities, lack of resources such as water rendered them unfit for purpose. Similarly, while handwashing facilities were installed in outdoor, public places, bedridden people could not easily access them.

Funding constraints

Due to the lack of funds, behaviour change communication was not grounded in people with disability and older peoples' reality, did not consider representation or relevance, and left out sections of society that did not speak the main languages of Zambia. Due to the lack of funds, best practices were not documented, and information was not uploaded to the national dashboard. The lack of budget also made it difficult to fix the damaged infrastructure.

> *"We also need to understand one thing; it depends on the budget that is being worked with because Communications and Marketing involves a lot of money if you want to have an impact." (Key informant, Zambia)*

Lack of effective mechanisms implemented to have sustainable infrastructures

Staff from BRAC indicated that monitoring and maintenance of the installed facilities are needed to sustain it for a longer period. Due to the lack of awareness, handwashing stations were not active, there was no soap available, and some instruments were missing, which caused the station non-functional.

> *So, if the station is monitored properly and the supply of soap and water is available, people will use this facility. The bolts and nuts come from the workshops to use in the station that is getting deteriorating due to salinity. If these are changed timely and maintenance is done, these facilities will be sustainable. (Key informant, Bangladesh)*

> *"The sad thing is when we see the handwashing stations now we find that only 10% are working. 10% are active, and 10% are active to some extent like suppose if it is pushed it can be broken sometimes. According to my point of view, 80% are not active. Like there is a handwashing station but there is no liquid soap. We need some instruments to keep it active. Like it can be seen that the feet stand of the handwashing station is broken, or the tap is broken or there is a need of soap which is absent or there is a basin but the spring of the basin is not working. This means due to a lack of awareness it is not working or active." (Key informant, Bangladesh)*

Only focus on visible physical disabilities

KIIs from Kenya explain that diverse forms of disability were not captured effectively during the implementation as most of the interventions mainly focused on people with physical disabilities.

Online training was not inclusive

Some participants faced technological challenges during the online training and meetings, especially if they weren't familiar with the technology and use of different online platforms. As a result, some activities took longer than anticipated.

In Indonesia, during the COVID-19 pandemic, there were some limitations in training. There was a lack of teachers to train students with disabilities, and they didn't undergo any special training on handling students with disabilities.

"No, we haven't got any special training, but in general, I guess we got one from the Intervention delivery organization program, maybe not specifically for handling students with disability, instead more for handling inclusive students." (Teacher, Indonesia)

Less involvement in planning and programming and lack of contextualised alternatives

Key informants in Kenya felt that people with disabilities and older people had generally been neglected in plans and programs; for example, many hotels, offices and establishments are not accessible for people with disabilities, such as lack of ramps.

'You know… most buildings are not disability-friendly. Sometimes you want to take a step, but you have to crawl or support yourself with the wall' (Key informant from DPO).

The transport system is often unfavourable to older persons and people with disabilities, especially those with reduced mobility and physical challenges. Key informants from OPDs and OPOs felt that there had been less focus on older people in resource allocation and planning, including at the ministry level.

Furthermore, it was noted that there was little consideration of the diverse types of people with disabilities, their different types of challenges, and, consequently, the different types of solutions for each type of functional difficulty. For example, the blind relies on physical touch to be guided, yet there are no alternatives for such groups of people, even in the COVID-19 guidelines of no contact.

"How will the deaf people communicate without transparent masks? How will a deaf person understand what you are communicating if they cannot see your mouth?" (Key informant from DPO).

'COVID information was out there… for example, you would find that most places had posters, but for someone who cannot see, how would they read that? (Key Informant from ministry of public service).

Less involvement of OPDs and OPOs in program design and implementation

In Kenya, the Key respondents from OPDs and OPOs felt that they are often not involved in planning and policy formulation, resulting in little focus on their issues in interventions.

Reluctance to practice COVID-19 measures

In all areas, some people were reluctant to maintain COVID-19 measures. For instance, people in Bangladesh believe they will not be infected as they perform their prayers properly. So, they were unwilling to wear mask.

"Some older adults pray their namaz while sitting in their chairs. We cannot make them understand that you have to wear masks. They believed that it only attacks the Christians and those who drink. They won't be attacked as they pray their namaz five times daily. At last, we saw that they were wearing masks." (Key informant, Bangladesh)

In Zambia, some people with disability reported difficulties with "masking at all times" and that they wore the mask incorrectly until they were taught otherwise. Older people mentioned difficulty in masking when at home or when doing strenuous work with long hours, such as fishing. Community members believed it was difficult for some old people and people with disabilities to follow the COVID-19 5 golden rules for prevention; for instance, some old people complained of 'suffocation' when they wore a mask.

Psychological challenges brought about by social distancing and adapting to lifestyle changes

In Zambia, restrictions during the pandemic resulted in little contact time with close family members, which may have affected the psychological wellness of older people and people with disabilities. In addition, they had to adjust their day-to-day lives and adopt new lifestyles such as using technology, wearing face masks, avoiding physical touch (such as handshakes, which is a common form of greeting), and using sanitizer.

Context: What contextual factors affect / promote inclusion?

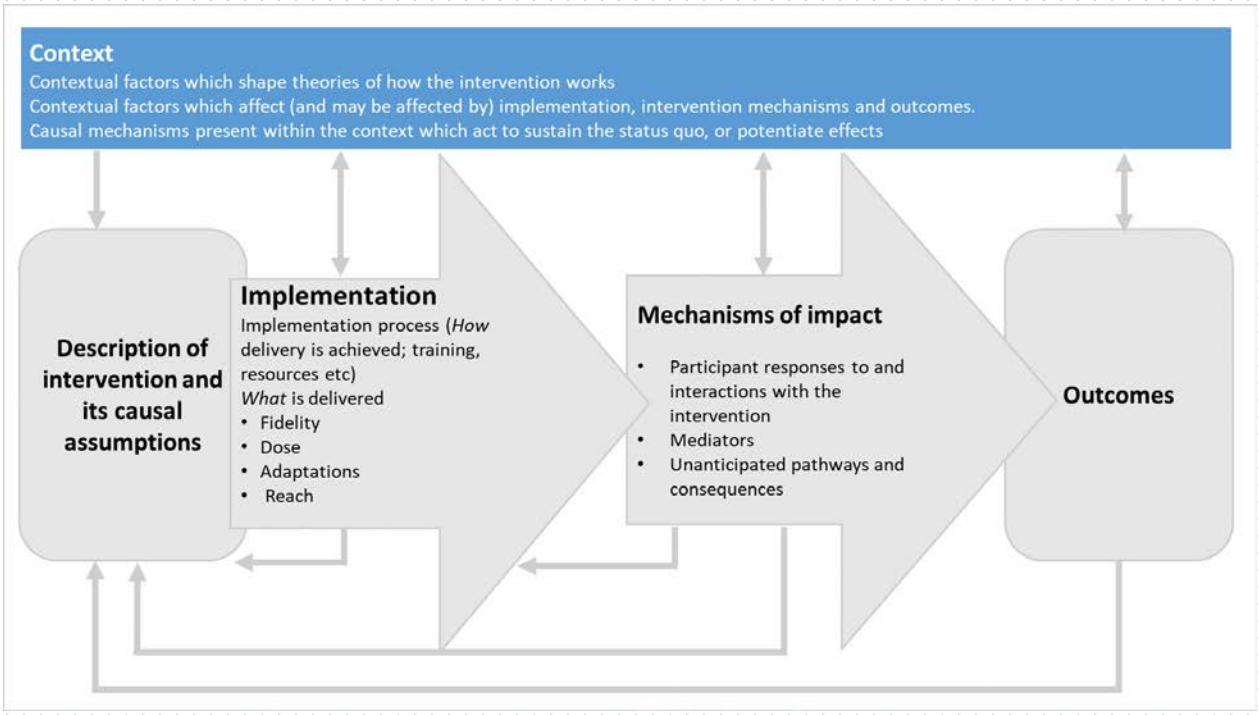


Figure 46: MRC framework: Context

Key findings

Accessibility of household-level handwashing station

- Person and older people had fewer household-level handwashing stations available within 5m in Kenya (around 50%), and Zambia (around 70%) compared to Indonesia (around 90%).
- Older people were less likely to use compounds and community-level handwashing stations compared to younger people.
- The use of disability-inclusive water sources is very rare in the household-level handwashing stations in all three countries
- Around 10% of older people had water available in an easily accessible handwashing place in Zambia, while the number was less than 5% in Indonesia and Kenya.
- Among all three countries, Zambia ranked the highest in terms of having adequate space (24%) and less barriers for wheelchair accommodation (26%), followed by Kenya (10%, and 8% respectively), while there was a serious lack of space observed for wheelchair movement in Indonesia.

Access to assistive devices

- Use of assistive devices was low among people with disability. Around 20% of people who had functional limitations with mobility and self-care, around 10% with vision, hearing and communication limitations, and around 5% with remembering limitations had access to assistive devices. The high expense of assistive devices was found to be an important contributing factor to lower access to the assistive device.
- Need for the assistive device was higher among females, people living in rural areas, and people from the poorest economic settings in all countries.

Economic vulnerability

- In Zambia and Kenya, people with disability, older people and their caregivers expressed that the main barrier two inclusion was their economic vulnerability. The unavailability of electricity and internet connection hindered access to information services (such as TV).
- In Kenya and Zambia, people with disabilities and older people had inadequate supply/access to clean water, and soap/other cleaning agents to maintain personal hygiene which affect their hygiene practices

Communication challenges

- In Kenya, some older people who spoke local languages did not understand the intervention messages as those were not translated into the local languages. DPO representatives in Kenya reported that messages were not inclusive of diverse disabilities.

Infrastructural barriers in public places

- In all countries, the infrastructure for handwashing may be available, but it may not be easily accessible to people with disabilities and older people.

Cultural orientations towards the COVID-19 measures

- In Zambia, some older people thought practicing social distancing is difficult due to the cultural importance such as given to funerals and burials.
- In Indonesia, people with disability and older people faced the loss of income, movement restrictions, loneliness, and challenges with praying during COVID-19. People with disabilities also depicted their challenges in wearing masks.

Accessibility of household handwashing station

Table 20 shows the different characteristics of the household handwashing station. In all three countries, people with disabilities and older people were significantly more likely to have handwashing basins inside the household, besides the tubewell/tap or in the yard, than their comparison groups. Therefore, older people were less likely to use compound or community handwashing stations than younger people. However, among all three countries, people with disabilities in Indonesia (95%) reported having more handwashing stations inside the kitchen. In contrast, less than half of them reported having it in Kenya (39%) and Zambia (34%). In all three countries, using disability-inclusive water sources is very rare in household handwashing places. Specifically, less than 1% of disability-inclusive water sources were observed in Zambia, while Indonesia had slightly more (3%) disability-inclusive water sources than the other two countries. In all three countries, no statistically significant difference was observed in accessing household handwashing stations by disability, although the accessibility of household handwashing places significantly varied by ageing.

Figure 47: Inaccessible household handwashing station for People with disability and Older people

A higher proportion of (more than 80%) household handwashing entry paths was observed to be smooth and flat, while almost 50% of surfaces were non-slippery. In Indonesia and Kenya, more older people were observed to have smooth flat surfaces, while in Zambia, younger people were more likely to have it. In Kenya, there was a significant association between non-slippery surface and their age group (older 44% vs younger 35%, $p<0.005$), while no such significant association was observed in Indonesia and Zambia. At the same time, a relatively low proportion of people with disability and older people have adequate space and other necessary inclusive components for wheelchair users at the entry path of their handwashing places. Among all three countries, Zambia ranked the highest in terms of having adequate space (24%) and fewer barriers for wheelchair accommodation (26%), followed by Kenya (10%, and 8%, respectively), while there was a serious lack of space observed for wheelchair movement in Indonesia. The presence of these components didn't significantly vary with their age group. It is also observed that more than 70% of people with disability and older people's handwashing places have water available, and approximately 50% of places have handwashing agents. In Indonesia, water availability was higher among older (93% vs 88%) compared to younger people, while in Zambia, fewer older people (61% vs 78%) had water available at their handwashing place. No such difference was observed in Kenya. However, fewer (less than 7%) people with disability and older people's handwashing places had water and handwashing agents in such a place that would be easily accessible to wheelchair users or children. Around 10% of older and younger people had water available in an easily accessible place in Zambia, while the number was less than 5% in the other two countries. All other

components were equally distributed for people with disability and older people compared to their comparison groups. (Figure 49, Figure 50, Table 63, Table 64)

Table 20: Access to household handwashing stations among persons with vs without disabilities and older vs younger people

Indicators	Person with disability	Person without Disability		Older	Younger	AOR (95% CI)
	N=615	N=588	AOR (95% CI)	N=510	N=693	
Handwashing place						
Toilet inside the household	116 (19)	131 (22)	ref.	111 (22)	136 (20)	Ref.
Kitchen inside the household	71 (12)	64 (11)	1.52 (0.97-2.37)*	63 (12)	72 (10)	1.53 (0.98-2.39)*
Basin inside the household	140 (23)	114 (19)	**1.91 (0.107-3.42)**	99 (19)	155 (22)	**1.92 (1.07-3.45)**
Beside the tubewell/tap/ water source in the yard	108 (18)	80 (14)	**2.25 (1.23-4.09)**	102 (20)	86 (12)	**2.31 (1.27-4.21)**
Customized bucket/ mug	135 (22)	158 (27)	1.37 (0.77-2.45)	111 (22)	182 (26)	1.39 (0.78-2.47)
No handwashing station just a designated place	27 (4.4)	26 (4.4)	1.61 (0.76-3.43)	17 (3.3)	36 (5.2)	1.61 (0.76-3.44)
Others (Please specify	15 (2.4)	12 (2.0)	1.72 (0.66-4.49)	4 (0.8)	23 (3.3)	1.72 (0.66-4.48)
Ownership type						
Personal family use	58 (10)	75 (13)	ref.	84 (17)	49 (7.4)	Ref.
Family use	450 (80)	447 (77)	0.86 (0.59-1.25)	356 (74)	541 (82)	**0.36 (0.24-0.54)**
Compound use	41 (7.3)	31 (5.3)	0.61 (0.33-1.12)	29 (6)	43 (6.5)	**0.38 (0.20-0.73)**
For Nearby community/shared use	4 (0.7)	7 (1.2)	1.18 (0.32-4.32)	2 (0.4)	9 (1.4)	**0.13 (0.02-0.67)**
Public use	6 (1.06)	10 (1.7)	1.17 (0.39-3.50)	8 (1.6)	8 (1.2)	0.82 (0.25-2.67)
Distance from household						
within 5m	417 (68)	407 (69)	ref.	344 (68)	480 (69)	Ref.
6-10m	115 (19)	111 (19)	1.03 (0.75-1.42)	100 (20)	126 (18)	1.29 (0.92-1.83)
>10m	83 (14)	70 (12)	1.14 (0.80-1.64)	66 (13)	87 (13)	1.19 (0.79-1.78)
Availability of water facility	426 (73)	399 (71)	1.25 (0.95-1.64)	345 (71)	480 (73)	0.88 (0.65-1.19)
Availability of cleaning agents	285 (49)	289 (51)	0.96 (0.75-1.26)	236 (49)	338 (51)	**0.70 (0.53-0.94)**
Water sources						
Hand pump Tube well	156 (27)	154 (27)	1.05 (0.79-1.40)	125 (26)	185 (28)	0.76 (0.54-1.07)
Water bucket	339 (58)	332 (59)	0.88 (0.68- 1.14)	254 (53)	417 (63)	**0.69 (0.51-0.95)**
Regular tap	245 (43)	232 (41)	1.20 (0.88-1.64)	228 (47)	249 (38)	1.37 (0.96-1.96)*
Elbow or forearm operated tap	4 (0.7)	10 (1.8)	0.38 (0.11-1.24)	6 (1.2)	8 (1.2)	0.83 (0.27-2.53)
Foot operated tap	7 (1.2)	7 (1.2)	1.02 (0.35-2.96)	9 (1.9)	5 (0.8)	2.27 (0.72-7.19)
Water dispenser tap (lever or push button	4 (0.7)	1 (0.2)	3.59 (0.39-32.78)	3 (0.6)	2 (0.3)	2.89 (0.43-19.12)
Time delay self-closing tap	1 (0.2)	1 (0.2)	0.89 (0.05-15.41)	0 (0.0)	2 (0.3)	-
Tap with automated sensor	1 (0.2)	2 (0.4)	0.47 (0.04-5.45)	1 (0.2)	2 (0.3)	0.94 (0.08-11.43)
Butterfly tap (ball valve)	2 (0.3)	0 (0.0)	-	1 (0.2)	1 (0.2)	0.75 (0.04-13.13)

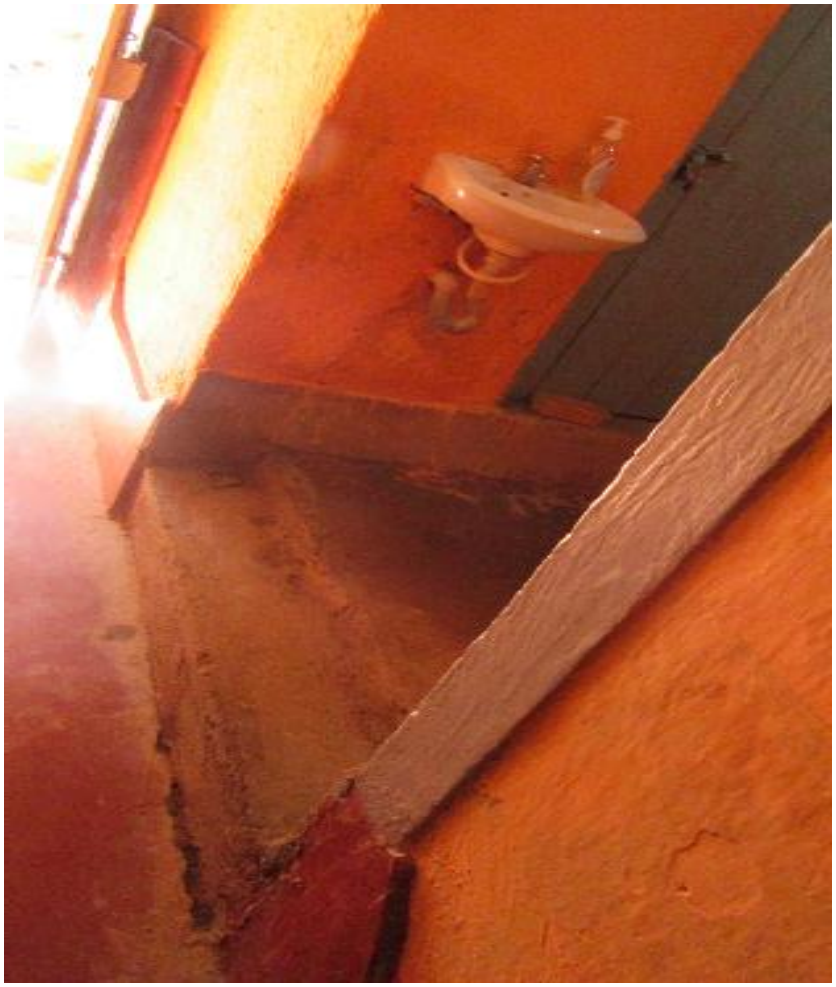


Figure 48: Inaccessible household handwashing station in Kenya

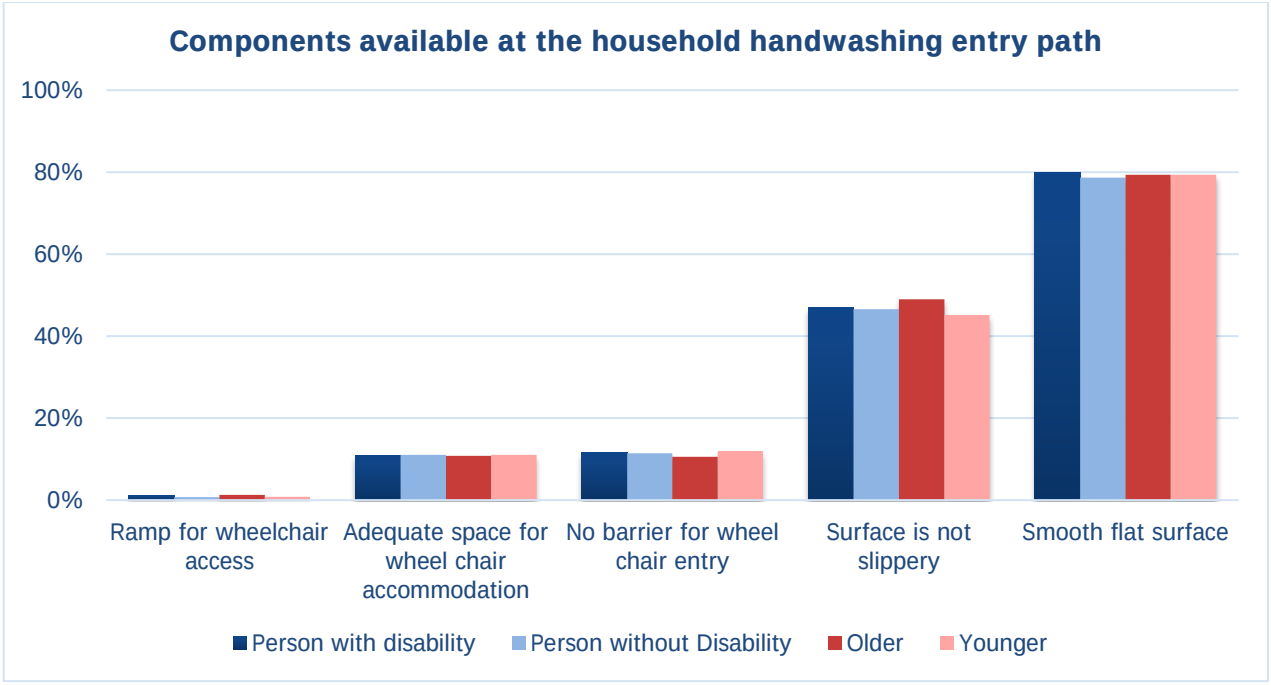


Figure 49: Components available at the handwashing area (household)tors

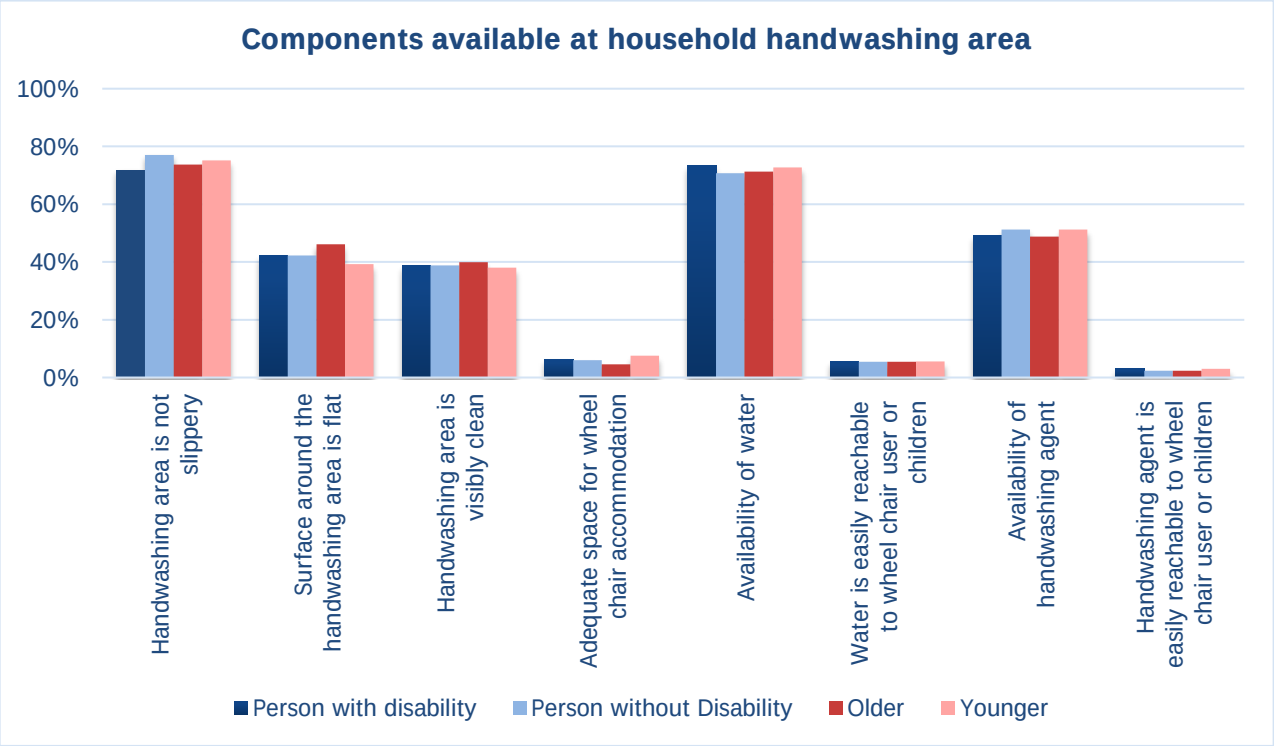


Figure 50: Components available in household handwashing area

Figure 51: A person with disabilities facing difficulty in reaching a water source at household

Access to assistive devices

Table 21 shows access to assistive devices among people with disabilities. Overall, only 21% have access to any assistive devices. Among different types of disabilities, the use of the assistive device is higher among those with mobility limitations (34%) and self-care limitations (34%). But the current use of assistive devices among other types of disabilities is less than one-fifth of those with a particular type of disability. The most common assistive devices reported to be used by the respondents were Crutch/Stick/Walker (64%), and eyewear (19%). Only less than 1% used the white cane. Within the three countries, people with disability in Kenya has the highest access to assistive devices (one in every three persons with a disability is currently using at least one assistive device). Crutch/Elbow Crutch/Stick/ Walker has been the most used assistive device in Indonesia (65%) and Kenya (69%); however, in Zambia wheelchair was the most used assistive device (42%). (Table 65)

Table 21: Access to assistive devices among different types of disabilities[¥]

Indicators	Vision	Hearing	Mobility	Communication	Rememberin g	Self-care	Anxiety	Depressi on	Total
	N=160	N=112	N=307	N=110	N=160	N=120	N=87	N=54	N=615
Currently use assistive equipment	31 (19)	22 (20)	104 (34)	15 (14)	16 (10)	41 (34)	18 (21)	10 (19)	129 (21)
Types of assistive devices	N=31	N=22	N=104	N=15	N=16	N=41	N=18	N=10	N=129
White Cane	0 (0.0)	0 (0.0)	1 (1.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.8)
Wheelchair	1 (3.2)	5 (23)	18 (17)	7 (47)	6 (36)	12 (29)	1 (5.6)	1 (10)	18 (14)
Crutch/Elbow Crutch/Stick/ Walker	13 (42)	16 (73)	75 (72)	7 (47)	7 (44)	27 (66)	8 (44)	3 (30)	83 (64)
Eyewear	17 (55)	1 (4.5)	10 (9.6)	0 (0.0)	2 (13)	2 (4.9)	9 (50)	6 (60)	25 (19)

[¥] Types of disabilities are Non-mutually exclusive binary variables: subjects may have more than one significant functional limitation.

Table 22 represents the distribution of people with disabilities who use, need, need but don't use with reasons for not using the assistive devices. Among all people with disabilities who express their need for assistive devices, the ability to use the assistive device was higher among females (62%) and those who live in rural areas (67%) and doesn't vary by age or socio-economic status. The unmet need for assistive devices is higher among females (62%), rural residents (67%), younger (53%), and the poorest (25%) people with disabilities. Most females (58%, 68%, 68% respectively), rural inhabitants (70%, 71%, 61% respectively) and younger people (54%, 58%, 57% respectively) couldn't use the assistive devices despite their need due to the expense, lack of knowledge of where to access the service, and unavailability of the services. A higher proportion of older (75%) and urban (63%) people with disabilities couldn't access the assistive device due to the distance of the service.

In Zambia, one of the people with disabilities in his IDI also stated that due to their retirement or economic vulnerability, it is hard to buy assistive devices to increase mobility (bicycle, walking stick, etc.) which may exclude them from participating in the social or other hygiene-related activities.

Table 22: Reasons for not using assistive devices by socio-demographics characteristics among person with disabilities

Indicators				Reasons for not using assistive device			
	Need assistive device	Use assistive device	Need but don't use assistive device	Too expensive	Too far	Doesn't know where to access	Service not available
	N=288	N=129	N=159	N=129	N=8	N=31	N=28
Sex							
Male	111 (39)	50 (39)	61 (38)	54 (42)	4 (50)	10 (32)	9 (32)
Female	177 (62)	79 (61)	98 (62)	75 (58)	4 (50)	21 (68)	19 (68)
Types of region							
Urban	96 (33)	44 (34)	52 (33)	39 (30)	5 (63)	9 (29)	11 (39)
Rural	192 (67)	85 (66)	107 (67)	90 (70)	3 (38)	22 (71)	17 (61)
Age							
Older	153 (53)	78 (61)	75 (47)	59 (46)	6 (75)	13 (42)	12 (43)
Younger	135 (47)	51 (40)	84 (53)	70 (54)	2 (25)	18 (58)	16 (57)
Socio-economic status							
1st quartile (poorest)	65 (23)	25 (19)	40 (25)	32 (25)	2 (25)	9 (29)	6 (21)
2nd quartile	62 (22)	25 (19)	37 (23)	35 (27)	1 (13)	8 (26)	6 (21)
3rd quartile	56 (19)	19 (15)	37 (23)	29 (23)	0 (0.0)	3 (9.7)	8 (29)
4th quartile	56 (19)	26 (20)	30 (19)	22 (17)	3 (38)	10 (32)	6 (21)
5th quartile (richest)	49 (17)	34 (26)	15 (9.4)	11 (8.5)	2 (25)	1 (3.2)	2 (7.1)

Several contextual factors have also been explored in the qualitative interviews that have an impact on the implementation of the intervention and people's interaction with the hygiene behavior components during COVID-19.

Economic vulnerability

Many people with disability, older people and their caregivers live in poverty and barely afford their basic needs. COVID-19 restrictions further worsened their economic condition. In Zambia and Kenya, people with disabilities, older people and their caregivers lamented the lack of resources to purchase goods/facilities to make their/the lives of special members comfortable and adhere to hygiene requirements. According to caregivers in Zambia, the main barriers to inclusion in implementing HBCC interventions were household economic vulnerability, limited funding to places/schools offering services to people with special needs, and infrastructural constraints. However, in Kenya, the Ministry of Gender provided financial resources to these groups, and key informants from the ministry admitted that they could not reach all the vulnerable because of a lack of resources. Most key informants from DPOs and older people organizations attested not receiving financial assistance. This socio-economic context also influenced people with disabilities/ older people's interaction with the intervention process and outcome.

Figure 52: Photovoice: An older person with disabilities in Indonesia explaining the physical and economic vulnerability

Lack of access to basic services

Key informants in Kenya felt that people with disabilities and older people living in poverty make it challenging to get access to basic services like water and sanitation facilities. These lead to hindering their hygiene practices.

> *"An elderly person living in Kibera, Mathare valley with flying toilets, where will that elderly person get running water to wash hands with soap? And you are telling the elderly to wash their hands using water. Where is the water?" (Key informant, older people's organization, Kenya)*

> *"There was no water, so for you to get water, you had to buy it, and it was tough to buy water daily when you also need food" [Female caregiver, Kenya]*

> *"For me to look for money to maintain hygiene, isn't that a challenge? When I come back home, what will I have left?" (Older person, Kenya)*

Lack of access to hygiene products

Due to poverty and compounded by the lack of basic services, people with disabilities, older people, and their caregivers find it challenging to routinely afford hygiene products and PPE such as soap, face masks, and sanitizer.

> *"It is not a priority for an older person to buy a mask. The priority is buying medicine and house supplies.'' Key informant, older people organization, Kenya)*

> *''If you walk in the villages, you can get an old person wearing a very old mask….it is probably from somebody [else], but they take it on….'' (Key informant, older people's organization, Kenya).*

Lack of access to information

Limited resources deprived people with disabilities of other services like electricity, and internet connection, which hindered access to information services (such as TV and radio); this resulted in a lack of information regarding the HBCC preventive messages or general misinformation about COVID-19 prevention. Due to this misinformation, some people with disabilities and older people lived in fear during COVID-19. Others did not know how to use handwashing facilities because they lacked the knowledge to use them. In Kenya, a respondent from the Ministry of Public Service shared their learning from the training sessions:

> *''There is an older person who told us that he did not understand some of the hand washing stations….and… how they are used…. and people were not kind to help or tell him what to do.'' (Key informant, Kenya)*

Communication challenges

In Kenya, people with disabilities also noted that some methods used to deliver intervention messages about COVID-19 were not inclusive of different kinds of disabilities because of a lack of modern sources of information and channels of communication.

> *"For most people with disability, especially those who are deaf, for example, there is no way they would do online classes.'' (Key informant, DPO, Kenya).*

Some older people only communicate in their local languages, which meant they did not understand the intervention messages unless they were translated into the local language. Due to these communication challenges, their COVID-19 hygiene practices were hindered.

Infrastructural barriers in public places

In Kenya, people with disabilities stated that although some handwashing interventions had been installed in public places, many were not inclusive for people with disabilities, e.g., people in wheelchairs could not reach the taps.

In Zambia, all types of participants thought mobility issues might exclude older and disabled from participation. For example, those with functional limitations in mobility may avoid clinics which do not have easy access for fear of falling or may not be able to access toilets with steps. One people with disabilities also expressed concern about the ability of pregnant women and older people to squat over pit latrines available at clinics. Caregivers noted the lack of customized water and toilet facilities to ease access for older people and people with disability.

> *"COVID information was out there… for example, you would find that most places had posters, but for someone who cannot see, how would they read that?" (Key Informant, ministry of public service, Kenya).*

Figure 53: Photovoice caption in Zambia showing inaccessible handwashing station: “Old model strong tap”

Cultural orientations towards the COVID-19 measures

In Zambia, people with a disability mentioned using hand sanitizer before handshaking alienated the elderly.

> *"Like our tradition, like greeting someone, we are supposed to shake hands. Now, since COVID came around, it's been a challenge, and for some elders, it's kind of difficult to understand that. They think you're discriminating because you want to greet them using your hand… Now, if you have those hand sanitizers, moving with them, yeah, you can wash your hands, then you will use the hand sanitizer after some time … people get offended; they think, 'Oh, maybe I'm just so dirty!' That's, now, without considering the disease and change, it's very difficult to adapt to, yes for people to adapt to a certain change, it takes time." (Person with disabilities, Zambia)*

In Zambia, some people with disabilities had difficulties practicing social distancing due to the cultural importance given to funerals and burials.

> *"Even though you want to stay apart … somebody may come near you, so you can't push somebody [away]." One older person thought that culturally, "even when you can see and feel that you are unwell, you still want to be out there everywhere." (Person with disability, Zambia)*

Contexts identified from Photovoice

Photovoice ranking in Indonesia, Kenya, and Zambia identified the following fundamental challenges of people with disability and older people to maintain COVID-19 preventive measures; i) Infrastructural barriers to using handwashing stations, ii) Inadequate availability of water/clean water and cleaning agents (soap), and iii) social and behavioral challenges during COVID-19.

i) Infrastructural barriers to using handwashing station

This theme was highlighted in all three countries, which mainly demonstrated that infrastructure for handwashing might be available, but it may not be easily accessible to people with disabilities and older people. The infrastructural challenges include inaccessible height (lower/higher), steep stairs, lack of supporting structure to reach the facility, and the distance from home. Photos from a participant from Kenya depicted the custom-made handwashing facilities, although the height was not favourable for the elderly or people with disabilities since it requires people with disabilities and older people to bend to use the facilities.

> *"The handwashing point is at a height that restricts an older person from using it. There is a steep stair that leads to the handwashing point, and there is no support; both are a struggle for the older persons"- Kenya*

Figure 54: Photo of an older person with visual limitation bending to wash hands in Kenya

Inadequate availability of water/clean water and cleaning agents (soap)

This theme was reported in Kenya and Zambia, which shows that people with disabilities and older people had inadequate supply/access to clean water and soap/other cleaning agents to maintain personal hygiene. Participants also discussed the challenges of accessing water, taps, refilling the water tank, moving around, and going to the water source far from their houses. The participants noted the lack of water and soap hinders hygiene practices.

> ***"A person with a disability found it difficult to access and use the facility since he cannot see. He used the walking stick to identify the handwashing facility. It takes time for him to identify and use it. Opening the tap was a challenge; in most cases, he was assisted in accessing and using it" (Kenya)***

Figure 55: Photovoice Zambia: “Where we find water to drink and bath”

In Zambia, the most prevalent theme for the photographs was the importance of water which is encapsulated in the phrase “water is life.” The most photographed and named items were soap (sometimes with a dish) for handwashing and soap. However, most participants found pride in keeping themselves and their surroundings clean. A few participants noted the importance of being taught about personal hygiene or COVID-19 prevention messaging by health personnel. Moreover, most preferred to teach their neighbors personal hygiene by example.

> ***“This sickness moves in dirt so if we keep our clothes clean, things would be better. Also keeping our toilet well and clean is a very good thing for our health … Thank you for encouraging us on how to take care of ourselves by washing our hands and keeping our surroundings clean and rubbish pits at our home where you can find flies that can make us sick” (Zambia)***

Figure 56: Despite challenges, a people with disabilities in Zambia demonstrates how he cleans the surrounding areas and washes clothes to prevent COVID-19

Challenges to using masks along with socio-economic and psychological challenges during COVID-19

This theme was reported in Indonesia, which demonstrates that people with disability and older people faced diverse socio-economic challenges such as loss of income, movement restrictions, loneliness, and challenges with praying during COVID-19. People tried to enjoy music and other media recreations to tackle boredom. However, the adverse news about COVID-19 infection and death made worried people, especially older people. People with disabilities also depicted their challenges in wearing masks.

Figure 57: 'Unusual Eid' (to express the loneliness of a person with visual functional limitation)

"Usually during Eid, it is a gathering moment for all relatives, family, especially distant relatives, but Eid during COVID-19, I was alone at home, and no one visits each other."

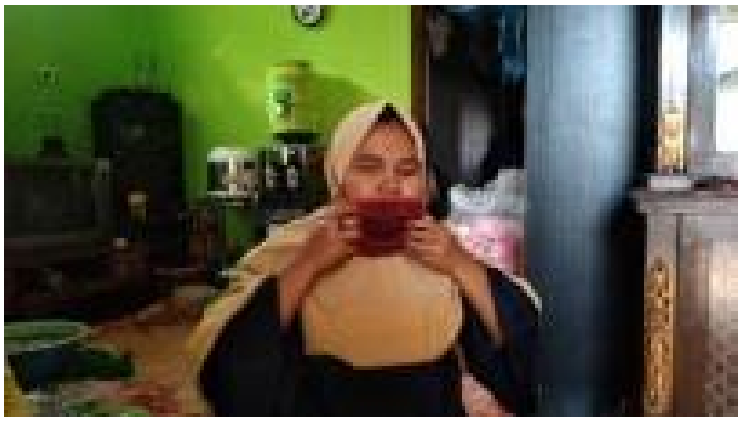


Figure 58: It's hard to wear a mask (demonstrating a person with visual functional limitation)

"When COVID is everywhere, you have to wear a mask; it keeps getting covered, making you uncomfortable because you're not used to it"

Figure 59: Feeling worried because of watching the news on TV

"Anxious to see COVID news, especially news in Jakarta. Worried because according to the report, a lot of people were sick and died because of COVID".

The need for assistance in performing hygiene practices

This theme is depicted in Kenya, which shows that people with disability and older people need assistance in moving to the water points or carrying water from the water points and performing basic hygiene practices, including handwashing with soap. Also, people with visual functional limitations needed assistance locating and using the handwashing facility.

Intervention outcome

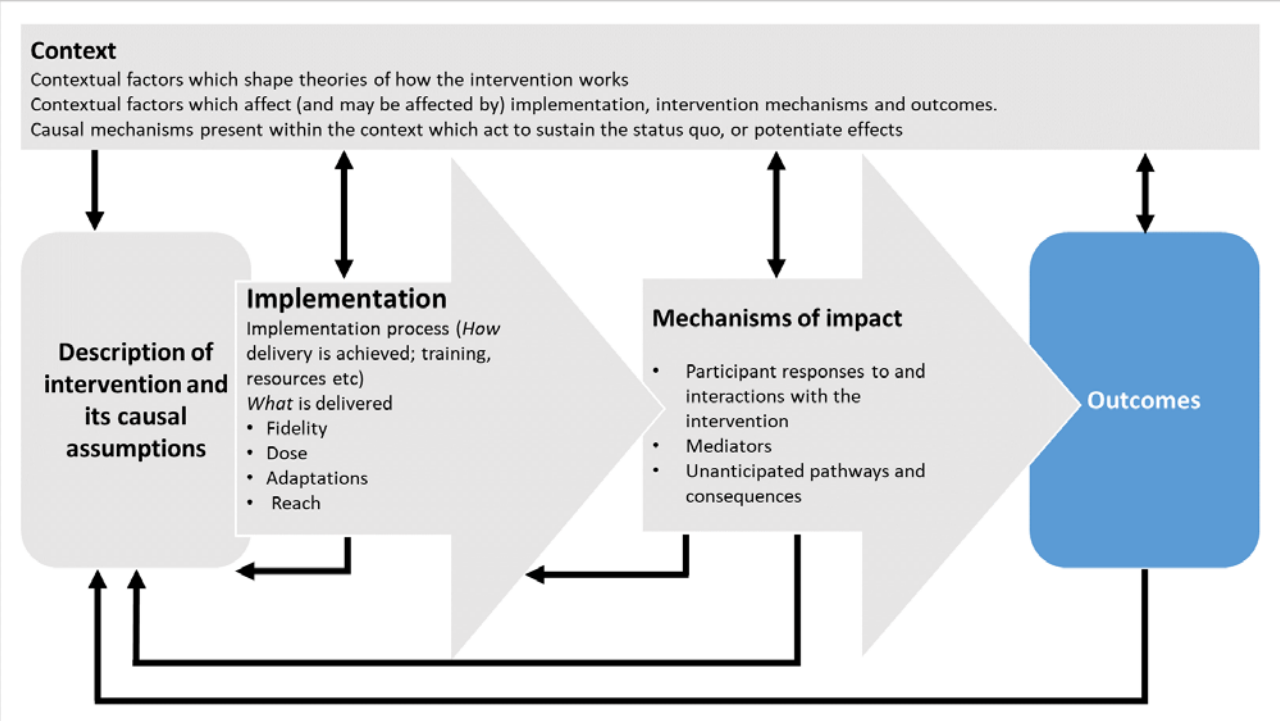


Figure 60: MRC framework: Outcomes

Key findings

KAP of People with disability and older people

Knowledge of COVID-19 spread, risk population, and preventive measures

- In all three countries, people with disability and older people were less likely to have knowledge about COVID-19 spread, risk population and preventive measures compared to persons without disabilities and younger people.
- In Kenya and Zambia, people with disability were more likely to have higher knowledge gaps compared to persons without disabilities and these were statistically significant.
- More than 50% of older people in all countries recognized themselves as the vulnerable group, and this was higher in Kenya (73%).
- Person with disabilities in Kenya and Zambia exhibits slightly little knowledge regarding preventive measures compared to Indonesia.
- Older people (vs younger people) in Zambia had a higher knowledge gap regarding these preventive measures compared to other to countries.

Attitude toward key COVID-19-related knowledge

- Overall, around 80% people with disability and older people perceived that frequent handwashing with soap, using face mask, maintaining social distancing, coughing, sneezing etiquette, and avoiding touching nose-face-eyes with unclean hands were effective preventive measures for COVID-19 infection.
- In all three countries, people with disability were slightly less likely than persons without disabilities to perceive that these preventive measures are effective in reducing COVID-19 infection.
- No significant difference was observed between the level of attitudes towards these measures with the ageing in all three countries.

Practices of maintaining COVID-19 preventive measures

- People with disability and older people were less likely to practice each key COVID-19 preventive measures compared to their comparison groups in all three countries separately, with the gaps being larger for people with disability than older adults.
- There was a significant difference observed in maintaining these preventive measures by 3 countries. Indonesia and Kenya, people with disabilities were significantly less likely to wash hands with soap, maintain social distancing, and wear face masks than people without disabilities.
- Older people in Zambia were significantly less likely to wear face masks as a COVID-19 preventive measure.
- In Indonesia (65%), and Kenya (68%) higher percentages of people with disability were reported to disinfect their assistive devices during COVID-19 than people with disability in Zambia (39%), while only half of them in Indonesia (36%), Kenya (34%) confirmed to disinfect those daily.

Comparison of KAP

- Among person with disabilities, the knowledge, attitude, practice (KAP) of 3-key COVID-19 preventive measures (handwashing, mask use, social distance) were strongly positively associated with their socio-economic status. The likelihood of KAP was significantly lower among poorer (1st quantile) person with disabilities which likely to increase with their socio-economic status.
- In Indonesia and Kenya, rural person with disabilities were significantly more likely to have the KAP regarding these 3-key measures, while in Zambia the KAP was lower among them compared to urban person with disabilities.
- No significant gender-wise differences were observed in people's knowledge and practices regarding these COVID-19 key measures.

KAP of caregivers

- In all three countries, caregivers reported increased knowledge and practices of COVID-19 preventive measures, especially handwashing, wearing face masks, and physical distancing.
- In Zambia, caregivers were reported to increase their handwashing practice along with the enhancement of other hygiene practices such as cleaning of surroundings and toilets.
- Caregivers' practices of COVID-19 preventive behaviors were primarily motivated by fear of contracting COVID-19 infection and passing it on to elderly family members.
- Caregivers in in-depth interviews reported that person with disabilities and older people were at greater risk of COVID-19 and other infections. And older people were more likely to accept COVID-19 preventive behaviors like handwashing and wearing of masks when shared by their caregivers.
- Nonetheless, some of the caregivers from Zambia reported to have lack of knowledge regarding caring of COVID-19 infected older people or person with disabilities. While caregivers from Indonesia reported that to have knowledge of handling the persons that they were taking care of.

Hygiene Behaviour Change during COVID-19

- Compared to before COVID-19, people with disability and older people reported less improvement in changing their practice of maintaining different hygiene etiquettes than their comparisons.
- Among people with disability, around 80% (Indonesia: 70%; Kenya: 80%; Zambia: 90%) reported that their practice to wash their hands with soap (at home or public places) significantly increased since before the pandemic. While the change in other hygiene behaviours (maintaining coughing etiquette, avoiding touching their face, and clean surfaces and assistive devices) was reported by 60-70% person with disabilities.

KAP of People with disability and older people

Knowledge of COVID-19 spread

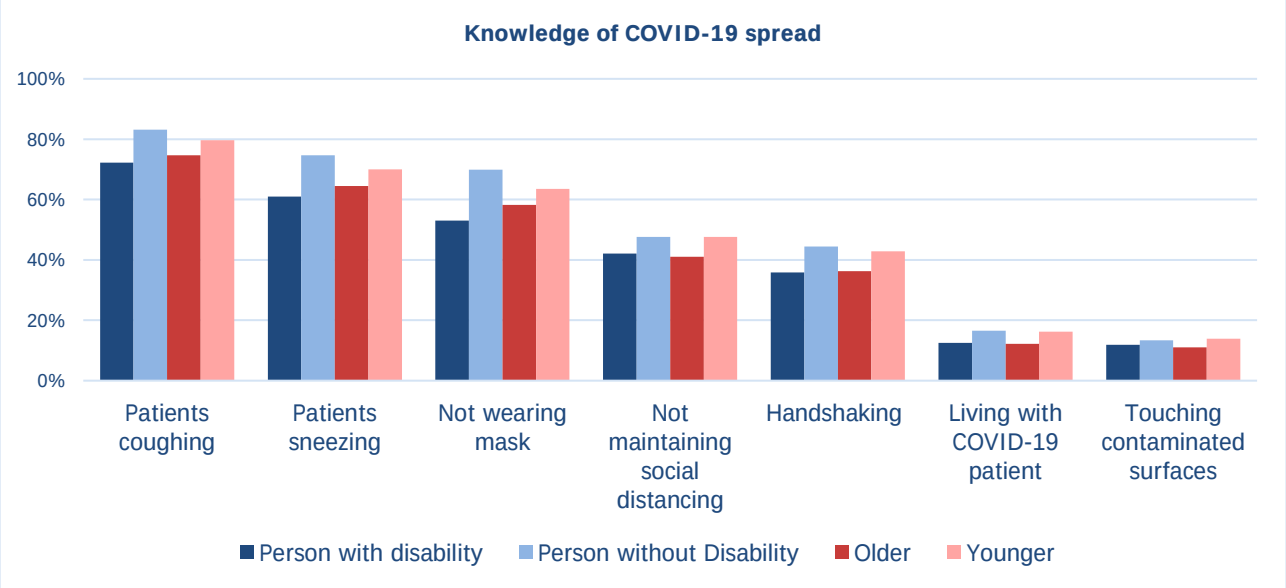


Figure 61: Knowledge of how COVID-19 spread

People with disability and older people had 5-17% less knowledge about COVID-19 spread compared to persons without disabilities and younger people. (Figure 61). In all three countries, people with disabilities exhibited significantly less knowledge that COVID-19 is spread by patients coughing, sneezing, or not wearing masks. In Zambia, people with disabilities demonstrated less knowledge that COVID-19 is spread by handshaking and in Indonesia and Kenya by patients coughing. (Table 23) However, it is noticeable that these knowledge gaps (regarding the COVID-19 spread) were higher in Indonesia for people with disability, while in Zambia, the gap was higher for older people. Older people in Indonesia also demonstrated less knowledge than younger people that coughing and handshaking spread COVID-19. Older people in Zambia were significantly less likely to know that COVID-19 can be spread by coughing, sneezing, and living with COVID-19 patients. However, there was no significant difference in demonstrated knowledge by ageing in Kenya (Table 24).

Table 23: Country-specific knowledge of how COVID-19 spread (disability)

Indicators	Indonesia			Kenya			Zambia		
	Person with disability	Person without Disability	AOR (95% CI)	Person with disability	Person without Disability	AOR (95% CI)	Person with disability	Person without Disability	AOR (95% CI)
	N=173	**N=167**		**N=282**	**N=260**		**N=160**	**N=161**	
How COVID-19 spread									
Patients coughing	142 (82)	160 (96)	**0.16 (0.04-0.57)**	177 (63)	187 (72)	**0.66 (0.43-0.99)**	125 (78)	142 (88)	0.43 (0.18-1.02)*
Patients sneezing	122 (71)	150 (90)	**0.21 (.08-0.59)**	145 (51)	161 (62)	**0.65 (0.43-0.97)**	108 (68)	128 (80)	**0.33 (0.16-0.67)**
Not maintaining social distancing	32 (19)	52 (31)	0.44 (0.16-1.17)	125 (44)	109 (42)	1.23 (0.96-1.56)	102 (64)	119 (74)	0.51 (0.23-1.12)*
Not wearing mask	89 (51)	123 (74)	**0.30 (0.17-0.53)**	133 (47)	160 (62)	**0.64 (0.44-0.95)**	104 (65)	128 (80)	**0.49 (0.27-0.89)**
Living with COVID-19 patient	14 (8.1)	26 (16)	0.63 (0.24-1.62)	11 (3.9)	12 (4.6)	0.79 (0.35-1.76)	52 (33)	59 (37)	0.68 (0.34-1.34)
Contact with contaminated surfaces	5 (2.9)	4 (2.4)	3.53 (0.54-23.15)	35 (12)	34 (13)	1.05 (0.64-1.72)	33 (21)	41 (26)	0.65 (0.36-1.16)
Handshaking	7 (4.0)	12 (7.2)	0.47 (0.16-1.35)	131 (47)	140 (54)	0.81 (0.61-1.09)	83 (52)	109 (68)	**0.49 (0.30-0.81)**

Bold indicates: p-value<0.05
- Indicates p-values<0.1

Table 24: Country specific knowledge of how COVID-19 spread (ageing)

Indicators	Indonesia			Kenya			Zambia		
	Older	Younger	AOR (95% CI)	Older	Younger	AOR (95% CI)	Older	Younger	AOR (95% CI)
	N=162	**N=178**		**N=246**	**N=296**		**N=102**	**N=219**	
How COVID-19 spread									
Patients coughing	138 (85)	164 (92)	**0.52 (0.29-0.96)**	163 (66)	201 (70)	0.93 (0.65-1.32)	80 (78)	187 (85)	**0.57 (0.34-0.93)**
Patients sneezing	126 (78)	146 (82)	0.82 (0.58-1.16)	134 (55)	172 (58)	0.88 (0.65-1.18)	69 (68)	167 (76)	**0.49 (0.26-0.91)**
Not maintaining social distancing	39 (24)	45 (25)	1.02 (0.58-1.82)	105 (43)	129 (44)	0.91 (0.67-1.25)	65 (64)	156 (71)	0.66 (0.38-1.16)
Not wearing mask	98 (61)	114 (64)	0.96 (0.63-1.43)	131 (53)	162 (55)	0.88 (0.64-1.19)	68 (67)	164 (75)	0.79 (0.46-1.38)
Living with COVID-19 patient	20 (12)	20 (11)	1.24 (0.58-2.68)	12 (4.9)	11 (3.7)	1.64 (0.77-3.51)	30 (29)	81 (37)	**0.48 (0.26-0.89)**
Contact with contaminated surfaces	4 (2.5)	5 (2.8)	0.82 (0.31-2.17)	27 (11)	42 (14)	0.75 (0.42-1.35)	25 (25)	49 (22)	1.15 (0.75-1.76)
Handshaking	6 (3.7)	13 (7.3)	0.48 (0.20-1.15)*	125 (51)	146 (49)	0.84 (0.62-1.14)	54 (53)	138 (63)	0.65 (0.35-1.19)

Knowledge of COVID-19 risk population

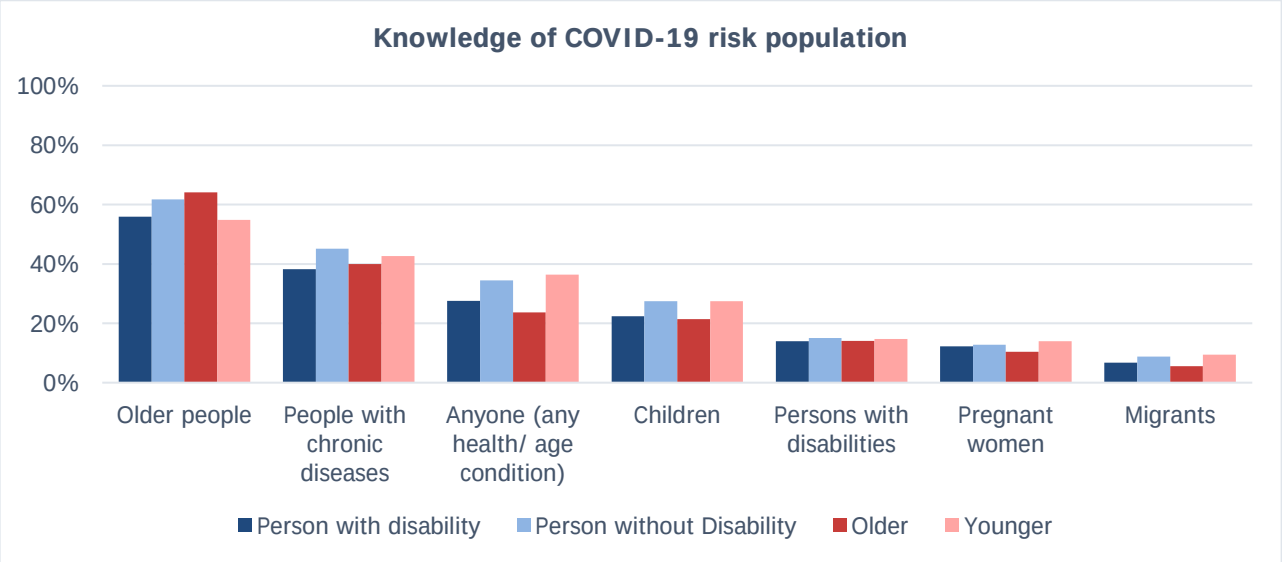


Figure 62: Knowledge about COVID-19 risk population

The respondents were asked about who they think are at risk of getting COVID-19 (multiple answers were allowed). In all three countries, people mostly reported older people, people with chronic diseases, and anyone, irrespective of their health condition or age, as the vulnerable groups to COVID-19 infection (Figure 62). In all three countries, people with disability and older people exhibited 1-12% less understanding of the COVID-19 risky population than people without disabilities and younger people. Moreover, in all three countries, most of these knowledge measures regarding the risky population groups didn't significantly vary with disability. In Kenya, people with disabilities demonstrated significantly less knowledge about pregnant women and children as risky populations. While in Zambia, people with disabilities had significantly lower knowledge regarding the COVID-19 infection risk of individuals with chronic disease and migrants. However, no significant difference was observed in demonstrated knowledge by disability in Indonesia. (Table 25).

On the other hand, older people considered themselves the most vulnerable population to COVID-19 infection, while younger people across three countries had 1-13% less consideration regarding this perception. The vulnerability of older people in Kenya was more recognized by older people (73%) compared to younger people (60%). Older people in Kenya were less likely to consider people with disabilities as one of the vulnerable groups, while in Zambia, this consideration was higher among older people. In Indonesia and Zambia, older people were significantly less likely to consider anyone (irrespective of their health and age) as one of the vulnerable populations of COVID-19 infection compared to younger people (Table 26).

Table 25: Country specific knowledge of population vulnerable to COVID-19 infection (disability)

Indicators	Indonesia			Kenya			Zambia		
	Person with disability	Person without Disability	AOR (95% CI)	Person with disability	Person without Disability	AOR (95% CI)	Person with disability	Person without Disability	AOR (95% CI)
	N=173	**N=167**		**N=282**	**N=260**		**N=160**	**N=161**	
COVID-19 risk population									
Individuals with chronic diseases	66 (38)	61 (37)	1.21 (0.81-1.83)	103 (37)	125 (48)	0.69 (0.41-1.18)	66 (41)	79 (49)	**0.41 (0.18-0.92)**
Pregnant women	28 (16)	27 (16)	1.21 (0.54-2.74)	22 (7.8)	11 (4.2)	2.22 (0.97-5.08)*	25 (16)	37 (23)	0.60 (0.31-1.16)
Older people	96 (56)	93 (56)	0.99 (0.75-1.28)	175 (62)	182 (70)	0.75 (0.49-1.14)	73 (46)	88 (55)	0.65 (0.36-1.17)
People with disability	32 (19)	27 (16)	1.14 (0.61-2.10)	22 (7.8)	32 (12)	0.60 (0.29-1.27)	32 (20)	29 (18)	1.01 (0.51-2.01)
Children	36 (21)	31 (19)	1.38 (0.86-2.22)	66 (23)	92 (35)	**0.58 (0.35-0.96)**	36 (23)	38 (24)	1.26 (0.51-3.08)
Migrants	16 (9.2)	16 (9.6)	1.22 (0.48-3.12)	4 (1.4)	5 (1.9)	0.67 (0.22-2.03)	21 (13)	31 (19)	**0.27 (0.09-0.78)**
Anyone irrespective of health/age	64 (37)	82 (49)	0.54 (0.26-1.11)*	37 (13)	42 (16)	0.75 (0.44-1.28)	69 (43)	79 (49)	0.44 (0.17-1.12)*

Table 26: Country specific knowledge of population vulnerable to COVID-19 infection (ageing)

Indicators	Indonesia			Kenya			Zambia		
	Older	Younger	AOR (95% CI)	Older	Younger	AOR (95% CI)	Older	Younger	AOR (95% CI)
	N=162	**N=178**		**N=246**	**N=296**		**N=102**	**N=219**	
Knowledge of COVID-19 risk population									
Individuals with chronic diseases	58 (36)	69 (39)	2.92 (0.29-29.08)	104 (42)	124 (42)	0.87 (0.59-1.26)	42 (41)	103 (47)	**0.41 (0.20-0.82)**
Pregnant women	18 (11)	37 (21)	1.23 (0.22-6.79)	13 (5.3)	20 (6.8)	0.84 (0.25-2.80)	22 (22)	40 (18)	1.81 (0.50-2.36)
Older people	91 (56)	98 (55)	1.30 (0.74-2.29)	179 (73)	178 (60)	1.66 (0.98-2.82)*	57 (56)	104 (48)	1.04 (0.62-1.72)
People with disability	23 (14)	36 (20)	1.40 (0.32-6.16)	23 (9.3)	31 (11)	**0.59 (0.37-0.98)**	26 (26)	35 (16)	**2.04 (1.13-3.70)**
Children	18 (11)	49 (28)	1.11 (0.26-4.81)	64 (26)	94 (32)	**0.61 (0.38-0.99)**	27 (27)	47 (22)	1.16 (0.61-2.21)
Migrants	8 (4.9)	24 (14)	**0.36 (0.15-0.89)**	5 (2.0)	4 (1.4)	1.79 (0.43-7.55)	15 (15)	37 (17)	0.63 (0.31-1.26)
Anyone irrespective of health/age	63 (39)	83 (47)	**0.12 (0.03-0.50)**	28 (11)	51 (17)	0.78 (0.44-1.39)	30 (29)	118 (54)	**0.41 (0.19-0.89)**

Knowledge of COVID-19 preventive measures

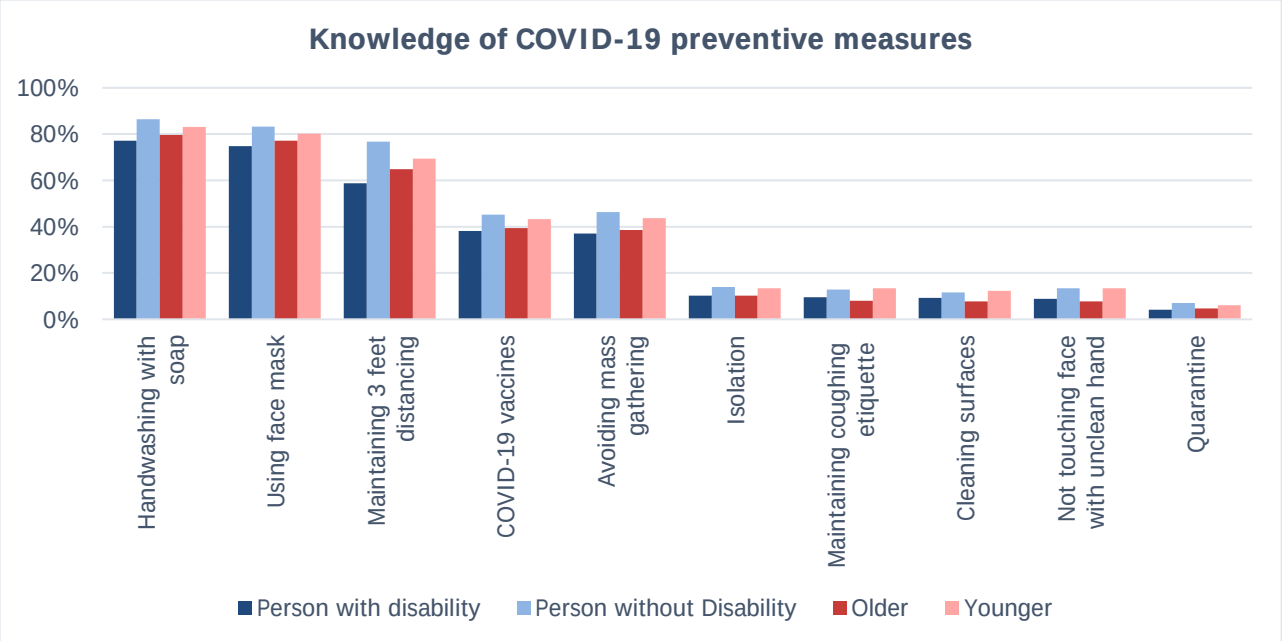


Figure 63: Knowledge of COVID-19 preventive measures

Regarding the COVID-19 preventive measures needed, the people with disability and older people had 3-18% less knowledge compared to people without disabilities and younger people. They mostly talked about the need for handwashing, mask use, social distancing, vaccine and avoiding mass gathering as key COVID-preventive measures. (Figure 63) In Kenya, people with disabilities had a significantly lower knowledge about maintaining social distancing, wearing face mask, and avoiding touching nose and face with unclean

hands. While, in Indonesia, people with disabilities demonstrated significantly lower knowledge that COVID-19 could be prevented by frequently handwashing with soap, maintaining 3 feet social distancing, taking vaccines, and avoiding touching nose, and face with unclean hands. Though there was no statistically significant relationship in demonstrated knowledge by disability in Zambia. (Table 27)

older people in Zambia demonstrated less knowledge than younger people that handwashing, avoiding mass gathering and maintaining coughing-sneezing etiquette can prevent COVID-19. However, no significant relationship was observed between knowledge of preventive measures with ageing in Indonesia, and Kenya. (Table 28)

Figure 64: A respondent from Zambia using a face mask to prevent COVID-19 transmission

Table 27: Country specific knowledge of COVID-19 preventive measures (disability)

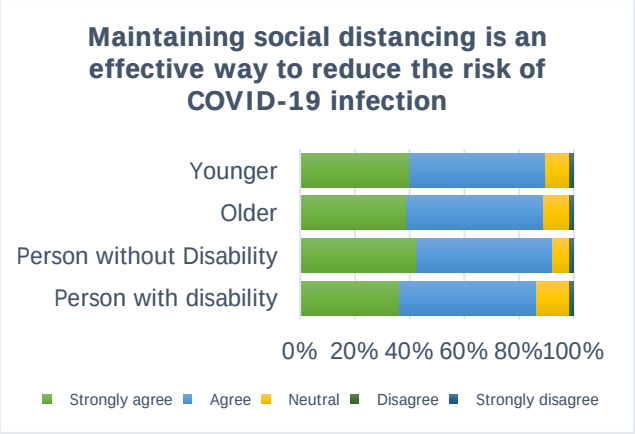
Indicators	Indonesia			Kenya			Zambia		
	Person with disability	Person without Disability	AOR (95% CI)	Person with disability	Person without Disability	AOR (95% CI)	Person with disability	Person without Disability	AOR (95% CI)
	N=173	**N=167**		**N=282**	**N=260**		**N=160**	**N=161**	
COVID measures needed									
Frequent hand washing with soap	138 (80)	159 (95)	**0.22 (0.09-0.49)**	213 (76)	218 (84)	0.66 (0.41-1.05)*	123 (77)	131 (81)	0.71 (0.43-1.18)
Maintaining 3 feet social distancing	121 (70)	148 (89)	**0.27 (0.12-0.59)**	145 (51)	185 (71)	**0.44 (0.29-0.65)**	95 (59)	118 (73)	0.57 (0.26-1.26)
Wearing face mask	136 (79)	145 (87)	0.71 (0.31-1.65)	211 (75)	222 (85)	**0.56 (0.34-0.92)**	113 (71)	122 (76)	0.85 (0.42-1.71)
Isolation	20 (12)	35 (21)	0.29 (0.07-1.22)*	15 (5.3)	16 (6.2)	0.95 (0.41-2.19)	28 (18)	31 (19)	0.83 (0.36-1.94)
Quarantine	11 (6.4)	22 (13)	0.41 (0.144-1.14)*	4 (1.4)	4 (1.5)	1.09 (0.25-4.74)	10 (6.3)	15 (9.3)	0.66 (0.19-2.31)
Avoiding gathering	47 (27)	67 (40)	0.64 (0.34-1.20)	91 (32)	106 (41)	0.74 (0.47-1.16)	90 (56)	99 (62)	0.73 (0.37-1.45)
COVID-19 vaccines	65 (38)	91 (55)	**0.45 (0.25-0.80)**	57 (20)	51 (20)	1.3 (0.83 –1.95)	113 (71)	124 (77)	0.59 (0.26-1.40)
Cleaning surfaces	5 (2.9)	11 (6.6)	0.80 (0.12-5.20)	19 (6.7)	19 (7.3)	1.11 (0.49-2.49)	33 (21)	38 (24)	0.98 (0.40-2.38)
Avoiding touching nose, eye, face with unclean hands	5 (2.9)	16 (9.6)	**0.22 (0.07-0.74)**	7 (2.5)	16 (6.2)	**0.39 (0.15-0.98)**	42 (26)	47 (29)	0.79 (0.27-2.35)
Maintaining coughing etiquette	8 (4.6)	17 (10)	0.38 (0.12-1.23)	6 (2.1)	11 (4.2)	0.48 (0.15-1.51)	45 (28)	47 (29)	1.54 (0.78-3.05)

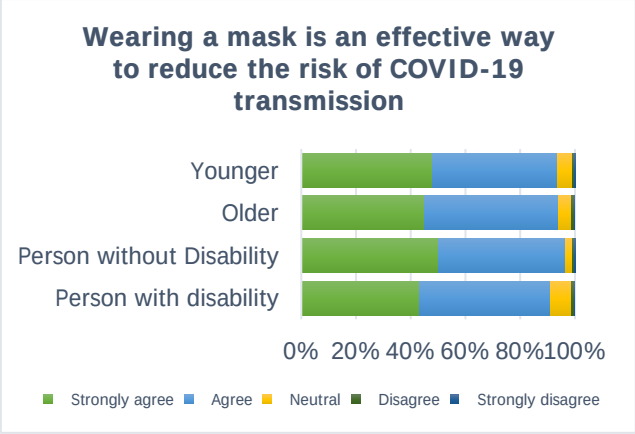
Table 28: Country specific knowledge of COVID-19 preventive measures (ageing)

Indicators	Indonesia			Kenya			Zambia		
	Older	Younger	AOR (95% CI)	Older	Younger	AOR (95% CI)	Older	Younger	AOR (95% CI)
	N=162	**N=178**		**N=246**	**N=296**		**N=102**	**N=219**	
COVID measures needed									
Frequent hand washing with soap	140 (86)	157 (88)	1.29 (0.14-12.35)	194 (80)	237 (80)	0.84 (0.53-1.32)	72 (71)	182 (83)	0.62 (0.39-1.01)*
Maintaining 3 feet social distancing	123 (76)	146 (82)	2.05 (0.32-13.25)	142 (58)	188 (64)	0.74 (0.51-1.07)	66 (65)	147 (67)	0.88 (0.43-1.82)
Wearing face mask	130 (80)	151 (85)	0.37 (0.05-2.79)	193 (79)	240 (81)	0.74 (0.41-1.35)	70 (69)	165 (75)	0.82 (0.42-1.59)
Isolation	23 (14)	32 (18)	0.82 (0.36-1.90)	11 (4.5)	20 (6.8)	0.66 (0.33-1.29)	18 (18)	41 (19)	0.86 (0.39-1.87)
Quarantine	17 (11)	16 (9.0)	1.37 (0.58-3.21)	2 (0.8)	6 (2.0)	0.44 (0.07-2.91)	5 (4.9)	20 (9.1)	0.53 (0.16-1.77)
Avoiding gathering	53 (33)	61 (34)	0.34 (0.04-2.69)	91 (37)	106 (36)	0.86 (60-1.22)	53 (52)	136 (62)	**0.47 (0.27-0.79)**
COVID-19 vaccines	62 (38)	94 (53)	0.17 (0.02-1.52)	57 (23)	51 (17)	1.33 (0.83-2.13)	82 (80)	155 (71)	1.62 (0.84-3.13)

Attitude toward key COVID-related knowledge

We combined the categories 'strongly agree' and 'agree' as a measure of positive attitude. Across three countries, all the comparison groups mostly had positive attitudes regarding the key COVID-19-related measures. However, people with disability had slightly less positive perceptions than persons without disabilities, while younger and older people had a similar attitude towards these key COVID-19 measures. Overall, 86% of people with disabilities (Indonesia: 82%, Kenya: 88%, Zambia: 87%) believed that social distancing could reduce COVID-19 infection risk, which was 93% for persons without disabilities. 7% fewer people with disability (Indonesia: 7%, Kenya: 4%, Zambia: 4% less respectively) and 3% fewer older people (Indonesia: 3%, Kenya: no difference, Zambia: 4% less respectively) (than their comparison groups) strongly agreed that masks could effectively reduce COVID-19 transmission risk. 5% fewer people with disability (Indonesia: 5%, Kenya: 6%, Zambia: 3% less respectively) (than without disabilities) strongly agreed that reusing the same mask is unhygienic and maintaining coughing and sneezing etiquettes were effective in reducing COVID-19 transmission while 7% less (Indonesia: 8%, Kenya: 4%, Zambia: 6% less respectively) strongly agreed that handwashing is effective. Around 10% less (Indonesia: 12%, Kenya: 7%, Zambia: 10% less respectively) people with disability (vs without disabilities) believed (agreed or strongly agreed) that touching face with unclean hands increases COVID-19 infection risk. These subtle differences in attitude were also similar in all three countries among older and younger people. No significant association was observed between the level of attitudes towards these measures and ageing in all three countries. (Figure 65, Table 48, Table 49).





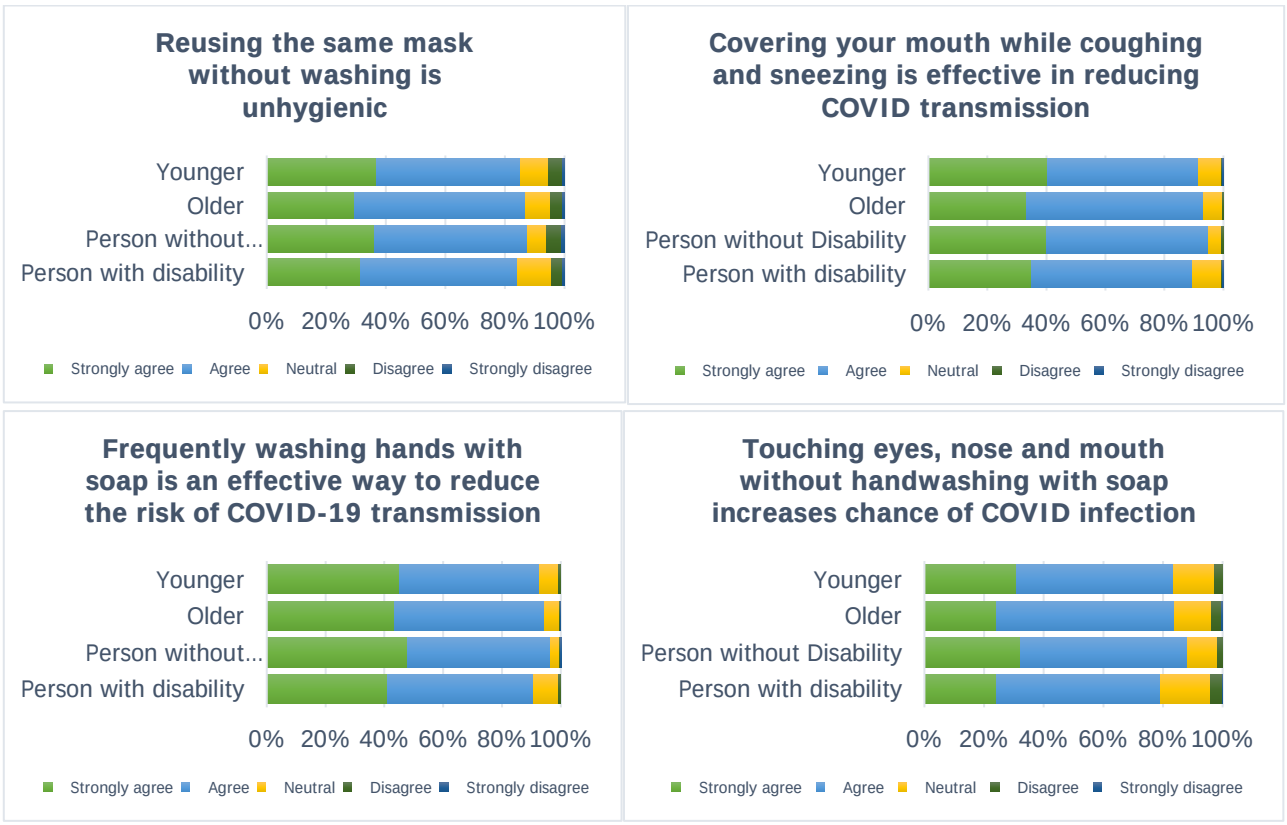


Figure 65: Attitude towards key COVID-19 preventive measures

Figure 66: A person with hearing functional limitation in Indonesia showing her attitude towards mask use by others

Practice of maintaining COVID-19 preventive measures

In maintaining all of the key COVID-19 preventive measures, the people with disability and older people had lower practice than their comparison groups. In comparison, the practice gap among the ageing group (older vs younger people) was lower than the gaps in the disability group (people with vs without disabilities). The practice of handwashing with soap was reported by 12% fewer people with disability than persons without disabilities (75% vs 87%) and by 4% older people compared to younger people (79% vs 83%). A 17% difference in maintaining at least 3 feet of social distancing was found among people with disability (53%) vs

persons without disabilities (70%), while a 7% difference was found among older people (57%) vs younger people (64%). The practice of using masks outside was seen in 71% of people with disability and 73% of older people, respectively. Also, the frequency of mask use was substantially less (15%) among people with disability compared to persons without disabilities. Other measures such as avoiding mass gatherings, maintaining coughing etiquettes, avoiding touching the face with unwashed hands, and surface cleaning were 3-10% less practiced among people with disability and older people (than comparisons). (Figure 68)

In Indonesia and Kenya, people with disabilities were significantly less likely to wash hands with soap, maintain social distancing, and wear face masks than people without disabilities. In comparison, people with disabilities in Zambia reported less practice than people without disabilities in terms of wearing face masks daily. It is noticeable that the practice gap regarding these preventive measures was higher for the maintenance of social distancing across three countries. In comparison, the practice gaps were higher in Zambia for older people. Older people in Zambia were significantly less likely to wear face masks as a COVID-19 preventive measure. However, there was no difference in practicing COVID-19 preventive measures with ageing in Indonesia and Kenya. (Table 29, Table 30)

Figure 67: An older adult is washing her hands with soap

One older person from Indonesia reported that during the pandemic didn't visit outside much. Whenever visiting outside, they used a face mask and washed their hands using soap.

> ***Only wear a mask whenever I go outside, I wash my hands every time with soap. Rubbing my hands just like the advertisement with soap to avoid my hands being dirty. (Older people, Indonesia)***

In Indonesia, students with disabilities reported that they maintain COVID-19 prevention measures, for instance, washing their hands, wearing masks, and avoiding crowded places. They were also instructed not to touch their face while coughing.

> ***"umm... during corona we wash hands more regularly and wear mask. We're also taught when we cough, we mustn't cover with our hands… instead... with our body." (Students with disability, Indonesia)***

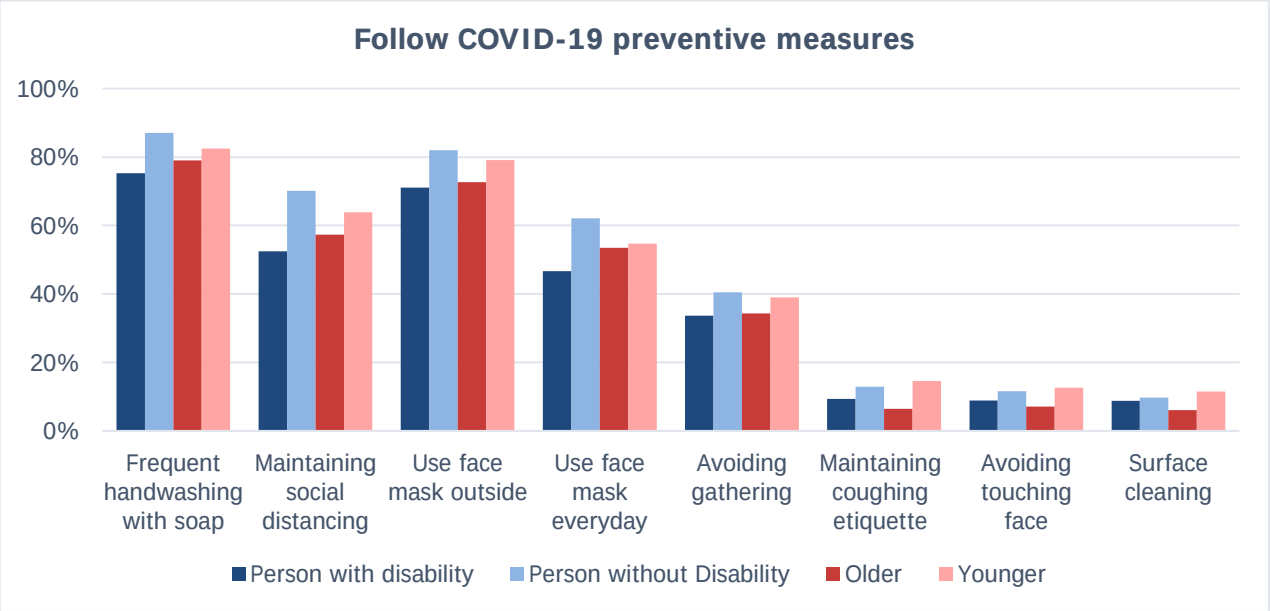


Figure 68: Practice of the respondents about maintaining COVID-19 preventive measures

Figure 69: Using handwashing station at school

We asked the people with disability about the cleanliness (for COVID-19 prevention) of the assistive device they use. Overall, 64% (Indonesia: 65%, Kenya: 68%, Zambia: 39%) reported disinfecting their assistive devices during COVID-19, while only half of them (Indonesia: 36%, Kenya: 34%, Zambia: 29%) confirmed that they disinfect those daily reported in all three countries. (Figure 70) In Zambia, a lower proportion of people with disabilities than in the other two countries cleaned their assistive devices, but almost 70% cleaned/disinfected them daily. In all three countries, people with disabilities were significantly less likely to dispose of their used masks after returning home than those without disabilities. (Table 50: Maintenance of different COVID-19 preventive measures by disability status, Table 51).

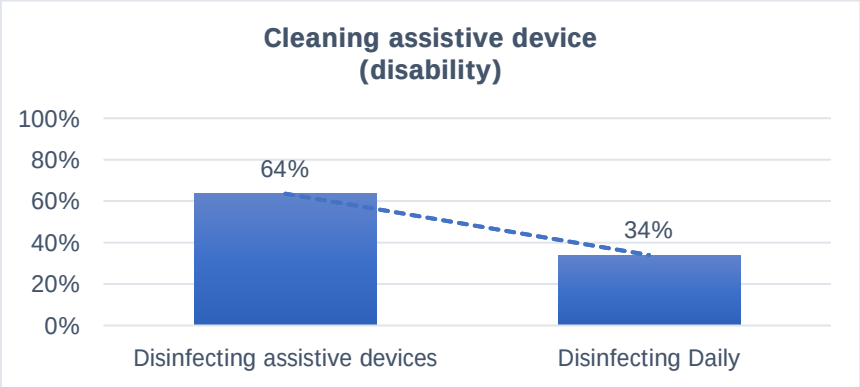


Figure 70: Practice of people with disability of assistive devices cleaning

Table 29: Country-specific key COVID-19 preventive measures followed by the respondents (disability)

Indicators	Indonesia			Kenya			Zambia		
	Person with disability	Person without Disability	AOR (95% CI)	Person with disability	Person without Disability	AOR (95% CI)	Person with disability	Person without Disability	AOR (95% CI)
	N=173	**N=167**		**N=282**	**N=260**		**N=160**	**N=161**	
COVID-measures followed									
Frequent hand washing with soap	126 (73)	156 (93)	**0.10 (0.04-0.26)**	214 (76)	227 (87)	**0.48 (0.30-0.76)**	123 (77)	129 (80)	1.09 (0.44-2.72)
Maintaining 3 feet social distancing	104 (60)	131 (78)	**0.42 (0.19-0.94)**	132 (47)	169 (65)	**0.48 (0.35-0.66)**	87 (54)	112 (70)	0.57 (0.24-1.35)
Wearing face mask	127 (73)	140 (84)	0.59 (0.34-1.0)*	205 (73)	222 (85)	**0.49 (0.29-0.85)**	105 (66)	120 (75)	0.89 (0.44-1.82)
Use mask everyday	107 (62)	124 (74)	**0.49 (0.31-0.83)**	146 (52)	181 (70)	0.49 (0.22-1.10)*	34 (21)	60 (37)	**0.33 (0.17-0.62)**
Avoiding gathering	39 (23)	53 (32)	0.66 (0.35-1.23)	81 (29)	95 (37)	0.74 (0.43-1.29)	87 (54)	90 (56)	0.95 (0.44-2.04)
Cleaning surfaces	4 (2.3)	6 (3.6)	0.69 (0.18-2.65)	17 (6.0)	14 (5.4)	1.25 (0.48-3.27)	33 (21)	37 (23)	0.84 (0.29-2.45)
Avoiding touching nose, eye, face with unclean hands	4 (2.3)	10 (6.0)	0.36 (0.09-1.29)	7 (2.5)	13 (5.0)	0.42 (0.14-1.28)	44 (28)	45 (28)	1.02 (0.46-2.23)
Maintaining coughing etiquette	7 (4.0)	15 (9.0)	0.32 (0.57-1.79)	7 (2.5)	12 (4.6)	0.49 (0.19-1.26)	44 (28)	49 (30)	1.38 (0.68-2.82)

Table 30: Country-specific key COVID-19 preventive measures followed by the respondents (ageing)

Indicators	Indonesia			Kenya			Zambia		
	Older	Younger	AOR (95% CI)	Older	Younger	AOR (95% CI)	Older	Younger	AOR (95% CI)
	N=162	**N=178**		**N=246**	**N=296**		**N=102**	**N=219**	
COVID-measures followed									
Frequent hand washing with soap	131 (81)	151 (85)	0.48 (0.03-7.73)	201(82)	240 (81)	0.88 (0.55-1.39)	71 (70)	181 (83)	1.5 (0.15-15.51)
Maintaining 3 feet social distancing	104 (64)	131 (74)	0.69 (0.41-1.19)	130(53)	171 (58)	0.81 (0.58-1.14)	58 (57)	141 (64)	0.69 (0.41-1.17)
Wearing face mask	121 (75)	146 (82)	0.67 (0.33-1.37)	190(77)	237 (80)	0.73 (0.43-1.23)	60 (59)	165 (75)	**0.56 (0.34-0.91)**
Use mask everyday	98 (61)	133 (75)	0.41 (0.09-1.82)	148(60)	179 (61)	0.94 (0.53-1.66)	27 (27)	67 (31)	1.46 (0.06-36.14)
Avoiding gathering	38 (24)	54 (30)	0.35 (0.03-3.67)	83 (34)	93 (31)	0.84 (0.62-1.14)	54 (53)	123 (56)	0.19 (0.03-1.48)
Cleaning surfaces	4 (2.5)	6 (3.4)	0.81 (0.22-2.93)	11 (4.5)	20 (6.8)	0.62 (0.29-1.32)	16 (16)	54 (25)	1.64 (0.12-21.49)
Avoiding touching nose, eye, face with unclean hands	4 (2.5)	10 (5.6)	0.52 (0.19-1.39)	7 (2.8)	13 (4.4)	0.57 (0.25-1.27)	25 (25)	64 (29)	0.39 (0.06-2.64)
Maintaining coughing etiquette	5 (3.1)	17 (9.6)	0.34 (0.10-1.16)*	7 (2.8)	12 (4.1)	0.56 (0.17-1.78)	21 (21)	72 (33)	0.46 (0.07-3.09)

Both people with disability and older people said that their frequency of handwashing has increased. However, they mentioned that their practice improved when they heard increasing deaths during the peak time of COVID-19. Later, some people with disability and older people noted that people are more relaxed now that the restrictions are not so severe and fewer cases of COVID-19 are being reported.

Most people stated that they clean their hands with soap, use sanitizer and wear masks whenever they go out.

> ***"Wash my hands clean with soap... using hand sanitizer... anything as long I don't get infected. I also often wear a mask, but since I don't go out often, I only wear one when I go out." (People with disability, Indonesia)***

Figure 71: Handwashing practice of a person with disabilities in Zambia

Compare between Knowledge, attitude, and practice of key COVID preventive measures

We found that knowledge and practice of social distancing were relatively lower among people with disability and older people than the other two COVID-19 preventive measures (handwashing and mask use). In all three countries, people with disability and older people had significantly lower knowledge, attitude, and practice than their comparison groups. There seems to be a consistent trend in the difference between knowledge and practice for all of these three measures. For instance, people with disability had lower

knowledge (18% less) and practice (17% less) than people without disabilities, and this trend is consistent in other cases too. (Table 48, Table 49, Table 50, Table 51, Figure 72)

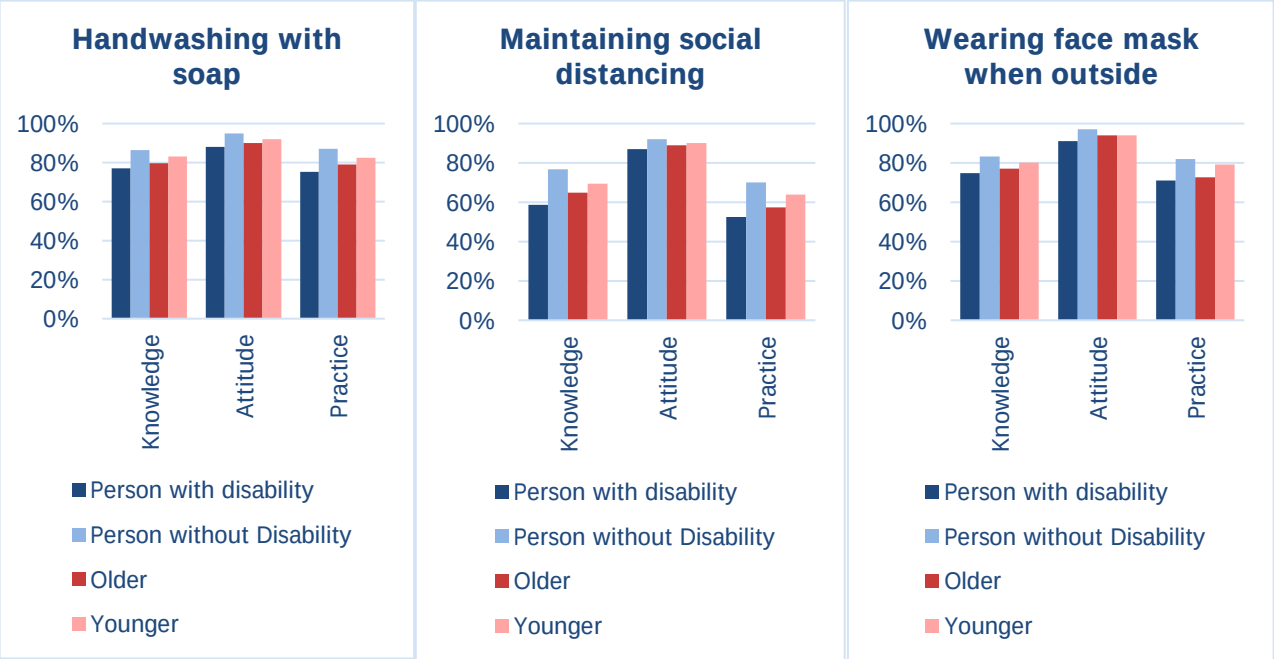


Figure 72: Comparison between KAP of key COVID measures

Qualitative exploration from Kenya has shown that poverty or socioeconomic status played a significant role in practicing COVID-19 preventive measures. Key informants felt that some Person with disabilities and older people living in poverty did not have access to basic water and sanitation facilities, which hindered hygiene practices.

> ***"An elderly person living in Kibera, Mathare valley with flying toilets, where will that elderly person get running water to wash hands with soap? And you are telling the elderly to wash their hands using water. Where is the water?" (Key informant, older people's organization, Kenya)***

Table 52 demonstrates comparisons between the SES of people with and without disabilities. We found that between the different economic situations of people with disability, the 1st quantile (poorest) had the lowest percentages in almost all the COVID-19-related measures (knowledge and practice). Knowledge and practice of these three key measures are strongly associated with socioeconomic status. An increasingly positive relationship was observed that knowledge and practice are increasing as people's socioeconomic status increases. Compared with the 1st quantile (poorest) people, people with disability had significantly less knowledge and practices in most aspects of COVID-19 measures than people without disabilities. A similar knowledge difference was also seen in 2nd quantile (persons with vs without disabilities).

In all three countries, knowledge and practice of these key measures also significantly varied by type of region. In both urban and rural areas, people with disabilities have significantly 10-20% fewer practices compared to people without disabilities across three countries. In Indonesia and Kenya, rural people with disabilities were significantly more likely to wash hands frequently, maintain social distancing, and use face masks than urban people with disabilities. While in Zambia, it is seen that in rural areas, people with disabilities had less habit of practicing social distancing (35% less) and using face masks (25% less) compared to urban people with disabilities. (Table 54).

No gender-wise differences were observed in overall people's knowledge and practices regarding these key COVID-19 measures. However, in Indonesia, gender was significantly associated with knowledge of the maintenance of social distancing, using face masks, and maintaining sneezing/ coughing etiquette at home. While in Kenya, no significant association was observed regarding the key knowledge and practice measures. Although, in Kenya, a slightly higher proportion (6-8%) of males were significantly maintaining social

distancing, wearing masks, and following sneezing/ coughing etiquette while going to work compared to females. In Zambia, males significantly exhibited more knowledge regarding preventive measures such as vaccines, cleaning frequently touched surfaces, and maintaining coughing and sneezing etiquettes than females. (Table 53).

Figure 73: An older person in Indonesia using a mask and cleaning his hands to prevent COVID-19 transmission

KAP of caregivers

The KAP of caregivers was explored through qualitative interviews. The following demonstrates the findings from those interviews.

Knowledge

Key Informants thought that caregivers had increased awareness of the use of clean water and toilets, handwashing with soap, as well as increased knowledge on COVID-19 prevention through handwashing, wearing masks, and physical and social distancing. Overall, most caregivers also indicated increased knowledge of the preventive measures for COVID-19, especially about handwashing, wearing face masks, and physical distancing. Nonetheless, some of the caregivers from Zambia mentioned that they didn't receive any interventions discussing COVID-19 with caregivers. Some caregivers disclosed that they would not know what to do if older people or persons with disabilities got COVID-19 as they had not been given specific information about that. On the other hand, caregivers received hygiene promotion messages from the health centres and Save the Children regarding maintaining hygiene in Indonesia. They reported understanding the messages delivered by these organizations on how to handle the persons they were taking care of.

> ***"Yes, I do., because we can get such information from the health cadres here, what should we do if we got COVID? Nevertheless, we fully understand how to handle students with special needs. So, simply adjust with their situation with the materials they give us and figure out how to implement it with our students" (Caregiver, Indonesia)***

Save the Children has trained teachers under the HBCC program on how to guide the students in the school and use the provided services. Teachers stated that training helps them to gain knowledge; with this knowledge, they are trying to implement the habit of handwashing in school.

"We received the knowledge, and we implemented it; although we didn't fully implement what was taught, at least we made a habit of washing hands InsyaAllah we will do it well." (Teacher, Indonesia)

Attitude

According to Key Informants, caregivers appreciated the hygiene and behaviour change messages and the intent behind the COVID-19 guidelines. The HBCC interventions helped them acknowledge that people with disabilities were at greater risk of COVID-19 and other infections due to the higher frequency of needing to touch surfaces that could be contaminated and the inability to reach water and soap for handwashing or provide self-care. However, they thought that some caregivers did not believe that face masks were effective against COVID-19 and expressed concerns regarding the non-inclusion of Disabled Peoples Organisation in decision-making on matters related to hygiene and behavior. Caregivers from Indonesia thought hygiene kits were insufficient to prevent children from COVID-19. They felt that kits assist them in preventing infection; it is the students themselves and their parents who can make a difference. If they were aware of the situation, they could prevent themselves from getting infected, as the kits are only there to help them.

"Well, I don't think the kit can make that many differences, it is more to the students themselves, their parents. Because kits are the only aid that assists us. It won't do much good in doing prevention. You know, our students still touch walls, desks… if we want to protect them, even classes need disinfecting. So, kits are not enough. It won't do much prevention. " (Caregiver, Indonesia)

Caregivers reported using COVID prevention techniques and being accustomed to behaviors like hand washing. Participants acknowledged that older persons and people with disabilities were at great risk of COVID-19 and expressed a strong desire to follow COVID guidelines to protect them. Caregivers' practice of COVID-19 prevention guidelines was motivated by fear of contracting COVID-19 infection and passing it on to elderly family members.

However, the caregiver also faced several challenges in conveying preventive messages and behavior change activities to their careers and often adjusted with innovative solutions for solving the problems.

One teacher stated that children with disabilities felt suffocated and did not want to put the mask on all the time though their teacher reminded them to pull it up. Also, one older person said that he/she feels hurt while using the mask.

"This is because students with mental—uh, their intelligence, is, below average. So, they cannot hold feeling suffocated and such, they can't handle it… but we keep reminding them, put it up, don't lower it down." (Teacher, Indonesia)

In Indonesia, teachers made creative plans to communicate with students with disabilities. Students who were mute depended on lip reading to communicate with others. But during the pandemic, teachers and students had to wear masks, and it was difficult for them to communicate. So, the teachers came up with the idea of a transparent mask and provided it to the students to keep them safe as well as to maintain communication.

Finally, when someone has to face a challenge or is stuck … trapped, creativity then appears. There are interesting and bright ideas for making mask producers design special masks for the deaf… transparent masks. Maybe now it's been widely promoted to the public. They still wear a transparent mask, so we can see their movement… because the transparent mask is made from plastic. (Teacher, Indonesia)

Practice

Key Informants thought that most caregivers practiced COVID-19 prevention guidelines out of fear of infection for themselves and their charges and intensified handwashing as well as cleaning of surfaces and toiles. They

also thought that access to handwashing facilities and hygiene kits containing masks, soap, and sanitizer supported the practice of COVID-19 prevention behaviors among caregivers. As reported by the program personnel, community-based program implementers were also observed to practice good hygiene behaviors.

> ***"You would find that the champions always went with disinfectants such as sanitizers, face masks and ensured that they maintained physical distances, disinfected the surfaces which they were about to touch" (Key Informants, Zambia)***

According to the Key Informants, the lack of easily accessible taps in the kitchen, bathroom, toilet, and public places, could prevent caregivers from washing their hands before assisting people with disabilities and older people in their care, which will eventually increase the risk of COVID-19 transmission.

During the IDIs in Zambia, the caregivers noted differences in practices before COVID-19; for example, previously, they only washed their hands right before a meal, but during COVID-19, they did it frequently. Practicing COVID-19 measures enhanced other hygiene practices, such as general cleaning of surroundings and toilets. After experiencing COVID-19, some caregivers reiterated their intentions to continue improving handwashing and hygiene routines. Caregivers also shared information about COVID-19 with the older persons in their households. As a result, older people accepted and practiced COVID-19 prevention behavior like handwashing and wearing masks.

In Indonesia, the teachers who were caring for the students took the first step before teaching the students about COVID-19. Teachers first made a habit of washing hands themselves and then demonstrated the handwashing steps to the students.

> ***"Um... it's the same. We also practiced with her (children with disability). So besides using our mouths but also our hands to.. so we used our mouths to explain, for example.. "wash.. hands.." more or less like that, so we practiced by taking her to the hand washing area, we taught her, practice... Alhamdulillah, she was able to understand, even though it wasn't 100% but since she was used to it so we only had to teach her one time and she could follow along afterward to wash her hands before entering the class. (Teacher, Indonesia)***

Figure 74: A caregiver in Indonesia is helping a person with a disability to wear a mask

Hygiene Behaviour Change during COVID-19

During COVID-19, the behaviour change intervention increased people's ability to practice diverse hygiene behaviour, including COVID-19 preventive behaviors. However, these changes were not similar for our comparison groups, and in all the cases, people with disability and older people had less improvement than their comparison groups. The ability to wash hands at home increased among 82% of people with disability compared to 90% of people without disabilities (Indonesia: 74% vs 84%; Kenya: 81% vs 92%; Zambia: 91% vs 93%). (Figure 75). Among all three countries, people with disabilities' ability to maintain these hygiene behaviours was slightly highly reported in Zambia compared to the other two countries. However, in Zambia (44%), fewer people with disabilities reported increasing their ability to clean assistive devices compared to people with disabilities in Indonesia (65%) and Kenya (75%). It is also observed only 15% of people with disabilities in Kenya reported increasing their ability to clean surfaces, while in Indonesia (54%) and Zambia (75%) there was more change in this behavior was observed. (Table 55) Older people had fewer gaps (around 5%) than younger people across all the mentioned abilities to practice behavior. No significant difference was observed in these behaviour changes by their age group. (Table 56) These differences were (more or less) similar across the countries, regions, sex, age, and socio-economic status (Table 57).

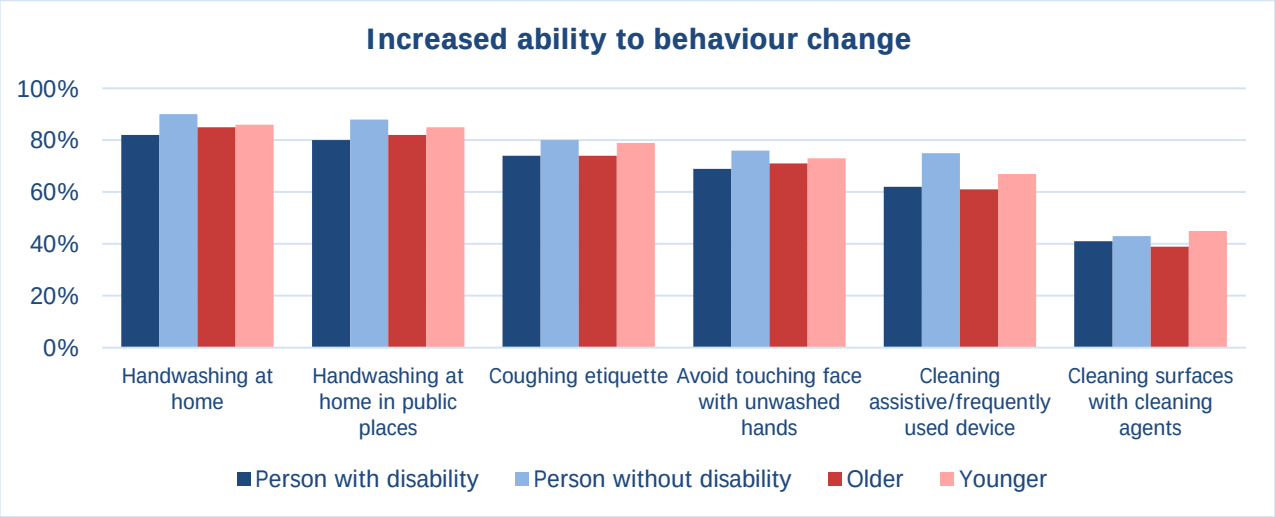


Figure 75: Increased ability to change behaviour

Figure 76: A student washing hands in Indonesia

Representatives from development partners in Kenya suggest that there had been evidence of changing the level of awareness, with some positive behaviours being adopted by people with disability and older people. This claim was supported by the interviewee of OPDs working in Kenya.

> *'People did not value the importance of washing hands [before the interventions]. People started washing their hands frequently. People with disability are now washing their hands." (key informant, DPO, Kenya)*

People with disability reported undertaking a wider range of COVID-19 precautions; one used the term 'high hygienic', and another explained that people took extra precautions during COVID-19.

> *"Yes, there is a difference. In the past, we didn't pay much attention to the fact that there are some infections we can get if we are not maintaining a high level of hygiene." (Person with disability, Zambia)*

In Zambia, from the qualitative interviews, we found some people with disability reported having inadequate running water or cleaning agents, whether at home or in public, as barriers to practicing handwashing. One older person with disabilities mentioned "difficulties when it comes to things that involve the use of water" due to distance to the well and the cost of water sold on the meter at public water points, which limits volume to what the family can afford. Both older and disabled persons could not always use soap for handwashing or use sanitizers due to cost, with one older person explaining:

> *"Well ... there is [very little] difference because most of the things that are needed to be done involve money. Now with the simple life that we live in the village, money is very difficult... to get. And if one is lame, one cannot work properly. You will find it difficult, even if you can have the theory of 'Let me buy ABCD,' maybe you don't manage. That is why it was even very difficult to follow." (Older People, Zambia)*

In Bangladesh, from our qualitative interview, we found that these interventions had some impact on the people regarding behavior change. A senior-level staff from the program implementation thought their project intervention impacted the community. People were using masks and handwashing to prevent COVID-19 which caused behavior change among them.

> *"In the end, we have felt that the people have received us. The masks which we have given, we have seen people wearing the masks randomly. I want to say that the man was present or collected from any in-person meetings. He has come to the market wearing this one. We build the handwashing stations and are supervised by the WASH committee. I do have data about our monitoring study. I can tell from my experience that building a handwashing station providing soap and water has a positive impact on the people." (Key informant, Bangladesh)*

In Indonesia, one caregiver reported that there is a change in behaviour due to COVID-19. Before COVID-19, they were used to washing their hands only after eating, but during the pandemic situations, everything changed, and they practiced handwashing more frequently than before. They also use hand sanitizer when there is a lack of water.

> *"I think the difference is in the behavior; now I feel cleaner since I wash my hands better. Before, I only washed my hands after eating. Now I wash my hands everytime after I go out. If there is no handwashing station, then I bring the handsanitizer. (Caregiver, Indonesia)*

INTERPRETATION OF RESULTS

The HBCC interventions have impacted the lives of the people in Indonesia, Kenya, Zambia, Sierra leone and Bangladesh to practice key hygiene measures to reduce COVID-19 infection. However, the intervention was less inclusive for people with disability and older people than for persons without disabilities and younger people. Further discrepancies were seen when comparing different functional limitation groups, where people with communication, self-care, remembering, and hearing functional limitations had lower inclusivity than other functional limitation groups.

While the behaviour change messages reached 90% of the population, the reach among people with disability and older people compared to people without disabilities and younger people was low; especially for people with communication, self-care, remembering, and hearing functional limitations; this indicates inadequate inclusiveness of the messages across disability and ageing. Previous studies have documented the failures in communication while reaching people with disability and their caregivers, which leads to poor healthcare access and poor adherence to the practice of public health measures [18, 19]. Thus, during the COVID-19 pandemic, the World Health Organization tried to reduce the barriers to accessing health information during intervention provisions [70]. Although the intervention-delivering partners in this study took a few measures to reach people with disability and older people, as the funding mandate did not require them to include people with disability and older people, the interventions did not specifically target these groups. The interventions that considered inclusion did so because they considered disability/ageing inclusion for all of their programs (although they still failed to reach the full diversity of disabilities equally). Not collecting disability or age-specific data while estimating the reach was likely to be another reason for the unequal reach, as programs could not see whether the intervention was working for people with disability and older people or not and, thus whether adjustments needed to be made. Age, gender, and disability-segregated data are essential to eliminate discrimination in intervention provision, especially in resource allocation; effective measures in monitoring intervention activities based on inclusive data are recommended [20, 21].

> ***"Good-quality data and research on disability are essential for providing the basis for policy and programmes and for efficient allocation of resources. They are also important for deepening understanding of disability issues and successful ways to remove barriers and for ensuring that people with disability can participate in and contribute to society on an equal basis." (Source: WHO Global Disability Action Plan 2014-2021) [71]***

As people with disability and older people were not considered in the intervention design, the mechanisms by which hygiene messages were delivered were not tailored to be appropriate to these groups. Subsequently, people without disabilities and younger people received more hygiene messages. Moreover, the HBCC messages rarely discussed the vulnerability of people with disability and older people to the risk of COVID-19 transmission or whether they needed to take any specific protective measures, including cleaning assistive devices to prevent COVID-19. Due to underlying health conditions and functional limitations, an estimated 75%-83% of COVID-19 deaths have been among older people [22]. One study has estimated that the death risk is 1.4 times higher for 'more disabled men' and 1.6 times higher for 'more disabled women' compared to non-disabled men and women [23].

TV and radio were the most popular media to disseminate messages, and they effectively reached older and younger people equally, but not people with all types of disabilities. Our study found that people with hearing and communication functional limitations had lower access to COVID-19 information. This is in line with other studies that suggest that during COVID-19, older adults, especially those with hearing and communication functional limitations, had a high risk of being excluded from mainstream communication mediums (e.g. TV and radio), which can lead to social isolation [24]. Sign language is often regarded as a means to provide inclusive interventions for people with hearing functional limitations [72]. However, only 1% of the deaf people in the USA use standardized sign language [73, 74] (and there is no reason to assume it would be higher in Indonesia, Kenya, and Zambia). Only a few of the HBCC intervention components were covered by the sign language interpreters; thus, it seems to have had a low impact on the overall inclusiveness. A previous study found that interpersonal communication works better to reach different functional limitation groups, including

older people, especially those with hearing functional limitations [25]. However, the HBCC interventions provided less focus on interpersonal communication.

In each country, there was minimal difference among the comparison groups regarding the appropriateness, understandability, acceptability, feasibility and effectiveness of the hygiene messages. This indicates that although the reach among people with disability and older people compared to their comparison groups was less inclusive, the content of the key messages of the HBCC interventions equally considered all people regardless of their age or disability status. These messages allowed people with disability and older people to consider the preventive measures as effective, and they began to feel safe, confident and comfortable in preventing the disease, which influenced them to convert this into practice. This created a desire among the respondents, especially older people, to be respected in society (by maintaining COVID-19 preventive measures). During COVID-19, the mass media interventions produced both positive and negative messages (particularly social media, which produced 85% misinformation) [26, 27], and relevant public health information was a crucial component of the COVID-19 response programs [75]. Healthcare professionals, family members/caregivers, and political leaders were the main role models for people with disability and older people, which the interventions integrated appropriately. Previous research suggests that credible role models can improve self-efficacy among people to invite positive behaviour [27]. The behaviour change messages were the product of successful collaboration between HBCC interventions, governments, and other non-government organizations; this good practice is recommended to continue having impactful interventions.

Across the three Objective 1 countries, around 30% of persons with and without disability, older, and young people received free hygiene products (e.g., masks, soap, sanitiser). However, the reach was lower among people with disability, especially people with hearing, communication and self-care functional limitations. The interventions distributed the hygiene products mainly at the household level, especially targeting the households of people with disability and older people who were relatively immobile. However, some people with disability and their caregivers expressed that those hygiene products were not adequate enough to satisfy their specific needs.

The HBCC intervention partners incorporated some inclusivity while installing the handwashing stations in public areas that included i) wheelchair-accessible areas, ii) height-adjustable basins for children and wheelchair users, iii) foot/elbow operated paddle, and iv) sensors to access water. However, not all of these components were installed by all the intervention-delivering organizations, indicating an unequal focus on handwashing accessibility among the organizations (when delivering the handwashing component). Even where included, few of these accessible measures were not adequate to ensure universal access to the handwashing station. While many guidelines exist on how to make a handwashing station accessible [21, 76, 77], reliable sources (e.g., UN) often highlight a few key categories, such as reach through the entry path, movement in the station area, and components available for use [78]. However, most handwashing stations installed from HBCC interventions significantly failed to promote inclusiveness. The entry path was highly non-inclusive, with inadequate considerations for wheelchair entry and the unavailability of support rails or tactile marking/guiding rope. Additionally, water and handwashing agents were not easily reachable for wheelchair users, and most of the taps did not consider inclusiveness, with inadequate light and unavailability of colour contrast to distinguish the handwashing area. A previous study found that during COVID-19, a lot of the WASH guidance did not consider disability inclusiveness, which resulted in the development of non-inclusive handwashing infrastructure [28]. One or two inclusive components does not make the handwashing station inclusive for all, especially when people with disability can not even enter the handwashing place because of the non-inclusive entry path. However, many of the handwashing stations we checked focused more on wheel chair accommodation and overlooked, or gave less emphasis to, other issues of inclusiveness. Moreover, around one in four installed handwashing stations were not functioning during the spot check, indicating inadequate infrastructure management. We also found that there are diverse barriers to entering and using handwashing stations that exist at public and household levels for people with disability and older people, making it difficult for them to wash their hands frequently. This inadequate accessibility ultimately reflects in their lower (compared to people without disabilities and older people) handwashing practices.

In terms of effort from the intervention-delivering organizations, there was some work to ensure that messages and handwashing infrastructure were inclusive. However, the organizations noted the lack of time

and resources to conduct formative research for a grounded intervention. Most people stated the absence of specific messaging or interventions for people with disability, older people, and their caregivers. Inclusiveness was challenging because of the myriad of disabilities and differing needs, most of which do not find voice and representation in Disabled Peoples Organizations, COVID-19 restrictions along with resource, funding, and space constraints. Resource constraints in programmes, communities, and households kept the programme focused on addressing the infrastructural challenges related to access to hand-washing facilities, but not structural challenges such as poverty and concerns about providing for the basic needs of older and disabled people. While communities were willing to be mobilised and contribute to operating handwashing facilities, funding, coordination, and capacity-building challenges among implementers created gaps in implementation and maintaining infrastructure.

People with disability and older people had lower knowledge, good attitudes towards, and reported practice of COVID-19 preventive measures than their comparison groups. Unavailability of household-level resources (e.g., running water and resources to buy soap and disinfectants in Zambia and Kenya) limited performing handwashing with soap in the prescribed manner. People with disability and older people have challenges remembering the hygiene messages, and the lack of available assistance in using the handwashing facilities (e.g., to open the taps) also adds barriers to their hygiene practice. The socioeconomic status of people with disabilities seems to impact their hygiene behaviour since some felt it was financially burdensome to follow these hygiene measures. As a result, people with disability, who were the poorest, had the lowest knowledge and practice compared to other economic groups and persons without disabilities (who were the poorest). The intervention did not put intensive focus on the caregivers, as they reported having no interventions that talked about how to care for their charges. In homes with older and disabled people, caregivers reported being more careful due to the increased risk of infection among their charges.

CONCLUSION

Inequitable access to WASH services and the diverse challenges in accessing and maintaining hygiene behaviours have made people with disability and older people more vulnerable during COVID-19 restrictions. During COVID-19, the UK Government and Unilever initiated the Hygiene and Behaviour Change Coalition (HBCC) intervention to raise awareness of and influence individual hygiene behaviours. This study aimed to evaluate the level of inclusiveness of the intervention to include people with disability, older people, and their caregivers and assess the effectiveness of the intervention for these groups in comparison to people without disabilities and younger adults.

The evaluation of the study demonstrates that the hygiene behaviour change messages were less inclusive for people with disability and older people compared to persons without disabilities and younger people. It has highlighted that the lack of consideration of people with disability and older people during the intervention design and the lack of effective monitoring of the intervention activities likely contributed to the non-inclusive intervention design. The unavailability of disability-ageing segregated data while estimating the reach led to inequal reach among diverse types of disabilities. In addition to these, efforts were made by the intervention-delivering organizations to install some disability-inclusive handwashing stations (e.g., wheelchair-accessible areas, height-adjustable basins, and the sensor for accessing water) in public places. However, these measures did not ensure universal accessibility of the handwashing infrastructure as they did not consider inclusive entry-path, handwashing places, and reach to water and soap and focused primarily on functional mobility issues, not considering other accessibility issues related to functional disabilities and age.

The overall inclusiveness was challenging because of the myriad of disabilities and differing needs, and the program did not have data and training for inclusiveness and meaningful involvement of OPDs in the designing and implementing phase to generate an inclusive and impactful intervention.

RECOMMENDATIONS

This section provides general and country-specific recommendations based on the lessons learnt from the Indonesia, Kenya, Zambia, Bangladesh and Sierra Leone studies.

Recommendations for all five countries

Implementation process

Reach and Dose

- Designing different versions of the same communications materials was ineffective at reaching older adults; different communication channels and information sources should be considered to increase reach and dose received.
- Future programs need to focus more on interpersonal communication (e.g., door-to-door and using caregivers) while delivering behaviour-change messages to promote inclusiveness
- Focus is needed to cover all functional limitation groups, especially persons with mobility, hearing, self-care, cognition, and communication limitations, to effectively increase the targeted intervention's reach. Collecting data on diverse types of functional limitations and age-groups during intervention need to be considered to estimate and reach the target audience as intended.
- Intervention messages/ hygiene products should be delivered to the households of people with disability or older people who can not go out much., or to schools (while targeting children/ children with disabilities), to achieve better reach to the targeted audience.
- Meaningful participation (strong engagement in the program) of OPDs needs to be ensured in program design and activity through providing funding for collaborative program involvement or at least holding initial workshops with intensive participation from the OPDs.
- Behaviour change messages targeted at people with disability, older people, and their caregivers need to provide specific guidance for them to practice hygiene behaviours.
- To achieve better reach, adequate allocation of hygiene commodities to address issues specific to people with disability and older people, and enhancing resource channelling and funding with an equitable distribution of limited resources should be considered

Adaptation

- To deal with diverse types of functional limitations, intervention components should be adapted for people with disability. For example, to communicate with students who have hearing functional limitations and depend on lip reading, a transparent mask was adopted by one of the schools in Indonesia, which keeps the students safe whilst maintaining communication.
- To achieve sustainable handwashing, intervention activities can consider some adaptations according to the target audience. For example, to bring change in children's handwashing behaviour the teachers that were caring for the students took the first step before teaching the students about COVID-19. Teachers first made a habit of washing hands themselves and then demonstrated the handwashing steps to the students.

Mechanism of impact

- Holding an initial workshop where DPOs/ OPOs are strongly represented should be considered to drive sustained programmatic focus in behaviour change programs.
- Collaborating with government and non-governmental organizations in designing and implementing activities helped to promote inclusive programs; this should continue in future program design/delivery.
- Program staff involved in intervention design need intensive training on disability and ageing inclusiveness. The staff involved in intervention delivery and monitoring need project/intervention-specific training on considering disability and ageing during intervention delivery/activity.
- Behaviour change messages should be provided through interpersonal communication or by door-to-door campaigning. This was found to be effective in adapting and improving targeted hygiene

behaviours among people with disabilities and older people, especially those who have hearing functional limitations.

- Community-based programs should engage local communities to improve hygiene behaviours effectively.
- People with disability and older people should be influencers in distributing behaviour change messages, co-creating the training manual and training sessions, leading the training sessions, and translating the information to braille and sign language.
- Caregivers of people with disability and older people should be identified and included in the hygiene message-delivering process to effectively encourage people with disability and older people to accept and practice hygiene behaviours like handwashing and wearing masks. Their involvement helped to identify households with people with special needs to incorporate their demands.
- Local radio stations should be used to disseminate hygiene messages as these reach a wide audience and increase people's interest in handwashing practices.
- Hygiene behavious (handwashing and sanitizing practices, distancing and correct wearing of masks) should be practically demonstrated so that they are understandable and simple to follow.
- Video/audio reminders (including storytelling and animated cartoon) can be used when delivering hygiene behaviour messages. These were reported to be more effective for people with disability and older people.
- Additional rewarding systems (e.g., cash) can act as cues for children to practice hygiene behaviours.
- Behaviour change communication messages should include people with disability and older adults. These groups should also be invited to attend dissemination meetings so that they feel recognized and encouraged to practice hygiene behaviours.
- Brand ambassadors (to whom the target population can relate) should be identified and included to disseminate hygiene messages.

Barriers to inclusion

- Behaviour change messages need to be distributed/reiterated frequently so that older people, who often have more challenges in remembering and following COVID-19 preventive measures, are a reminder of key behaviours.
- Messaging needs to be provided with appropriate support to practice the directives to change a person's hygiene practice. It is evident from the study that people with disability and older people face difficulties while practicing hygiene behaviours without assistance from others. So, it is important to support them by providing the necessary assistive devices (walking sticks, bicycles, etc) to able them independently practice hygiene behaviours.
- Messages need to be translated into local languages for better reach.
- Funding needs to be channelled to better address the hygiene needs of people with disability and older people.
- Interventions need to focus on an array of types of functional disabilities, not focus solely on those with limited mobility.
- Handwashing stations in public places need to be installed closer to the homes of people with disability and older people. The entire community could be involved in deciding where to place handwashing facilities. For example, village administrators in Indonesia installed handwashing facilities at every alleyway entrance, which enhanced the use of those facilities and increased handwashing practices in the community.
- While building the handwashing stations, rather than only considering wheelchair users, the focus should be placed on developing adjustable heights for the facilities (put in low or high levels to reach water and soap), the use of disability-inclusive water sources (e.g., tap with sensors, foot paddles, elbow or forearm operated tap), inclusive entry paths, the availability of ramps, tactile marking/landmark/guidance rope, and adequate space for wheelchair accommodation, considering diversities in disability.
- Monitoring, security and maintenance of handwashing facilities need to be ensured. Involving local artisans and manufacturers who can take up the design and have knowledge of repairing technologies was effective for properly maintaining the facilities.

- Enough time should be allocated to the intervention, both in the design phase to allow time for revisions and modifications to the content and in the implementation phase to cater for unexpected challenges facing people with disability and older people.
- Program personnel and other stakeholders involved in program design and activity should be trained in disseminating information and considering the differing abilities of people with disability.
- Advocacy and awareness creation should be incorporated into interventions to increase knowledge. Psycho-social support should also be included in interventions for pandemics such as COVID-19 that resulted in distancing and loss of livelihood.

Context

- The economic vulnerability of people with disability, some older people and their caregivers hindered their basic hygiene practices. Funds should be allocated to support their needs for appropriate hygiene materials and to sustain these practices; low-cost products should be supplied (such as the availability of cloth masks in Zambia made wearing masks affordable for all).

Specific recommendations for Indonesia, Kenya, Zambia, Bangladesh and Sierra Leone

Indonesia

- When the intervention delivery organization (IDO) selected the sites, they should choose the site where the sites were cooperative and less risky. For instance, if IDO targeted gender balance, they checked 50-50 participants. Besides, IDO tried to mitigate any distortion when any program was running. When allocating hygiene material, cash assistance should be given to all, including COVID-19-affected personnel. Program should include DPOs since most local region-level governments do not understand that matters related to people with disability. Since a multidisciplinary approach would be better where DPOs, social workers, doctors, health and education departments will be involved for the betterment of Person with disabilities. The hand washing station needs to be more Person with disabilities and older people-friendly. Due to diversities in the disability types, it would be better to use a standard rotary faucet instead of the paddle and any metal wash basin in the handwashing station. At the same time, the availability of water supply needs to be ensured.
- Instead of providing hygiene training to the students directly by their teachers, it would be better if either an intervention delivery organization or any third party give training to them so that they will not get bored and will be more enthusiastic about learning something new.
- Every program should be inclusive for all. To promote the program, all kinds of promotional material should be included. For instance, the poster should have a model with a wheelchair showing how to wash hands.

Kenya

- The interventions can consider the use of technological advancement; for example, the training offered to CHWs through Whatsapp proved very effective, as the CHWs could take the courses at their own convenience.
- Implementing partners may not spend huge amounts of resources in delivering the same intervention through conventional methods. For this training, a respondent further suggested that such courses needed to have some form of incentive; for example, the course offered through WhatsApp had a certificate of completion and all those who completed it earned points for renewal of their licences.
- The Person with disabilities should be given full information about all activities, especially in research. For example, researchers should obtain consent from the Person with disabilities before taking any photos.
- Increase access to PPE and hygiene products at the nearest point (e.g. at the local health centres or the chief's office) and not where the Person with disabilities and the elderly have to travel for a distance.

Zambia

- Direct financial support and strengthening capacity (training) of residential facilities and organizations serving disabled and older people would increase the reach and effectiveness of the HBCC intervention. The lack of stratified data led to suggestions for process indicators, including:
  a) Proportion of disabled and older people reached per community/catchment area and through which channels (reach)
  b) Number of exposures to the intervention (dose)
  c) Uptake of new/modified behaviours (response)
  d) Qualitative data on relevance, appropriateness and 'nudges' (actions) needed to sustain behaviours
  e) Costs
  f) Best practices
- Have standardized data collection tools that capture data at different levels (administrative) and stages of the pandemic/intervention. A dashboard on progress could help identify challenges and inform adaptations.

- Collaborations between organisations could be in training on program design and consultations on best practices. Also, It is recommended to support and capacitate community groups to implement activities and management of resources.
- There is a need for systems strengthening to establish structures at the district and community level to represent marginalized groups.
- Community-level facilities like toilets, boreholes, and hand washing facilities should be fitting for people with disabilities and older people to practice hygiene and feel part and parcel of the school and community at large. These should be placed closer to villages/communities if not in households themselves.
- Infrastructure and standard placement of facilities should consider; for instance, the standard placement of a stand with a tap can allow a blind person to touch, open and wash without assistance.
- Schools that offer special education should receive consistent government funding for procuring hand sanitizer, hand soap and related items to practice hygiene.
- Community-level awareness and support should be arisen for caregivers to care for older and disabled persons. Training for caregivers on recommended practices should also be provided.
- Program must reach out and include old people and people with disabilities who could feel 'lonely', 'isolated' and 'left behind.
- Assistive devices must be provided to ensure people can independently access water and other hygiene facilities. For instance, providing devices such as wheelchairs for those who need them or bicycles to older people who cannot walk long distances.

Bangladesh and Sierra Leone

- Monitoring and maintenance of the handwashing facilities are needed to make them sustainable for a longer period. So, if the station is monitored properly and the supply of soap and water is available, people will use this facility. The bolts and nuts come from the workshops to use in the station that is getting deteriorating due to salinity. If these are changed timely, and maintenance is done, these facilities will be sustainable.
- HBCC interventions provided handwashing stations mainly at the community level and also provided some household-based stations called happy tap. These household-based stations needed to provide more for older people and people with disability who cannot come and wash their hands at the community-based.

STRENGTHS, LIMITATIONS, AND CHALLENGES

Strengths:

- We arranged participatory study design workshops to understand the context and plan the study in each country.
- We screened for Disability (using the Washington group extended short set) for recruiting in the study
- Our study desegregated the findings by various types of disabilities and age groups.
- Disable People Organizations were involved throughout the study.

Limitations:

- Qualitative interviews were conducted simultaneously with quantitative interviews; thus, some of the problems identified could not be answered through qualitative explorations.
- We did not have baseline data to measure changes in behaviour within the study population.
- We did not perform any clinical assessments to identify people with disability; we rather relied on the respondent's responses against the Washington group short set of questionnaires.
- While assessing the accessibility of the handwashing station, we relied on the data collector's observation rather than specifically measuring the handwashing area. Nonetheless, the data collectors were intensively trained on when to consider a handwashing station accessible.

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APPENDICS

Annex 1: Study sites

Details about study sites

We selected districts/counties through stratified random sampling (e.g. random selection of districts within regions and then randomly finding the smallest administrative units/areas) from each study country.

In Kenya, first, we divided the intervention districts into three broader geographical regions and then randomly one districts from each of the regions. Each district then was segregated into the country's smallest administrative areas (*mtaa mdogo)* from where we randomly selected 2 urban and 4 rural areas, thus bringing the total number of smallest administrative areas/units to 18.

In Indonesia, we selected both of the regions (North Jakarta and West Bandung) where SCF implemented the HBCC programme. Out of the 40 intervention schools/areas, we randomly selected 6 (of 20) schools from North Jakarta and 6 (of 20) from West Bandung and considered the school premises and the nearest locality as our point of study.

In Zambia, we selected three districts served by WaterAid's HBCC programme namely Samfya District of Luapula (Northern) Province, Mwandi District of Western Province, and Monze District of Southern Provinces. These districts were selected as those had representation of both rural and urban areas. We selected two urban (or peri-urban if urban was unavailable) and four rural areas counting to a total of six areas from each district. Where there were more than four rural sites, four were chosen using random selection and where two urban/peri areas were not available, more rural sites were taken.

Table 31: Country-wise intervention areas and number of selected study sites

Country	Organization	Intervention districts	# of selected districts	# of selected smallest administrative area
Kenya	AMREF	Nairobi, Meru, Embu, Kisii, Kwale, Mombasa, Siaya, Homabay, Migori, and Kakamega	Total number of areas: 3 – 1 county from Kakamega, Saiya, Homabay, Kisii, Migori – 1 from Nakuru, Meru, Embu, Kiambu, Nairobi, Machakos, Mandera – 1 from Kilifi, Kwale, Mombasa	Districts: Total areas: 18 (Randomly select 2 urban areas and 4 rural areas from each of the 3 counties)
	PSI	Kilifi, Kwale, Mombasa, Nairobi,		

		Kiambu, Mandera, Machakos, and Nakuru		
Indonesia	SCF	Intervention delivered in 40 Schools • Jakarta province: North Jakarta (20 schools) • West Java province: West Bandung (20 schools)	2	**Districts:** North Jakarta and West Bandung **Total areas: 12** (Randomly select 6 schools/areas from Jakarta (urban areas) and 6 schools/areas from Bandung (rural areas)
Zambia	WaterAid	Lusaka (capital), Livingstone, Kazungula, Monze, Mwense, Samfya and Mwandi districts.	3 • 1 from Northern (Mwense, Samfya) • 1 from Southern (Livingstone, Kazungula, Monze) • 1 from Western (Mwandi)	Districts: Total areas: 18 (Randomly select 2 urban areas and 4 rural areas from each of the 3 districts)

Table X. Site Selection among WaterAid HBCC Areas (Zambia)

	Available			**Selection notes**
Districts	**Urban**	**Peri-urban**	**Rural**	
Target per district	2		4	
Southern Province				
Livingstone	5	1	0	Does not meet criteria
Kazungula			9	Does not meet criteria
Monze*	1	1	13	Include urban, peri-urban, randomly select 4 rural areas
Luapula Province				
Mwense	1		9	Meets criteria, but community not accessible

Samfya*	1		5	Include all (Of note, 5th rural area was included in the field)
Western Province				
Mwandi*		1	5	Include all

- Quantitative tables
- Other relevant documents
- Web-link
    - Survey -spot check questionnaire
    - Qualitative guides
    - Qualitative codebook
    - Qualitative data matrix (Excel file)

Annex 2: Initial inclusion score

SL	Counrty	Kenya, Nepal, Bangladesh, India, Indonesia, Kenya, Malawi		Kenya, Tanzania, Uganda		Sirya		Sierra Leone		Bangladesh, Pakistan, Myanmar, Burkina Faso		Kenya, Myanmar, South Africa and Vietnam		Bangladesh, DRC, Ethiopia, Indonesia, Nigeria, Pakistan, South Sudan, and Yemen		Mozambique		Democratic Republic of Congo, South Sudan, Bangladesh and Cameroon		Papua New Guinea (PNG), Indonesia, Fiji/Pacific Islands, Myanmar, Nepal, Pakistan, India, Sri Lanka, Zimbabwe, Ethiopia, South Africa, Mozambique, Nigeria, DRC, Cameroon, Venezuela, Colombia, Iraq		Ethiopia, Ghana, Nepal, Pakistan, Tanzania and Zambia.		DRC		Kenya and Ghana		Afghanistan, Somalia		Rwanda, Somalia, Zimbabwe		Bangladesh		India		Philippines, Indonesia		Tanzania, Kenya and Ghana (with extension into 40 sub-Saharan countries for some materials)		India, Nepal, Pakistan, Philippines		Jordan + Syria	
	Organization	Action aid		AMREF		Oxfam Sirya		Plan		IRC		PSI		SCF		SNV		UNHCR		UNICEF		Water aid		World Vision		WSUP		BBC		CARE		BRAC		AGA Khan		GIZ		LSHTM		Oxfam		Sesame	
	Inclusion Criteria	Disability	Ageing	Disability	Ageing	Disability	Ageing	Disability	Ageing	Disability	Ageing	Disability	Ageing	Disability	Ageing	Disability	Ageing	Disability	Ageing	Disability	Ageing	Disability	Ageing	Disability	Ageing	Disability	Ageing	Disability	Ageing	Disability	Ageing	Disability	Ageing	Disability	Ageing	Disability	Ageing	Disability	Ageing	Disability	Ageing	Disability	Ageing
1	Non-discrimination																																									
2	Individualised services																																									
3	Entitlement/affordability																																									
4	Capability based services																																									
5	Participation																																									
6	Coordination of services																																									
7	Protection from harm																																									
8	Integration																																									
9	Family resource																																									
10	Family support																																									
11	Accountability																																									
12	Capacity development																																									
13	Access																																									
14	Quality																																									
15	Efficiency																																									

Color code	
4	
3	
2	
1	
0	
Orgnizations to evaluate	

Annex 3: HBCC program details

Table 32: Country and programs with reasons for selection (based on the inclusion score)

Assessment type	Country name	Organizations	Justification and Methods
	Kenya	AMREF, PSI	Highest levels of inclusion in both the disability and ageing sectors.

HBCC program Evaluation study	Indonesia	SCF	Four organizations are working in Indonesia (SCF, UNICEF, GIZ, SNV). SCF achieved the highest inclusion score.
	Zambia	WaterAid	WaterAid has conducted inclusivity work on disability and ageing in Zambia.
High-level assessment on inclusion	Sierra Leone	Plan International	We will interview key personnel/program managers on why disability and ageing have been included in program design.
	Bangladesh	BRAC	We will interview key personnel/program managers on why disability and ageing have not been included in program design.

Table 33: Type and number of the target population under HBCC program in each country

Country	Outputs	Mode of intervention delivery	Intervention delivery media/methods	People/ Sites reached/Products delivered
Kenya (PSI)	**Messages**	Mass media 1. Radio 2. TV	**1. Target- 2,172,000)-** 6 ads (Radio Maisha, Milele FM and Ghetto FM that targeted informal settlements) **2. Target- 7,966,000)-** 3 TVCs (one local production, 2 adapted from Unilever's 'Hand Tales' and surface hygiene	18,000,000 persons reached with messages on COVID and hygiene
		Social media- 1. Facebook 2. Twitter	**1. Target 3 million**- The 'Stop *Corona Save Lives*' campaign targeted Kenyan Facebook account users with pictures and videos **2. Target- 5,500,000) -** combined video and tweet; increased awareness to the national Unstructured supplementary service data (USSD) platform *719#.	
		Outdoor advertising 1. Public vehicles 2. Digital screens	**1.** Supported installation of branded seat covers with '*Stop Corona'* campaign key messages in 14 public service vehicles (9 in Nairobi and 5 in Mombasa) **2.** The campaign was placed at the outdoor digital screen at Likoni Ferry in Mombasa	
		Interpersonal communication (IPC)	**Target 2,400,000-** PSI Kenya has engaged 350 community health volunteers (CHVs). 2,500 consumer posters and 4 banners were printed and distributed.	
	Product Distribution (target population)	WASH Products	Reached with targeted WASH products (50K soap and 150K sanitizers. Soap delivered to health providers.	200,000 people
	Training	Providing training to healthcare providers	PS Kenya with Ministry of Health developed a COVID-19 course on WhatsApp with 12 modules.	719 health care staff trained up to October 2020
	Supplies to HCF	Mask and gloves distribution	46,000 face masks and 80,000 gloves were distributed to 400 and 415 healthcare providers, respectively. 6,000 face masks were distributed to CHWs	700 facilities (Tunza clinics) reached with critical WASH products/services
		No touch handwashing station	400 units provided to private health providers	
		Hygiene product distribution	Scouring powder, detergent, and soap	
		Developing facility level messaging	Developed point-of-care information and messaging for health providers at facility level e.g. posters and TV screens placed at health facility receptions	
		Guideline development	User-friendly COVID-19 infection prevention guidelines for health providers. Developed risk-counseling, referral and case reporting guidelines in-line with GOK protocol/ guidelines.	
	Other	Engagement with Ministry of Information Communication and Technology and MOH	Through their technical working groups on health promotion and community engagement	Partnering with MoH and other HBCC partners
Kenya (AMREF)	**Messages**	Mass media	Young (15-24 years) people reached	7.5 million people
		Mass media	Reached the general population	1,150,000 people
		Inter-personal behavior change programs	BCC messages delivered	2,490,000 people
			ToTs on COVID-19 prevention preventive measures for people with disability reached on COVID-19.	5000 caregivers
			Training provided	7200 CHWs
			Training provided	4000 health care workers
		Digital messages	Women of reproductive age reached through digitally curated and timely content on reducing COVID-19 prevention.	200,000 women of reproductive age
		Digital messages advertising	Reached through e-vouchering for BCC while in transit with a chance to respond to the questions	1.2 million people
		Digital messages	Reached through digital influencing for BCC in COVID-19.	12 million people
	Product Distribution (target population)	WASH Products	Distribute Unilever products including soap, hand sanitizers and detergents	1.2M vulnerable households and 97,000 people with disabilities
	Training	Providing training to healthcare providers, CHWs, Volunteers	Face to face trainings for a class of between 15-20 HCWs and E-learning for further learning Virtual capacity building and tele-learning	HCWs from 400 health facilities; 7200 CHWs; 100 heros

Country	Outputs	Mode of intervention delivery	Intervention delivery media/methods	People/ Sites reached/Products delivered
			Training through the mHealth platform and face to face of CHWs; WhatsApp API training of heros/volunteers	
	Supplies to HCF	Service Support	Improved existing healthcare facilities	300 high-demand healthcare facilities
	Other	Engagement with Ministry of Information Communication and Technology and MOH	Through their technical working groups on health promotion and community engagement	Partnering with MoH and other HBCC partners
Zambia (WaterAid)	**Messages**	Mass Media (15-60 yrs)	Radio	5,251,000
			TV	5,366,000
			Print media	150,000
		Digital Media (15-60 yrs)	Social Media	460,107
		Face-to-face communication setting	Meeting in communities, schools and through health care staff	40,429
			Loudspeaker announcements	1,203,419
	Product Delivery (target population)	Hygiene product	Total 138 institutes reached. Hygiene product delivered to households, schools, ports of entry, care homes etc.	41,161 soaps and 96,546 hand sanitizer
			Conducted one-off HBC sessions with 1,253 people while distributing hygiene materials.	10 disability homes, 3 old people's homes, 2 ports of entry, 6 markets, 3 bus stations, 1 juvenile detention centre
		Handwashing stations	Provided at a variety of public locations. 2 facilities deemed accessible for people with disabilities or older adults	38 public locations
	Training	Trainings to staff	Face-to-face training	86 CHWs
	Supplies to HCF	12 HCFs received critical WASH infrastructure	Hardware installed or improved e.g. handwashing stations distributed/build	12 handwashing stations; 19,319 soaps and 210,594 hand sanitizers
			Gift in Kind (GIK) from Unilever distributed to health care facilities across the country	122 HCF; 67,431 people.
			Health care facilities supplied with the first 12 contactless hand washing facilities	6 HCFs; 25,341 people
Indonesia (SCF)	**Messages**	Online meetings and workshops	Utilizing any existing media such as Ministry of Education and Culture videos, and a session on COVID-19 preventive measures delivered by health officers	129 teachers, government officers and health workers
		Mass media	WhatsApp group, radio, printed materials, both printed and digital IEC materials (e-flyers, infographic, short videos)	500,000 girls, boys, women and men indirectly benefitted (targeted)
	Product Delivery (target population)	Hygiene kits	11,293 personal hygiene kits (in West Bandung) provided to female and male adults at school including teachers, school principals are staff	4,800 people (1200 families)
				5,600 girls and boys from 20 schools
				400 female and male adults
			49,693 family and personal hygiene kits	3,861 people (979 boys, 902 girls, 960 male, 1025 female)
	Training	Online training/webinar	Provide online capacity building training on COVID preventive measures	200 male and female community health workers
				200 male and female teachers
				1,200 male and female parents from targeted schools
				100 adult male and female community members
	Supplies to HCF	Hand Washing Stations	Provided to Health Facilities. Each PPE package includes: 20 boxes of surgical masks (50 pieces / box), 20 boxes of hand gloves (100 pieces / box), 20 boxes of head-coverings (100 pieces / box) and 20 face shields)	25 HWS and 25 PPE packages. 125,525 items in total
		25 packages of PPE		

Annex 4: Data analysis based on MRC Framework

Process Evaluation components	Research Question	Methods of Measurements
Implementation		
Implementation process	• What was the intervention delivery medium, implementation sites, resources, and population selection process in relation to the inclusion of disability and ageing?	Document review (Protocol/ Proposal, Quarterly report), KII, IDI, survey
Fidelity	• To what extent does the intervention consider the person with disabilities, older people and their caregivers? • To what extent do the stakeholders, and implementers think the intervention included people with disabilities, older adults, and their caregivers?	Document review (Proposal, Quarterly report), KII

Reach	• Did the target audience (people with disability and older people) receive the delivered intervention as intended?	Document review (Quarterly report), KII, IDI, Survey, Photovoice
Dose	• What intervention was delivered to people with disability, older people, and their caregivers? • How frequently was the intervention delivered to people with disabilities, older adults, and their caregivers?	Document review (Quarterly report, behaviour change communication materials), KII, IDI, survey, spot check
Adaptations	• How were activities or mechanisms adapted to ensure the inclusion of people with disabilities and older adults?	Document review (Report), KII
Mechanism of impact		
Mediators	• What intermediate mechanism/ process of the intervention delivery was intended to produce a change in people with disabilities/older adults' behaviour? How?	KII, IDI, survey, spot check
Participants' response/ experience	• How do participants (people with disability, older people, and their caregivers) interact with and respond to the interventions in terms of satisfaction, appropriateness, accessibility/ inclusiveness, and feasibility? • What challenges/ barriers were identified by participants which influenced their interaction with the intervention?	KII, IDI, survey, Photovoice
Unintended consequences	• How did the program deal with the potential unintended consequences against with person with disabilities and older people?	KII
Context		
Contextual factors	• Which external factors/ circumstances (e.g., socio-demographic, environmental, political) have influenced the inclusion of the person with disabilities, older people, and their caregivers in the implementation process? • How did the personal or environmental factors impact person with disabilities and older people's interaction with the intervention process/ outcome?	Document review (Quarterly report), KII, IDI, survey, Photovoice
Outcomes		
Short-term outcomes	• What are the KAPs of people with disabilities and older adults in relation to Covid-19 prevention measures? • Have the participants' ability to practice personal hygiene behaviours changed since before the pandemic? How? • What are the KAPs of caregivers towards caring/ supporting people with disability/ older people in relation to COVID-19 preventive measures?	IDI, survey

Source: https://www.ukri.org/publications/process-evaluation-of-complex-interventions/

Annex 5: Additional tables

Table 34: Country-wise Disability prevalence by types of disabilities

	Indonesia										Kenya											Zambia								
Variable		**Types of Disability¥**								**Disability Prevalence**		**Types of Disability¥**								**Disability Prevalence**			**Types of Disability¥**							**Disability Prevalence**
		Vision	Hearing	Mobility	Communication	Cognition	Self-care	Anxiety	Depression			Vision	Hearing	Mobility	Communication	Cognition	Self-care	Anxiety	Depression			Vision	Hearing	Mobility	Communication	Cognition	Self-care	Anxiety	Depression	
	N	N=1392	N=1392	N=1392	N=1392	N=1392	N=1392	N=1392	N=1392		N	N=1588	N=1588	N=1588	N=1588	N=1588	N=1588	N=1588	N=1588		N	N=1902	N=1902	N=1902	N=1902	N=1902	N=1902	N=1902	N=1902	
Overall disability	1392	57 (4.1)	41(2.9)	91(6.5)	40 (2.9)	53 (3.8)	24(1.7)	34(2.4)	7 (0.5)	197 (14.2)	1588	79(4.9)	46(2.9)	183 (11.5)	54 (3.4)	73 (4.6)	81(5.1)	58(3.7)	47 (2.9)	338(21.3)	1902	76(4.0)	51(2.7)	98 (5.2)	36 (1.9)	74 (3.9)	44(2.3)	14(0.7)	17 (0.9)	251 (13.2)
Age (years)																														
5--9	57	0 (0.0)	1 (1.8)	1 (1.8)	3 (5.3)	2 (3.5)	1 (1.8)	0 (0.0)	0 (0.0)	3 (5.3)	98	1 (1.0)	3 (3.1)	8 (8.2)	9 (9.2)	7 (7.1)	10 (10)	2 (2.0)	1 (1.02)	14 (14)	229	3 (1.3)	5 (2.2)	2 (0.9)	6 (2.6)	2 (0.9)	4 (1.8)	1 (0.4)	0 (0.0)	12 (5.2)
10--17	186	0 (0.0)	1 (0.5)	2 (1.1)	7 (3.8)	6 (3.2)	2 (1.1)	1 (0.5)	1 (0.5)	10 (5.4)	267	4 (1.5)	6 (2.3)	13 (4.9)	13 (4.9)	11 (4.1)	10 (3.8)	4 (1.5)	3 (1.12)	28 (10)	473	5 (1.1)	1 (0.2)	5 (1.1)	4 (0.9)	7 (1.5)	2 (0.4)	1 (0.2)	0 (0.0)	19 (4.0)
18--35	384	3 (0.8)	2 (0.5)	2 (0.5)	4 (1.0)	9 (2.3)	1 (0.3)	2 (0.5)	0 (0.0)	17 (4.4)	501	7 (1.4)	12 (2.4)	21 (4.2)	20 (3.9)	19 (3.8)	14 (2.8)	12 (2.4)	9 (1.80)	62 (12)	547	10 (1.8)	20 (3.7)	19 (3.5)	16 (2.9)	23 (4.2)	11 (2.0)	2 (0.4)	4 (0.7)	58 (11)
36--49	322	7 (2.2)	3 (0.9)	8 (2.5)	3 (0.9)	8 (2.5)	1 (0.3)	6 (1.9)	2 (0.6)	28 (8.7)	248	9 (3.6)	1 (0.4)	21 (8.5)	5 (2.0)	11 (4.4)	6 (2.4)	13(5.2)	12(4.84)	48 (19)	277	13(4.7)	3 (1.1)	21 (7.6)	1 (0.4)	16 (5.8)	4 (1.4)	5 (1.8)	6 (2.2)	50 (18)
50--59	187	8 (4.3)	7 (3.7)	22 (12)	5 (2.7)	6 (3.2)	3 (1.6)	13(6.9)	3 (1.6)	36 (19)	137	5 (3.7)	2 (1.5)	21 (15)	2 (1.5)	2 (1.5)	5 (3.7)	7 (5.1)	6 (4.38)	36 (26)	150	15 (10)	4 (2.7)	11 (7.3)	3 (2.0)	5 (3.3)	5 (3.3)	1 (0.7)	1 (0.7)	31 (21)
60--70	156	19 (12)	10(6.4)	30 (19)	8 (5.1)	12 (7.7)	7 (4.5)	4 (2.6)	0 (0.0)	51 (33)	169	17 (10.1)	1 (0.6)	39 (23)	2 (1.2)	9 (5.3)	11(6.5)	11(6.5)	7 (4.14)	57 (34)	107	12 (11)	3 (2.8)	18 (17)	0 (0.0)	9 (8.4)	6 (5.6)	3 (2.8)	2 (1.9)	34 (32)
70+	100	20 (20)	17 (17)	26 (26)	10 (10)	10 (10)	9 (9.0)	8 (8.0)	1 (1.0)	52 (52)	168	36 (21)	21 (13)	60 (36)	3 (1.8)	14 (8.3)	25 (15)	9 (5.4)	9 (5.4)	93 (55)	119	18 (15)	15 (13)	22 (18)	6 (5.0)	12 (10)	12 (10)	1 (0.8)	4 (3.4)	47 (40)
Age group																														
Younger (<60 years)	1136	18 (1.6)	14 (1.2)	35 (3.1)	22 (1.9)	31 (2.7)	8 (0.7)	22 (1.9)	6 (0.5)	94 (8.3)	1251	26 (2.1)	24 (1.9)	84 (6.7)	49 (3.9)	50 (4.0)	45 (3.6)	38 (3.0)	31 (2.5)	188 (15)	1676	46 (2.7)	33 (1.9)	58 (3.5)	30 (1.8)	53 (3.2)	26 (1.6)	10 (0.6)	11 (0.7)	170 (10)
Older (>=60 years)	256	39 (15)	27 (11)	56 (22)	18 (7.0)	22 (8.6)	16 (6.3)	12 (4.7)	1 (0.4)	103 (40)	337	53 (16)	22 (6.5)	99 (29)	5 (1.5)	23 (6.8)	36 (11)	20 (5.9)	16 (4.8)	150 (45)	226	30 (13)	18 (7.9)	40 (18)	6 (2.7)	21 (9.3)	18 (7.9)	4 (1.8)	6 (2.7)	81 (36)
Sex																														
Male	675	25 (3.7)	17 (2.5)	35 (5.2)	19 (2.8)	23 (3.4)	15 (2.2)	14 (2.1)	3 (0.4)	82 (12)	719	33 (4.6)	19 (2.6)	69 (9.6)	31 (4.3)	34 (4.7)	37 (5.2)	27 (3.8)	21 (2.9)	145 (20)	825	30 (3.6)	18 (2.2)	39 (4.7)	20 (2.4)	21 (2.6)	18 (2.2)	3 (0.4)	5 (0.6)	94 (11)
Female	716	32 (4.5)	24 (3.4)	56 (7.8)	21 (2.9)	30 (4.2)	9 (1.3)	20 (2.8)	4 (0.6)	115 (16)	869	46 (5.3)	27 (3.1)	114 (13)	23 (2.7)	39 (4.5)	44 (5.1)	31 (3.6)	26 (2.9)	193 (22)	1074	45 (4.2)	33 (3.1)	59 (5.5)	16 (1.5)	53 (4.9)	26 (2.4)	11 (1.0)	12 (1.1)	156 (15)
Others	1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	-	-	-	-	-	-	-	-	-	-	3	1 (33)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (33)
Types of region																														
Urban	678	30 (4.4)	24 (3.5)	54 (7.9)	30 (4.4)	36 (5.3)	19 (2.8)	12 (1.8)	4 (0.6)	107 (16)	652	23 (3.5)	13 (1.9)	66 (10)	25 (3.8)	26 (3.9)	33 (5.1)	14 (2.2)	16 (2.5)	124 (19)	395	15 (3.8)	8 (2.0)	22 (5.6)	3 (0.8)	9 (2.3)	8 (2.0)	7 (1.8)	6 (1.5)	54 (14)
Rural	714	27 (3.8)	17 (2.4)	37 (5.2)	10 (1.4)	17 (2.4)	5 (0.7)	22 (3.1)	3 (0.4)	90 (13)	936	56 (5.9)	33 (3.5)	117 (13)	29 (3.1)	47 (5.0)	48 (5.1)	44 (4.7)	31 (3.3)	214 (23)	1507	61 (4.1)	43 (2.9)	76 (5.0)	33 (2.2)	65 (4.3)	36 (2.4)	7 (0.5)	11 (0.7)	197 (13)
Region																														
North Zakarta	680	30 (4.4)	24 (3.5)	54 (7.9)	30 (4.4)	36 (5.3)	19 (2.8)	12 (1.8)	4 (0.6)	107 (16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
North Bangdung	712	27 (3.8)	17 (2.4)	37 (5.2)	10 (1.4)	17 (2.4)	5 (0.7)	22 (3.1)	3 (0.4)	90 (13)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kwale	-	-	-	-	-	-	-	-	-	-	503	24 (4.8)	9 (1.8)	38 (7.6)	16 (3.2)	27 (5.4)	22 (4.4)	27 (5.4)	19 (3.8)	84 (17)	-	-	-	-	-	-	-	-	-	-	-
Taita Taveta	-	-	-	-	-	-	-	-	-	-	401	16 (3.9)	8 (2.0)	41 (10)	8 (2.0)	6 (1.5)	9 (2.2)	8 (2.0)	12 (2.9)	80 (20)	-	-	-	-	-	-	-	-	-	-	-
Embu	-	-	-	-	-	-	-	-	-	-	324	24 (7.4)	14 (4.3)	50 (15)	19 (5.9)	30 (9.3)	32 (9.9)	13 (4.0)	15 (4.6)	91 (28)	-	-	-	-	-	-	-	-	-	-	-
Homabay	-	-	-	-	-	-	-	-	-	-	360	15 (4.2)	15 (4.2)	54 (15)	11 (3.1)	10 (2.8)	18 (5.0)	10 (2.8)	1 (0.3)	83 (23)	-	-	-	-	-	-	-	-	-	-	-
Monze	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	652	31 (4.8)	20 (3.1)	42 (6.4)	9 (1.4)	32 (4.9)	10 (1.5)	7 (1.1)	7 (1.1)	109 (17)
Samfya	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	596	20 (3.4)	7 (1.2)	30 (5.0)	6 (1.0)	16 (2.7)	8 (1.3)	4 (0.7)	8 (1.3)	73 (12)

Mwandi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	654	25 (3.8)	24 (3.7)	26 (3.9)	21 (3.2)	26 (3.9)	26 (3.9)	3 (0.5)	2 (0.3)	69 (11)
Education																														
No formal education	115	10 (8.7)	10 (8.7)	12 (10)	13 (11)	13 (11)	5 (4.4)	3 (2.6)	1 (0.9)	28 (24)	224	30 (13)	26 (12)	65 (29)	23 (10)	31 (14)	36 (16)	20 (8.9)	17 (7.6)	106 (47)	145	16 (11)	16 (11)	17 (12)	18 (12)	18 (12)	20 (14)	4 (2.8)	3 (2.1)	48 (33)
Primary education (1 to 5 years)	80	5 (6.3)	1 (1.3)	7 (8.8)	7 (8.8)	5 (6.3)	4 (5.0)	1 (1.3)	0 (0.0)	17 (21)	835	33 (3.9)	14 (1.7)	82 (9.8)	29 (3.5)	37 (4.4)	35 (4.2)	29 (3.5)	21 (2.5)	167 (20)	561	22 (3.9)	13 (2.3)	25 (4.5)	6 (1.1)	19 (3.4)	8 (1.4)	1 (0.2)	4 (0.7)	61 (11)
Secondary education (6 to 12 year)	1085	36 (3.3)	28 (2.6)	66 (6.1)	18 (1.7)	32 (2.9)	11 (1.0)	27 (2.5)	5 (0.5)	139 (13)	423	11 (2.6)	6 (1.4)	26 (6.2)	1 (0.2)	3 (0.7)	5 (1.2)	7 (1.7)	9 (2.1)	47 (11)	1149	35 (3.1)	22 (1.9)	55 (4.8)	12 (1.0)	34 (2.9)	15 (1.3)	8 (0.7)	10 (0.9)	135 (12)
Higher education (more than 12 years)	112	6 (5.4)	2 (1.8)	6 (5.4)	2 (1.8)	3 (2.7)	4 (3.6)	3 (2.7)	1 (0.9)	13 (12)	106	5 (4.7)	0 (0)	10 (9.4)	1 (0.9)	2 (1.9)	5 (4.7)	2 (1.9)	0 (0)	18 (17)	47	3 (6.4)	0 (0.0)	1 (2.1)	0 (0.0)	3 (6.4)	1 (2.1)	1 (2.1)	0 (0.0)	7 (15)
Employment status																														
Full time employment	181	7 (3.9)	0 (0.0)	4 (2.2)	0 (0.0)	0 (0.0)	0 (0.0)	2 (1.1)	0 (0.0)	8 (4.4)	54	0 (0)	0 (0)	3 (5.6)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1.9)	4 (7.4)	61	2 (3.3)	1 (1.6)	3 (4.9)	1 (1.6)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	6 (9.8)
Part-time employment	187	2 (1.1)	3 (1.6)	4 (2.1)	1 (0.5)	5 (2.7)	0 (0.0)	1 (0.5)	0 (0.0)	12 (6.4)	131	6 (4.6)	2 (1.5)	6 (4.6)	1 (0.8)	2 (1.5)	1 (0.8)	4 (3.1)	5 (3.8)	17 (13)	46	1 (2.2)	0 (0.0)	2 (4.4)	0 (0.0)	2 (4.4)	0 (0.0)	1 (2.2)	1 (2.2)	6 (13)
Self-employed	208	11 (5.3)	2 (0.9)	17 (8.2)	2 (0.9)	7 (3.4)	1 (0.5)	3 (1.4)	2 (0.9)	32 (15)	243	8 (3.3)	4 (1.7)	26 (11)	2 (0.8)	3 (1.2)	6 (2.5)	5 (2.1)	5 (2.1)	44 (18)	208	9 (4.3)	7 (3.4)	17 (8.2)	3 (1.4)	9 (4.3)	4 (1.9)	1 (0.5)	2 (0.9)	39 (19)
Home-maker	371	22 (5.9)	19 (5.1)	40 (11)	12 (3.2)	13 (3.5)	6 (1.6)	15 (4.0)	1 (0.3)	75 (20)	90	5 (5.6)	3 (3.3)	14 (16)	2 (2.2)	1 (1.1)	4 (4.4)	3 (3.3)	2 (2.2)	21 (23)	103	4 (3.9)	0 (0.0)	9 (8.7)	0 (0.0)	2 (1.9)	1 (0.9)	3 (2.9)	0 (0.0)	12 (12)
Student	292	0 (0.0)	1 (0.3)	2 (0.7)	9 (3.1)	8 (2.7)	2 (0.7)	1 (0.3)	1 (0.3)	12 (4.1)	415	5 (1.2)	6 (1.5)	14 (3.4)	15 (3.6)	12 (2.9)	9 (2.2)	4 (0.9)	1 (0.2)	35 (8.4)	718	8 (1.1)	5 (0.7)	5 (0.7)	6 (0.8)	5 (0.7)	3 (0.4)	1 (0.1)	0 (0.0)	27 (3.8)
Retired	55	9 (16)	6 (11)	13 (24)	4 (7.3)	7 (13)	6 (11)	4 (7.3)	0 (0.0)	25 (45)	50	8 (16)	4 (8.0)	14 (28)	1 (2.0)	7 (14)	5 (10)	2 (4.0)	2 (4.0)	24 (48)	36	5 (14)	1 (2.8)	3 (8.3)	0 (0.0)	3 (8.3)	1 (2.8)	0 (0.0)	1 (2.8)	10 (28)
Unemployed	93	6 (6.5)	10 (11)	11 (12)	12 (13)	13 (14)	9 (9.7)	8 (8.6)	3 (3.2)	33 (35)	531	33 (6.2)	18 (3.4)	77 (15)	25 (4.7)	37 (6.9)	39 (7.3)	31 (5.8)	24 (4.5)	152 (29)	669	45 (6.7)	34 (5.1)	57 (8.5)	21 (3.1)	51 (7.6)	32 (4.8)	7 (1.1)	13 (1.9)	144 (22)
Pre-school/ not to school yet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	0 (0.0)	2 (7.7)	0 (0.0)	3 (12)	1 (3.9)	1 (3.9)	1 (3.9)	0 (0.0)	3 (12)
Other	5	-	-	-	-	-	-	-	-	-	74	14 (19)	9 (12)	29 (39)	8 (11)	11 (15)	17 (23)	9 (12)	7 (9.5)	41 (55)	35	2 (5.7)	1 (2.9)	2 (5.7)	2 (5.7)	1 (2.9)	2 (5.7)	0 (0.0)	0 (0.0)	4 (11)
Ethnicity																														
Jawa	315	17 (5.4)	8 (2.5)	26 (8.3)	13 (4.1)	15 (4.8)	8 (2.5)	8 (2.5)	3 (0.9)	50 (16)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sunda	760	31 (4.1)	19 (2.5)	46 (6.1)	12 (1.6)	19 (2.5)	8 (1.1)	21 (2.78)	3 (0.4)	100 (13)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Betawi	188	6 (3.2)	8 (4.3)	11 (5.9)	7 (3.7)	11 (5.9)	4 (2.1)	1 (0.5)	0 (0.0)	27 (14)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Embu	-	-	-	-	-	-	-	-	-	-	289	22 (7.6)	13 (4.5)	47 (16)	17 (5.9)	27 (9.3)	31 (11)	13 (4.5)	15 (5.2)	84 (29.)	-	-	-	-	-	-	-	-	-	-
Luo	-	-	-	-	-	-	-	-	-	-	387	16 (4.1)	15 (3.9)	55 (14)	12 (3.1)	11 (2.8)	18 (4.7)	10 (2.6)	1 (0.3)	85 (22)	-	-	-	-	-	-	-	-	-	-
Mijikenda	-	-	-	-	-	-	-	-	-	-	390	21 (5.4)	7 (1.8)	29 (7.4)	11 (2.8)	21 (5.4)	15 (3.9)	27 (6.9)	19 (4.9)	68 (17)	-	-	-	-	-	-	-	-	-	-
Taita Taveta	-	-	-	-	-	-	-	-	-	-	321	12 (3.8)	7 (2.2)	34 (11)	8 (2.5)	6 (1.9)	8 (2.5)	6 (1.9)	8 (2.5)	64 (20)	-	-	-	-	-	-	-	-	-	-
Bemba	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	579	19 (3.3)	7 (1.2)	31 (5.4)	6 (1.0)	16 (2.8)	8 (1.4)	4 (0.7)	8 (1.4)	73 (13)
Nyanja	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	0 (0.0)	1 (4.0)	1 (4.0)	1 (4.0)	1 (4.0)	2 (8.0)	0 (0.0)	0 (0.0)	2 (8.0)
Tonga	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	595	31 (5.2)	18 (3.0)	38 (6.4)	8 (1.3)	31 (5.2)	8 (1.3)	6 (1.0)	6 (1.0)	103 (17)
Lozi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	650	25 (3.9)	25 (3.9)	25 (3.9)	21 (3.2)	26 (4.0)	25 (3.9)	4 (0.6)	3 (0.5)	69 (11)
Others	129	3 (2.3)	6 (4.7)	8 (6.2)	8 (6.2)	8 (6.2)	4 (3.1)	4 (3.1)	1 (0.8)	20 (16)	201	8 (3.9)	4 (1.9)	18 (8.9)	6 (2.9)	8 (3.9)	9 (4.5)	2 (1.0)	4 (1.9)	37 (18)	53	1 (1.9)	0 (0.0)	3 (5.7)	0 (0.0)	0 (0.0)	1 (1.9)	0 (0.0)	0 (0.0)	4 (7.6)

¥ Types of disability are Non-mutually exclusive binary variables

Table 35: Characteristics of Person with and without disabilities in the screening

	Indonesia			Kenya			Zambia			Overall		
Indicators	**Person without disabilities**	**Person with disabilities**	**AOR (95% CI) ¥**	**Person without disabilities**	**Person with disabilities**	**AOR (95% CI) ¥**	**Person without disabilities**	**Person with disabilities**	**AOR (95% CI) ¥**	**Person without disabilities**	**Person with disabilities**	**AOR (95% CI) ***
	N=1195	**N=197**		**N=1250**	**N=338**		**N=1651**	**N=251**		**N=4096**	**N=786**	
Region[a]												

Indicators	Indonesia			Kenya			Zambia			Overall		
	Person without disabilities	Person with disabilities	AOR (95% CI) ¥	Person without disabilities	Person with disabilities	AOR (95% CI) ¥	Person without disabilities	Person with disabilities	AOR (95% CI) ¥	Person without disabilities	Person with disabilities	AOR (95% CI) *
	N=1195	N=197		N=1250	N=338		N=1651	N=251		N=4096	N=786	
North Zakarta	573 (48)	107 (54)	Ref.	-	-	-	-	-	-	-	-	-
North Bangdung	622 (52)	90 (46)	0.8 (0.6-1.0)	-	-	-	-	-	-	-	-	-
Kwale	-	-	-	419 (34)	84 (25)	Ref.	-	-	-	-	-	-
Taita Taveta	-	-	-	321 (26)	80 (24)	0.9 (0.8-1.2)	-	-	-	-	-	-
Embu	-	-	-	233 (19)	91 (27)	1.2 (0.8-1.9)	-	-	-	-	-	-
Homabay	-	-	-	277 (22)	83 (25)	1.1 (0.9-1.3)	-	-	-	-	-	-
Monze	-	-	-	-	-	-	543 (33)	109 (43)	Ref.	-	-	-
Samfya	-	-	-	-	-	-	523 (32)	73 (29)	**0.7 (0.5-0.9)**	-	-	-
Mwandi	-	-	-	-	-	-	585 (35)	69 (28)	**0.5 (0.3-0.7)**	-	-	-
Types of region												
Urban	571 (48)	107 (54)	1.3 (0.9-1.6)	528 (42)	124 (37)	0.9 (0.7-1.2)	341 (21)	54 (22)	1.1 (0.8-1.6)	1440 (35)	285 (36)	1.09 (0.9-1.3)
Rural	624 (52)	90 (46)	Ref.	722 (58)	214 (63)	Ref.	1310 (79)	197 (79)	Ref.	2656 (65)	501 (64)	Ref.
Age (years)[b]												
5--9	54 (4.5)	3 (1.5)	Ref.	84 (6.7)	14 (4.1)	Ref.	217 (13)	12 (4.8)	Ref.	355 (8.7)	29 (3.7)	Ref.
10--17	176 (15)	10 (5.1)	0.9 (0.3-3.3)	239 (19)	28 (8.3)	**0.7 (0.5-0.9)**	454 (28)	19 (7.6)	0.7 (0.4-1.3)	869 (21)	57 (7.3)	0.8 (0.7-1.1)
18--35	367 (31)	17 (8.6)	0.8 (0.2-3.7)	439 (35)	62 (18)	0.8 (0.6-1.3)	489 (30)	58 (23)	**2.1 (1.1-3.7)**	1295 (32)	137 (17)	1.3 (0.9-1.9)
36--49	294 (25)	28 (14)	1.6 (0.3-8.1)	200 (16)	48 (14)	1.4 (0.8-2.4)	227 (14)	50 (20)	**3.9 (2.3-6.9)**	721 (18)	126 (16)	**2.2 (1.6-3.0)**
50--59	151 (13)	36 (18)	4.1 (0.9-17.4)	101 (8.1)	36 (11)	**2.1 (1.3-3.6)**	119 (7.2)	31 (12)	**4.9 (2.8-8.5)**	371 (9.1)	103 (13)	**3.5 (2.3-5.3)**
60--70	105 (8.8)	51 (26)	**8.5 (1.9-37.2)**	112 (9.0)	57 (17)	**3.0 (1.7-5.3)**	73 (4.4)	34 (14)	**8.1 (4.9-13.5)**	290 (7.1)	142 (18)	**6.3 (4.3- 8.8)**
70+	48 (4.0)	52 (26)	**18.9 (4.7-76.5)**	75 (6.0)	93 (28)	**7.0 (4.4-11.2)**	72 (4.4)	47 (19)	**12.8 (8.5-19.4)**	195 (4.8)	192 (24)	**12.4 (9.2-16.6)**
Age												
Younger (<60 years)	1042 (87)	94 (48)	Ref.	1063 (85)	188 (56)	Ref.	1506 (91)	170 (68)	Ref.	3611 (88)	452 (58)	Ref.
Older adults (>=60 years)	153 (13)	103 (52)	**7.5 (5.7-9.7)**	187 (15)	150 (44)	**4.3 (3.4-5.5)**	145 (8.8)	81 (32)	**5.2 (4.0-6.7)**	485 (12)	334 (43)	**5.5 (4.9-6.2)**
Sex[c]												
Male	593 (50)	82 (42)	Ref.	574 (46)	145 (43)	Ref.	731 (44)	94 (38)	Ref.	1898 (46)	321 (41)	Ref.
Female	601 (50)	115 (58)	1.4 (0.9-1.9)	676 (54)	193 (57)	1.0 (0.8-1.4)	918 (56)	156 (62)	1.3 (0.9-1.6)	2195 (54)	464 (59)	1.2 (0.9-1.5)
Others[d]	1 (0.1)	0 (0.0)					2 (0.1)	1 (0.4)	3.8 (0.7-19.9)	3 (0.1)	1 (0.1)	2.5 (0.3-19.0)
Ethnicity												
Jawa	265 (22)	50 (25)	Ref.	-	-	-	-	-	-	-	-	-
Sunda	660 (55)	100 (51)	1.2 (0.5-3.1)	-	-	-	-	-	-	-	-	-
Betawi	161 (14)	27 (14)	1.2 (0.9-1.7)	-	-	-	-	-	-	-	-	-

Indicators	Indonesia			Kenya			Zambia			Overall		
	Person without disabilities	Person with disabilities	AOR (95% CI) ¥	Person without disabilities	Person with disabilities	AOR (95% CI) ¥	Person without disabilities	Person with disabilities	AOR (95% CI) ¥	Person without disabilities	Person with disabilities	AOR (95% CI) *
	N=1195	N=197		N=1250	N=338		N=1651	N=251		N=4096	N=786	
Embu	-	-	-	205 (16)	84 (25)	Ref.	-	-	-	-	-	-
Luo	-	-	-	302 (24)	85 (25)	0.4 (0.2-1.3)	-	-	-	-	-	-
Mijikenda	-	-	-	322 (26)	68 (20)	0.9 (0.4-1.9)	-	-	-	-	-	-
Taita Taveta	-	-	-	257 (21)	64 (19)	0.7 (0.4-1.1)	-	-	-	-	-	-
Bemba	-	-	-	-	-	-	506 (31)	73 (29)	Ref.	-	-	-
Nyanja	-	-	-	-	-	-	23 (1.4)	2 (0.8)	0.9 (0.3-3.0)	-	-	-
Tonga	-	-	-	-	-	-	492 (30)	103 (41)	1.2 (0.8-1.6)	-	-	-
Lozi	-	-	-	-	-	-	581 (35)	69 (28)	0.9 (0.6-1.2)	-	-	-
Others	109 (9.1)	20 (10)	0.0 (0.5-1.7)	164 (13)	37 (11)	0.9 (0.6-1.3)	49 (3.0)	4 (1.6)	0.4 (0.2-1.0)	-	-	-
Education												
No formal education	87 (7.3)	28 (14)	Ref.	118 (9.4)	106 (31)	Ref.	97 (5.9)	48 (19)	Ref.	302 (7.4)	182 (23)	Ref.
Primary education (1 to 5 years)	63 (5.3)	17 (8.6)	1.2 (0.6-2.5)	668 (53)	167 (49)	**0.4 (0.2-0.7)**	500 (30)	61 (24)	**0.3 (0.2-0.7)**	1231 (30)	245 (31)	**0.5 (0.3-0.7)**
Secondary education (6 to 12 year)	946 (79)	139 (71)	**0.3 (0.1-0.6)**	376 (30)	47 (14)	**0.2 (0.1-0.5)**	1014 (61)	135 (54)	**0.5 (0.1-0.5)**	2336 (57)	321 (41)	**0.3 (0.2-0.4)**
Higher education (more than 12 years)	99 (8.3)	13 (6.6)	**0.3 (0.1-0.7)**	88 (7.0)	18 (5.3)	**0.3 (0.1-0.8)**	40 (2.4)	7 (2.8)	**0.2 (0.1-0.5)**	227 (5.5)	38 (4.8)	**0.3 (0.2-0.5)**
Employment status												
Full time employment	173 (15)	8 (4.1)	Ref.	50 (4.0)	4 (1.2)	Ref.	55 (3.3)	6 (2.4)	Ref.	278 (6.8)	18 (2.3)	Ref.
Part-time employment	175 (15)	12 (6.1)	1.3 (0.5-3.1)	114 (9.1)	17 (5.0)	2.1 (0.6-7.1)	40 (2.4)	6 (2.4)	1.1 (0.5-2.4)	329 (8.0)	35 (4.5)	1.6 (0.8-3.2)
Self-employed	176 (15)	32 (16)	1.9 (0.9-3.9)	199 (16)	44 (13)	2.2 (0.9-4.9)	169 (10)	39 (16)	1.7 (0.8-3.5)	544 (13)	115 (15)	**2.5 (1.5-4.2)**
Home-maker	296 (25)	75 (38)	1.7 (0.8-3.7)	69 (5.5)	21 (6.2)	**2.7 (1.0-6.9)**	91 (5.5)	12 (4.8)	0.9 (0.4-1.9)	456 (11)	108 (14)	**2.2 (1.2-3.7)**
Student	280 (23)	12 (6.1)	0.9 (0.2-4.0)	380 (30)	35 (10)	1.4 (0.4-5.6)	691 (42)	27 (11)	0.7 (0.2-1.8)	1351 (33)	74 (9.4)	1.1 (0.5-2.3)
Retired	30 (2.5)	25 (13)	**3.1 (1.5-6.5)**	26 (2.1)	24 (7.1)	**3.9 (1.3-11.2)**	26 (1.6)	10 (4.0)	1.4 (0.7-3.2)	82 (2.0)	59 (7.5)	**3.6 (2.1-6.3)**
Unemployed	60 (5.0)	33 (17)	**9.8 (4.1-23.5)**	379 (30)	152 (45)	**5.6 (1.9-11.1)**	525 (32)	144 (57)	2.1 (0.9-4.4)	964 (24)	329 (42)	**4.3 (2.8-6.8)**
Pre-school/ not to school yet							23 (1.4)	3 (1.2)	2.4 (0.5-11.5)	23 (0.6)	3 (0.4)	2.8 (0.8-9.6)
Others	5 (0.4)	0 (0.0)	-	33 (2.6)	41 (12)	**10.9 (3.4-34.8)**	31 (1.9)	4 (1.6)	1.2 (0.3-5.4)	69 (1.7)	45 (5.7)	**6.7 (3.3-13.6)**
Marital status												
Married / living together	642 (54)	102 (52)	Ref.	471 (38)	114 (34)	Ref.	531 (32)	98 (39)	Ref.	1644 (40)	314 (40)	Ref.
Divorced/separated	31 (2.6)	7 (3.6)	1.5 (0.6-3.5)	78 (6.2)	28 (8.3)	**1.8 (1.1-2.9)**	65 (3.9)	27 (11)	**2.5 (1.3-4.7)**	174 (4.2)	62 (7.9)	**2.1 (1.6-2.8)**
Widowed	83 (6.9)	55 (28)	1.4 (0.7-2.6)	85 (6.8)	87 (26)	**2.2 (1.3-3.7)**	85 (5.1)	42 (17)	1.7 (0.7-1.9)	253 (6.2)	184 (23)	**1.6 (1.2-2.2)**
Never married/lived together	439 (37)	32 (16)	**3.9 (1.5-10.5)**	403 (32)	78 (23)	**2.6 (1.5-4.4)**	483 (29)	60 (24)	**2.5 (1.4-4.4)**	1325 (32)	170 (22)	**2.7 (2.0-3.6)**
Not applicable	0 (0.0)	1 (0.5)	-	213 (17)	31 (9.2)	**2.4 (1.5-3.8)**	487 (30)	24 (9.6)	1.7 (0.7-3.8)	700 (17)	56 (7.1)	**2.0 (1.3-3.3)**

Indicators	Indonesia			Kenya			Zambia			Overall		
	Person without disabilities	Person with disabilities	AOR (95% CI) ¥	Person without disabilities	Person with disabilities	AOR (95% CI) ¥	Person without disabilities	Person with disabilities	AOR (95% CI) ¥	Person without disabilities	Person with disabilities	AOR (95% CI) *
	N=1195	N=197		N=1250	N=338		N=1651	N=251		N=4096	N=786	

¥ adjusted for age, sex, region
a adjusted for age, sex
b adjusted for sex, region
c adjusted for age, region
d observation excluded from the AOR calculation, - dropped due to complete separation problem
* adjusted for age, sex, types of region
Bold indicates statistically significant at 5% level

Table 36: Country specific socio-demographics characteristics by disability status

Indicators	Indonesia			Kenya			Zambia		
	person without Disability	Person with disability	AOR (95% CI)	person without Disability	Person with disability	AOR (95% CI)	person without Disability	Person with disability	AOR (95% CI)
	N=167	N=173		N=260	N=282		N=161	N=160	
Region/ province/ county									
North Zakarta	86 (52)	89 (51)	ref.	-	-	-	-	-	-
North Bangdung	81 (49)	84 (49)	1.02 (0.91-1.15)	-	-	-	-	-	-
Embu	-	-	-	65 (25)	84 (30)	ref.	-	-	-
Homabay	-	-	-	81 (31)	73 (26)	0.64 (0.40-1.01)	-	-	-
Kwale	-	-	-	47 (18)	64 (23)	0.98 (0.62-1.56)	-	-	-
Taita Taveta	-	-	-	67 (26)	61 (22)	0.69 (0.45-1.05)	-	-	-
Monze	-	-	-	-	-	-	54 (34)	53 (33)	ref.
Samfya	-	-	-	-	-	-	53 (33)	53 (33)	0.83 (0.67-10.3)
Mwandi	-	-	-	-	-	-	54 (34)	54 (34)	0.89 (0.75-1.05)
Types of region									
Urban	84 (50)	89 (51)	1.01 (0.83-1.22)	104 (40)	107 (38)	0.89 (0.64-1.25)	31 (19)	29 (18)	1.07 (0.79-1.44)
Rural	83 (50)	84 (49)	ref.	156 (60)	175 (62)	ref.	130 (81)	131 (82)	ref.
Ethnicity									
Jawa	48 (29)	43 (25)	ref.	-	-	-	-	-	-
Sunda	86 (52)	94 (54)	1.67 (0.48-5.82)	-	-	-	-	-	-
Betawi	11 (6.6)	18 (10)	**2.66 (1.58-4.48)**	-	-	-	-	-	-
Others_Indonesia	22 (13)	18 (10)	0.95 (0.34-2.64)	-	-	-	-	-	-
Embu	-	-	-	58 (22)	78 (28)	ref.	-	-	-

Indicators	Indonesia			Kenya			Zambia		
	person without Disability	Person with disability	AOR (95% CI)	person without Disability	Person with disability	AOR (95% CI)	person without Disability	Person with disability	AOR (95% CI)
	N=167	N=173		N=260	N=282		N=161	N=160	
Luo	-	-	-	83 (32)	75 (27)	0.39 (0.06-2.46)	-	-	-
Mijikenda	-	-	-	38 (15)	48 (17)	0.51 (0.17-1.54)	-	-	-
Taita	-	-	-	59 (23)	50 (18)	034 (0.09-1.17)	-	-	-
Others_Kenya	-	-	-	22 (8.5)	31 (11)	0.66 (0.24-1.82)	-	-	-
Bemba	-	-	-	-	-	-	49 (30)	54 (34)	ref.
Tonga	-	-	-	-	-	-	47 (29)	50 (31)	0.85 (0.16-4.54)
Lozi	-	-	-	-	-	-	57 (35)	53 (33)	0.18 (0.02-1.69)
Others_Zambia	-	-	-	-	-	-	8 (4.9)	3 (1.9)	0.26 (0.04-1.54)
Sex of the respondent									
Male	66 (40)	67 (39)	ref.	109 (42)	116 (41)	ref.	59 (37)	55 (34)	ref.
Female	101 (61)	106 (61)	1.4 (0.39-5.01)	151 (58)	166 (59)	1.02 (0.75-1.38)	101 (63)	104 (65)	1.04 (0.88-1.22)
Other	-	-		-	-		1 (0.6)	1 (0.6)	
Age of the respondent									
Younger	93 (56)	85 (49)	ref.	147 (57)	149 (53)	ref.	110 (68)	109 (68)	ref.
Older	74 (44)	88 (51)	**5.37 (1.34-21.49)**	113 (43)	133 (47)	1.14 (0.91-1.43)	51 (32)	51 (32)	1 (0.20-5.03)
5 quantiles of SES									
1 (poorest)	27 (16)	42 (24)	ref.	43 (17)	66 (23)	ref.	21 (13)	44 (28)	ref.
2	32 (19)	35 (20)	0.67 (0.2-1.40)	49 (19)	59 (21)	0.82 (0.47-1.43)	35 (22)	29 (18)	**0.40 (0.18-0.88)**
3	38 (23)	30 (17)	**0.49 (0.30-0.77)**	51 (20)	58 (21)	0.77 (0.38-1.57)	36 (22)	28 (18)	**0.41 (0.22-0.76)**
4	36 (22)	33 (19)	**0.57 (0.33-0.98)**	54 (21)	54 (19)	0.64 (0.34-1.24)	35 (22)	29 (18)	**0.37 (0.22-0.64)**
5 (richest)	34 (20)	33 (19)	0.73 (0.35-1.54)	63 (24)	45 (16)	**0.46 (0.28-0.76)**	34 (21)	30 (19)	**0.36 (0.16-0.80)**
Education completed in years									
No education	12 (7.2)	22 (13)	ref.	46 (18)	97 (34)	ref.	10 (6.2)	32 (20)	ref.
Primary education	7 (4.2)	14 (8.1)	1.64 (0.76-3.55)	137 (53)	131 (47)	**0.46 (0.28-0.76)**	42 (26)	42 (26)	0.3 (0.08-1.08)
Secondary education	133 (80)	128 (74)	0.54 (0.23-1.27)	61 (24)	40 (14)	**0.34 (0.19-0.59)**	100 (62)	83 (52)	**0.24 (0.08-0.69)**
Higher education	15 (9.0)	9 (5.2)	**0.29 (0.09-0.92)**	16 (6.2)	14 (5.0)	0.47 (0.21-1.02)	9 (5.6)	3 (1.9)	**0.08 (0.02-0.38)**
Employment status									
Full time employment	21 (13)	6 (3.5)	**0.03 (0.01-0.12)**	6 (2.3)	3 (1.1)	0.51 (0.15-1.70)	11 (6.8)	2 (1.3)	0.11 (0.01-2.09)
Part-time employment	12 (7.2)	10 (5.8)	**0.21 (0.6-0.75)**	22 (8.5)	15 (5.3)	0.59 (0.24-1.50)	4 (2.5)	3 (1.9)	0.26 (0.04-1.58)

Indicators	Indonesia			Kenya			Zambia		
	person without Disability	Person with disability	AOR (95% CI)	person without Disability	Person with disability	AOR (95% CI)	person without Disability	Person with disability	AOR (95% CI)
	N=167	N=173		N=260	N=282		N=161	N=160	
Self-employed	27 (16)	29 (17)	**0.26 (0.13-0.53)**	58 (22)	39 (14)	0.62 (0.33-1.18)	28 (17)	21 (13)	0.42 (0.17-1.03)
Home-maker	73 (44)	70 (41)	**0.14 (0.07-0.29)**	20 (7.7)	18 (6.4)	0.86 (0.41-1.83)	14 (8.7)	7 (4.4)	0.29 (0.07-1.15)
Student	13 (7.8)	11 (6.4)	0.10 (0.01-1.17)	27 (10)	27 (9.6)	0.91 (0.39-2.14)	18 (11)	10 (6.3)	0.15 (0.02-1.16)
Retired	15 (9.0)	19 (11)	0.43 (0.14-1.38)	16 (6.2)	21 (7.4)	1.13 (0.50-2.56)	14 (8.7)	7 (4.4)	**0.14 (0.03-0.77)**
Unemployed	6 (3.6)	28 (16)	ref.	105 (40)	125 (44)	ref.	68 (42)	106 (66)	ref.
Pre-school/ not to school yet	-	-	-	-	-	-	0 (0.0)	2 (1.3)	-
Other	-	-	-	6 (2.3)	34 (12)	**5.13 (1.89-13.86)**	4 (2.5)	2 (1.3)	**0.22 (0.05-0.96)**
Marital status									
Married / living together	106 (64)	90 (52)	**0.17 (0.29-0.98)**	128 (49)	86 (31)	**0.39 (0.25-0.61)**	82 (51)	62 (39)	0.32 (0.09-1.10)
Divorced/separated	5 (3.0)	5 (2.9)	0.31 (0.03-3.04)	14 (5.4)	26 (9.2)	0.97 (0.45-2.09)	13 (8.1)	19 (12)	0.51 (0.13-2.04)
Widowed	38 (23)	49 (28)	0.25 (0.04-1.46)	62 (24)	83 (29)	0.68 (0.33-1.43)	33 (21)	30 (19)	0.35 (0.07-1.76)
Never married/lived together	18 (11)	28 (16)	ref.	32 (12)	53 (19)	ref.	19 (12)	32 (20)	ref.
Not applicable[a]	0 (0.0)	1 (0.6)		24 (9.2)	34 (12)	0.87 (0.49-1.52)	14 (8.7)	17 (11)	1.16 (0.19-6.85)

Marital status= not applicable excluded for the model Indonesia data
8 observations excluded from the MV analysis in Indonesia data due to unmatched case-control pair
Employment status=pre-school excluded from Zambia data in MV analysis

Table 37: Country specific socio-demographics characteristics by ageing

Indicators	Indonesia			Kenya			Zambia		
	Younger	Older	p-value	Younger	Older	p-value	Younger	Older	p-value
	N=178	N=162		N=296	N=246		N=219	N=102	
Region/ province/ county									
North Zakarta	84 (47)	91 (56)	0.098*	-	-	-	-	-	-
North Bangdung	94 (53)	71 (44)		-	-	-	-	-	-
Embu	-	-	-	61 (21)	88 (36)	**<0.001**	-	-	-
Homabay	-	-	-	85 (29)	69 (28)		-	-	-
Kwale	-	-	-	79 (27)	32 (13)		-	-	-
Taita Taveta	-	-	-	71 (24)	57 (23)		-	-	-
Monze	-	-	-	-	-	-	65 (30)	42 (41)	**0.010**
Samfya	-	-	-	-	-	-	84 (38)	22 (22)	
Mwandi	-	-	-	-	-	-	70 (32)	38 (37)	
Types of region									
Urban	84 (47)	89 (55)	0.15	132 (45)	79 (32)	**0.003**	44 (20)	16 (16)	0.35
Rural	94 (53)	73 (45)		164 (55)	167 (68)		175 (80)	86 (84)	
Ethnicity									
Jawa	42 (24)	49 (30)	0.076*	-	-	-	-	-	-
Sunda	101 (57)	79 (49)		-	-	-	-	-	-
Betawi	19 (11)	10 (6.2)		-	-	-	-	-	-
Others_Indonesia	16 (9.0)	24 (15)		-	-	-	-	-	-
Embu	-	-	-	52 (18)	84 (34)	**<0.001**	-	-	-
Luo	-	-	-	89 (30)	69 (28)		-	-	-
Mijikenda	-	-	-	62 (21)	24 (9.8)		-	-	-

Indicators	Indonesia			Kenya			Zambia		
	Younger	Older	p-value	Younger	Older	p-value	Younger	Older	p-value
	N=178	N=162		N=296	N=246		N=219	N=102	
Taita	-	-	-	60 (20)	49 (20)		-	-	-
Others_Kenya	-	-	-	33 (11)	20 (8.1)		-	-	-
Bemba	-	-	-	-	-	-	83 (38)	20 (20)	**0.007**
Nyanja	-	-	-	-	-	-	2 (0.9)	0 (0.0)	
Tonga	-	-	-	-	-	-	56 (26)	41 (40)	
Lozi	-	-	-	-	-	-	73 (33)	37 (36)	
Others_Zambia	-	-	-	-	-	-	5 (2.3)	4 (3.9)	
Sex of the respondent									
Male	65 (37)	68 (42)	0.30	136 (46)	89 (36)	**0.022**	71 (32)	43 (42)	0.16
Female	113 (64)	94 (58)		160 (54)	157 (64)		146 (67)	59 (58)	
Others	-	-		-	-		2 (0.9)	0 (0.0)	
5 quantiles of SES									
1 (poorest)	37 (21)	32 (20)	**0.010**	64 (22)	45 (18)	0.12	43 (20)	22 (22)	0.074*
2	26 (15)	41 (25)		61 (21)	47 (19)		35 (16)	29 (28)	
3	47 (26)	21 (13)		53 (18)	56 (23)		47 (22)	17 (17)	
4	33 (19)	36 (22)		51 (17)	57 (23)		45 (21)	19 (19)	
5 (richest)	35 (20)	32 (20)		67 (23)	41 (17)		49 (22)	15 (15)	
Education completed in years									
No education	14 (7.9)	20 (12)	0.33	38 (13)	105 (43)	**<0.001**	25 (11)	17 (17)	**0.046**
Primary education	11 (6.2)	10 (6.2)		157 (53)	111 (45)		52 (24)	32 (31)	
Secondary education	143 (80)	118 (73)		77 (26)	24 (9.8)		136 (62)	47 (46)	
Higher education	10 (5.6)	14 (8.6)		24 (8.1)	6 (2.4)		6 (2.7)	6 (5.9)	
Employment status									
Full time employment	21 (12)	6 (3.7)	**<0.001**	8 (2.7)	1 (0.4)	**<0.001**	12 (5.5)	1 (1.0)	**<0.001**
Part-time employment	13 (7.3)	9 (5.6)		31 (11)	6 (2.4)		5 (2.3)	2 (2.0)	
Self-employed	23 (13)	33 (20)		49 (17)	48 (20)		40 (18)	9 (8.8)	
Home-maker	73 (41)	70 (43)		14 (4.7)	24 (9.8)		16 (7.3)	5 (4.9)	
Student	24 (14)	0 (0.0)		54 (18)	0 (0.0)		28 (13)	0 (0.0)	
Retired	0 (0.0)	34 (21)		1 (0.3)	36 (15)		3 (1.4)	18 (18)	
Unemployed	24 (14)	10 (6.2)		121 (41)	109 (44)		107 (49)	67 (66)	
Pre-school/ not to school yet	-	-		-	-		2 (0.9)	0 (0.0)	
Other	-	-		18 (6.1)	22 (8.9)		6 (2.7)	0 (0.0)	
Marital status									
Married / living together	110 (62)	86 (53)	**<0.001**	108 (37)	106 (43)	**<0.001**	100 (46)	44 (43)	**<0.001**
Divorced/separated	5 (2.8)	5 (3.1)		24 (8.1)	16 (6.5)		27 (12)	5 (4.9)	
Widowed	17 (9.6)	70 (43)		28 (9.5)	117 (48)		12 (5.5)	51 (50)	
Never married/lived together	46 (26)	0 (0.0)		78 (26)	7 (2.8)		50 (23)	1 (1.0)	
Not applicable	0 (0.0)	1 (0.6)		58 (20)	0 (0.0)		30 (14)	1 (1.0)	

Table 38: Reach and dose of the HBCC intervention delivery components by disability status

Indicators	Indonesia			Kenya			Zambia			Overall		
	person without Disability	Person with disability	AOR (95% CI)	person without Disability	Person with disability	AOR (95% CI)	person without Disability	Person with disability	AOR (95% CI)	person without Disability	Person with disability	AOR (95% CI)
	n (%)	n (%)		n (%)	n (%)		n (%)	n (%)		n (%)	n (%)	
	N=167	N=173		N=260	N=282		N=161	N=160		N=588	N=615	
Behaviour change messages												
Social distancing	151 (90)	122 (71)	0.27 (0.12-0.59)	204 (79)	175 (62)	**0.48 (0.31-0.74)**	140 (87)	121 (76)	**0.29 (0.14-0.62)**	495 (84)	418 (68)	**0.42 (0.31-0.56)**
Mask use	155 (93)	139 (80)	0.42 (0.20-0.89)	219 (84)	201 (71)	**0.51 (0.29-0.86)**	152 (94)	137 (86)	**0.32 (0.11-0.93)**	526 (90)	477 (78)	**0.44 (0.31-0.62)**
Hand washing with soap	150 (90)	124 (72)	0.31 (0.14-0.69)	197 (76)	187 (66)	0.69 (0.45-1.06)	143 (89)	126 (79)	**0.39 (0.21-0.72)**	490 (83)	437 (71)	**0.52 (0.39-0.70)**
Surface cleaning	21 (13)	19 (11)	1.25 (0.46-3.38)	14 (5.4)	15 (5.3)	1.08 (0.48-2.43)	56 (35)	45 (28)	0.63 (0.32-1.26)	91 (16)	79 (13)	0.85 (0.58-1.24)
Assistive device cleaning	5 (3.0)	2 (1.2)	0.40 (0.07-2.12)	5 (1.9)	8 (2.8)	1.45 (0.53-3.96)	11 (6.8)	9 (5.6)	0.87 (0.13-6.01)	21 (3.6)	19 (3.1)	0.86 (0.43-1.69)
Isolation (when you have COVID symptoms)	24 (14)	18 (10)	0.94 (0.37-2.39)	12 (4.6)	18 (6.4)	1.58 (0.59-4.22)	23 (14)	11 (6.9)	**0.27 (0.10-0.69)**	59 (10)	47 (7.6)	0.79 (0.52-1.20)
Quarantine (when you have been exposed to someone with COVID)	22 (13)	15 (8.7)	0.82 (0.32-2.09)	11 (4.2)	9 (3.2)	0.89 (0.39-1.98)	11 (6.8)	2 (1.3)	**0.16 (0.04-0.65)**	44 (7.5)	26 (4.2)	**0.57 (0.34-0.96)**
People with disability and older people are more vulnerable to covid19	1 (0.6)	4 (2.3)	4 (0.28-56.83)	3 (1.2)	1 (0.4)	0.23 (0.03-2.06)	8 (5.0)	5 (3.1)	0.36 (0.08-1.65)	12 (2.0)	10 (1.6)	0.82 (0.34-1.95)
People with disabilities may need support to maintain personal hygiene	0 (0.0)	1 (0.6)		3 (1.2)	2 (0.7)	0.53 (0.12-2.45)	9 (5.6)	5 (3.1)	0.74 (0.17-3.21)	12 (2.0)	8 (1.3)	0.65 (0.25-1.66)
Testing for COVID-19	16 (9.6)	10 (5.8)	1.06 (0.23-4.96)	39 (15)	28 (9.9)	0.77 (0.45-1.30)	64 (40)	53 (33)	0.50 (0.23-1.09)	119 (20)	91 (15)	**0.69 (0.48-0.99)**
COVID-19 Vaccination	84 (50)	54 (31)	**0.39 (0.24-0.66)**	71 (27)	63 (22)	0.89 (0.50-1.49)	129 (80)	112 (70)	0.53 (0.24-1.18)	284 (48)	229 (37)	**0.62 (0.47-0.82)**

Indicators	Indonesia			Kenya			Zambia			Overall		
	person without Disability	Person with disability	AOR (95% CI)	person without Disability	Person with disability	AOR (95% CI)	person without Disability	Person with disability	AOR (95% CI)	person without Disability	Person with disability	AOR (95% CI)
	n (%)	n (%)		n (%)	n (%)		n (%)	n (%)		n (%)	n (%)	
	N=167	N=173		N=260	N=282		N=161	N=160		N=588	N=615	
Others	2 (1.2)	0 (0.0)		8 (3.1)	4 (1.4)	0.49 (0.15-1.55)	3 (1.9)	4 (2.5)	1.5 (0.24-9.52)	13 (2.2)	8 (1.3)	0.63 (0.26-1.57)
Can't remember	0 (0.0)	4 (2.3)		4 (1.5)	13 (4.6)	2.53 (0.77-8.28)	0 (0.0)	3 (1.9)		4 (0.7)	20 (3.3)	**4.39 (1.46-13.23)**
BCC message receiving mediums	**N=156**	**N=143**		**N=239**	**N=231**					**N=556**	**N=534**	
Broadcasting media (TV, Radio)	133 (85)	109 (76)	0.72 (0.28-1.87)	211 (88)	198 (86)	0.79 (0.39-1.59)	106 (66)	95 (59)	0.79 (0.38-1.68)	450 (81)	402 (75)	0.76 (0.55-1.06)
Social media (Facebook, twitter, WhatsApp, social media graphics)	40 (26)	24 (17)	0.54 (0.19-1.53)	16 (6.7)	14 (6.1)	1.04 (0.62-1.77)	22 (14)	6 (3.8)	**0.16 (0.04-0.65)**	78 (14)	44 (8.2)	**0.55 (0.35-0.86)**
Family/ caregivers/ neighbours	54 (35)	62 (43)	1.07 (0.69-1.66)	31 (13)	39 (17)	1.24 (0.77-1.99)	48 (30)	44 (28)	0.88 (0.52-1.49)	133 (24)	145 (27)	1.15 (0.86-1.54)
Digital print (digital screen, billboard, film van	10 (6.4)	7 (4.9)	0.80 (0.22-2.84)	6 (2.5)	2 (0.9)	0.35 (0.04-2.94)	5 (3.1)	1 (0.6)	0.25 (0.04-1.67)	21 (3.8)	10 (1.9)	0.55 (0.23-1.34)
Print media (posters, banner, newspaper, leaflets, flyers	19 (12)	17 (12)	0.93 (0.29-2.89)	24 (10)	16 (6.9)	0.75 (0.37-1.52)	13 (8.1)	8 (5.0)	0.62 (0.18-2.19)	56 (10)	41 (7.7)	0.81 (0.52-1.25)
Educational media (YouTube, Website, film van, Children activity book, animated puppet series)	15 (9.6)	9 (6.3)		4 (1.7)	2 (0.9)	0.58 (0.12-2.79)	2 (1.2)	1 (0.6)	0.66 (0.17-2.60)	21 (3.8)	12 (2.2)	0.65 (0.29-1.41)
Community level campaigning	68 (44)	47 (33)	**0.48 (0.24-0.97)**	100 (42)	82 (36)	0.79 (0.52-1.21)	146 (91)	128 (80)	**0.27 (0.08-0.89)**	314 (57)	257 (48)	**0.59 (0.45-0.80)**
Public vehicle	1 (0.6)	2 (1.4)	2.09 (0.14-30.13)	12 (5.0)	11 (4.8)	1.08 (0.44-2.64)	22 (14)	23 (14)	0.74 (0.21-2.59)	35 (6.3)	36 (6.7)	1.13 (0.67-1.91)
Interpersonal communication/ mobile SMS	2 (1.3)	2 (1.4)	1.07 (0.28-4.05)	57 (24)	48 (21)	0.97 (0.71-1.32)	27 (17)	28 (18)	1.40 (0.56-3.53)	86 (16)	78 (15)	1.05 (0.73-1.51)
Received behaviour change messages	**N=156**	**N=143**					**N=158**	**N=151**		**N=553**	**N= 525**	
HBCC intervention delivery organization	2 (1.3)	6 (4.2)	2.89 (0.44-19.12)	18 (7.5)	21 (9.1)	1.57 (0.79-3.12)	36 (23)	39 (26)	0.89 (0.42-1.91)	56 (10)	66 (13)	1.35 (0.79-2.28)
Government	136 (87)	124 (87)	0.47 (0.11-2.01)	191 (80)	159 (69)	**0.55 (0.36-0.82)**	147 (93)	141 (93)	0.39 (0.08-1.96)	474 (86)	424 (81)	**0.64 (0.46-0.90)**
Others	-	-	-	23 (9.6)	36 (16)	1.99 (0.99-3.98)	1 (0.6)	3 (2.0)	1.44 (0.36-5.75)	24 (4.3)	39 (7.4)	**2 (1.21-3.31)**
Hygiene products												
Soap	17 (10)	22 (13)	1.04 (0.54-1.98)	13 (5.0)	24 (8.5)	1.69 (0.85-3.36)	4 (2.5)	4 (2.5)	1.49 (0.17-13.20)	34 (5.8)	50 (8.1)	1.55 (0.93-2.56)
Alcohol based hand rub	64 (38)	55 (32)	0.89 (0.63-1.27)	14 (5.4)	10 (3.5)	0.72 (0.32-1.62)	12 (7.5)	9 (5.6)	1.23 (0.48-3.16)	90 (15)	74 (12)	0.78 (0.53-1.14)
Detergents	4 (2.4)	5 (2.9)	2 (0.37-10.92)	1 (0.4)	2 (0.7)	2.05 (0.14-30.26)	0 (0.0)	1 (0.6)	-	5 (0.9)	8 (1.3)	1.78 (0.54-5.89)
Mask	98 (59)	101 (58)	1.17 (0.77-1.77)	41 (16)	38 (14)	0.86 (0.58-1.26)	20 (12)	20 (13)	1.31 (0.51-3.33)	159 (27)	159 (26)	0.99 (0.73-1.35)
Hygiene products distribution places	**N=101**	**N=103**		**N=47**	**N=44**		**N=22**	**N=25**		**N=170**	**N=172**	
At household	74 (73)	85 (83)	7.61 (1.92-29.99)	1 (2)	11 (25)	**17.40 (1.29-234.05)**	1 (5)	3 (12)	3.49 (0.42-29.16)	76 (45)	99 (58)	**2.59 (1.40-4.78)**
Public health centers	18 (18)	14 (14)	0.26 (0.04-1.53)	19 (40)	24 (55)	0.79 (0.94-6.52)	15 (68)	21 (84)	1.54 (0.23-10.16)	52 (31)	59 (34)	0.82 (0.45-1.50)
Near school	12 (12)	6 (5.8)	0.65 (0.04-10.22)	17 (36)	8 (18)	**0.41 (0.17-0.97)**	6 (27)	2 (8)	0.14 (0.01-2.89)	35 (20.6)	16 (9.3)	**0.45 (0.21-0.97)**
Near public places	12 (12)	6 (5.8)	0.48 (0.18-1.24)	18 (38)	15 (34)	0.63 (0.29-1.39)	3 (14)	0 (0.0)	0.92 (0.83-1.02)	33 (19.4)	21 (12)	0.53 (0.27-1.06)
Hygiene products recipient organization	**N=101**	**N=103**		**N=47**	**N=44**		**N=22**	**N=25**		**N=170**	**N=172**	
HBCC intervention delivery organization	2 (1.9)	7 (6.8)	4.23 (0.54-33.49)	2 (4.3)	4 (9.1)	**5.39 (1.99-14.50)**	5 (23)	1 (4.0)	0.10 (0.01-1.31)*	9 (5.3)	12 (6.9)	1.74 (0.67-4.52)
Government	63 (62)	68 (66)	0.94 (0.24-3.71)	30 (64)	25 (57)	0.74 (0.45-1.17)	16 (73)	18 (72)	1.17 (0.12-11.69)	109 (64)	111 (65)	1.01 (0.60-1.69)
Others	-	-	-	15 (32)	6 (14)	**0.21 (0.08-0.55)**	3 (14)	4 (16)	1.86 (0.14-24.03)	18 (11)	10 (5.8)	0.43 (0.14-1.32)
Use handwashing station at public place	**N=69**	**N=55**		**N=208**	**N=215**		**N=135**	**N=112**		**N=412**	**N=382**	
HBCC intervention delivery organization	8 (12)	5 (9)	0.56 (0.18-1.76)	5 (2.4)	7 (3.3)	2.02 (0.52-7.79)	15 (11)	12 (11)	1 (0.12-8.56)	28 (6.8)	24 (6.3)	1.02 (0.54-1.93)
Government	36 (52)	33 (60)	**0.33 (0.12-0.94)**	92 (44)	73 (34)	0.71 (0.44-1.15)	84 (62)	71 (63)	1.05 (0.47-2.34)	212 (52)	177 (46)	0.92 (0.67-1.27)
Can't remember	28 (41)	17 (31)	0.54 (0.23-1.25)	86 (41)	109 (51)	1.11 (0.64-1.92)	39 (29)	27 (24)	0.61 (0.27-1.36)	153 (37)	153 (40)	0.90 (0.65-1.25)

Table 39: Reach and dose of the HBCC intervention delivery components by ageing

Indicators	Indonesia			Kenya			Zambia			Overall		
	Younger	Older	p-value	Younger	Older	p-value	Younger	Older	p-value	Younger	Older	p-value
	n (%)	n (%)		n (%)	n (%)		n (%)	n (%)		n (%)	n (%)	
	N=178	N=162		N=296	N=246		N=219	N=102		N=693	N=510	
Behaviour change messages												
Social distancing	149 (84)	124 (77)	0.097*	214 (72)	165 (67)	0.19	185 (85)	76 (75)	**0.033**	548 (79)	365 (72)	**0.003**
Mask use	157 (88)	137 (85)	0.33	234 (79)	186 (76)	0.34	200 (91)	89 (87)	0.26	591 (85)	412 (81)	**0.038**
Hand washing with soap	152 (85)	122 (75)	**0.019**	218 (74)	166 (68)	0.12	190 (87)	79 (78)	**0.035**	560 (81)	367 (72)	**<0.001**
Surface cleaning	28 (16)	12 (7.4)	**0.017**	14 (4.7)	15 (6.1)	0.48	71 (32)	30 (29)	0.59	113 (16)	57 (11)	**0.012**
Assistive device cleaning	5 (2.8)	2 (1.2)	0.45	3 (1.0)	10 (4.1)	**0.025**	16 (7.3)	4 (3.9)	0.32	24 (3.5)	16 (3.1)	0.87
Isolation (when you have COVID symptoms)	24 (14)	18 (11)	0.51	22 (7.4)	8 (3.3)	**0.034**	24 (11)	10 (9.8)	0.75	70 (10)	36 (7.1)	0.066*
Quarantine (when you have been exposed to someone with COVID)	20 (11)	17 (11)	0.83	15 (5.1)	5 (2.0)	0.062*	12 (5.5)	1 (1.0)	0.057*	47 (6.8)	23 (4.5)	0.096*
People with disability and older people are more vulnerable to covid19	4 (2.2)	1 (0.6)	0.37	2 (0.7)	2 (0.8)	1.00	11 (5.0)	2 (2.0)	0.24	17 (2.5)	5 (1.0)	0.080*
People with disabilities may need support to maintain personal hygiene	0 (0.0)	1 (0.6)	0.48	3 (1.0)	2 (0.8)	1.00	10 (4.6)	4 (3.9)	1.00	13 (1.9)	7 (1.4)	0.65
Testing for COVID-19	14 (7.9)	12 (7.4)	1.00	41 (14)	26 (11)	0.29	86 (39)	31 (30)	0.14	141 (20)	69 (14)	**0.002**
COVID-19 Vaccination	79 (44)	59 (36)	0.15	71 (24)	63 (26)	0.69	163 (74)	78 (77)	0.78	313 (45)	200 (39)	**0.045**
Others	0 (0.0)	2 (1.2)	0.23	8 (2.7)	4 (1.6)	0.56	5 (2.3)	2 (2.0)	1.00	13 (1.9)	8 (1.6)	0.82

Indicators	Indonesia			Kenya			Zambia			Overall		
	Younger	**Older**	**p-value**	**Younger**	**Older**	**p-value**	**Younger**	**Older**	**p-value**	**Younger**	**Older**	**p-value**
	n (%)	**n (%)**		**n (%)**	**n (%)**		**n (%)**	**n (%)**		**n (%)**	**n (%)**	
	N=178	N=162		N=296	N=246		N=219	N=102		N=693	N=510	
Can't remember	3 (1.7)	1 (0.6)	0.62	10 (3.4)	7 (2.8)	0.81	0 (0.0)	3 (2.9)	**0.031**	13 (1.9)	11 (2.2)	0.84
BCC message receiving mediums	**N=161**	**N=138**		**N=260**	**N=210**					**N=640**	**N=450**	
Broadcasting media (TV, Radio)	133 (83)	109 (79)	0.43	220 (85)	189 (90)	0.084*	147 (67)	54 (53)	**0.014**	500 (78)	352 (78)	0.97
Social media (Facebook, twitter, WhatsApp, social media graphics)	55 (34)	9 (6.5)	**<0.001**	28 (11)	2 (1.0)	**<0.001**	26 (12)	2 (2.0)	**0.003**	109 (17)	13 (2.9)	**<0.001**
Family/ caregivers/ neighbours	55 (34)	61 (44)	0.076*	32 (12)	38 (18)	0.080*	67 (31)	25 (25)	0.26	154 (24)	124 (28)	0.19
Digital print (digital screen, billboard, film van	8 (5.0)	9 (6.5)	0.62	7 (2.7)	1 (0.5)	0.080*	6 (2.7)	0 (0.0)	0.18	21 (3.3)	10 (2.2)	0.36
Print media (posters, banner, newspaper, leaflets, flyers	22 (14)	14 (10)	0.35	36 (14)	4 (1.9)	**<0.001**	19 (8.7)	2 (2.0)	**0.023**	77 (12)	20 (4.4)	**<0.001**
Educational media (YouTube, Website, film van, Children activity book, animated puppet series)	22 (14)	2 (1.4)	**<0.001**	6 (2.3)	0 (0.0)	**0.036**	3 (1.4)	0 (0.0)	0.55	31 (4.8)	2 (0.4)	**<0.001**
Community level campaigning	59 (37)	56 (41)	0.49	96 (37)	86 (41)	0.37	186 (85)	88 (86)	0.75	341 (53)	230 (51)	0.48
Public vehicle	1 (0.6)	2 (1.4)	0.47	15 (5.8)	8 (3.8)	0.33	35 (16)	10 (9.8)	0.14	51 (8.0)	20 (4.4)	0.020
Interpersonal communication/ mobile SMS	4 (2.5)	0 (0.0)	0.062*	80 (31)	25 (12)	**<0.001**	45 (21)	10 (9.8)	**0.017**	129 (20)	35 (7.8)	<0.001
Received behaviour change messages				**N=260**	**N=210**		**N=213**	**N=96**		**N=634**	**N=444**	
HBCC intervention delivery organization	6 (3.7)	2 (1.4)	0.29	28 (11)	11 (5.2)	**0.042**	58 (27)	17 (18)	0.085*	92 (15)	30 (6.8)	**<0.001**
Government	143 (89)	117 (85)	0.30	190 (73)	160 (76)	0.44	197 (93)	91 (95)	0.46	530 (84)	368 (83)	0.76
Others	0 (0.0)	0 (0.0)	-	48 (19)	11 (5.2)	**<0.001**	4 (1.9)	0 (0.0)	0.31	52 (8.2)	11 (2.5)	**<0.001**
Hygiene products												
Soap	24 (14)	15 (9.3)	0.22	22 (7.4)	15 (6.1)	0.54	6 (2.7)	2 (2.0)	0.68	52 (7.5)	32 (6.3)	0.41
Alcohol based hand rub	59 (33)	60 (37)	0.45	16 (5.4)	8 (3.3)	0.23	17 (7.8)	4 (3.9)	0.20	92 (13)	72 (14)	0.67
Detergents	4 (2.2)	5 (3.1)	0.74	2 (0.7)	1 (0.4)	1.00	1 (0.5)	0 (0.0)	1.00	7 (1.0)	6 (1.2)	0.79
Mask	97 (55)	102 (63)	0.11	52 (18)	27 (11)	**0.030**	32 (15)	8 (7.8)	0.087*	181 (26)	137 (27)	0.77
Personal protective equipment	2 (1.1)	0 (0.0)	0.50	1 (0.3)	0 (0.0)	1.00	1 (0.5)	0 (0.0)	1.00	4 (0.6)	0 (0.0)	0.14
Surface cleaners	2 (1.1)	3 (1.9)	0.67	2 (0.7)	1 (0.4)	1.00	0 (0.0)	0 (0.0)	-	4 (0.6)	4 (0.8)	0.73
Hygiene products distribution places	**N=101**	**N=103**		**N=60**	**N=31**		**N=37**	**N=10**		**N=198**	**N=144**	
At household	77 (76)	82 (80)	0.61	6 (10)	6 (19)	0.33	4 (11)	0 (0.0)	0.56	87 (44)	88 (61)	**0.002**
Public health centers	13 (13)	19 (18)	0.27	25 (42)	18 (58)	0.14	28 (76)	8 (80)	0.77	66 (33)	45 (31)	0.68
Near school	15 (15)	3 (2.9)	**0.003**	22 (37)	3 (10)	**0.006**	6 (16)	2 (20)	0.78	43 (22)	8 (5.6)	**<0.001**
Near public places	11 (11)	7 (6.8)	0.30	21 (35)	12 (39)	0.73	1 (3)	2 (20)	**0.047**	33 (17)	21 (15)	0.60
Hygiene products recipient organization	**N=101**	**N=103**		**N=60**	**N=31**		**N=37**	**N=10**		**N=198**	**N=144**	
HBCC intervention delivery organization	8 (7.9)	1 (1.0)	**0.016**	6 (10)	0 (0.0)	0.068*	6 (16)	0 (0.0)	0.17	20 (10)	1 (0.7)	**<0.001**
Government	68 (67)	63 (61)	0.359	39 (65)	16 (52)	0.22	29 (78)	5 (50)	0.075*	136 (69)	84 (58)	**0.048**
Others	-	-		15 (25)	6 (19)	0.54	3 (8.1)	4 (40)	**0.012**	18 (9.1)	10 (6.9)	0.47
Use handwashing station at public place	**N=75**	**N=49**		**N=230**	**N=193**		**N=180**	**N=67**		**N=485**	**N=309**	
HBCC intervention delivery organization	7 (9)	6 (12)	0.77	7 (3.0)	5 (2.6)	1.00	24 (13)	3 (4.5)	0.064*	38 (7.8)	14 (4.5)	0.077*
Government	41 (55)	28 (57)	0.79	100 (44)	65 (34)	**0.040**	117 (65)	38 (57)	0.23	258 (53)	131 (42)	**0.003**
Can't remember	28 (37)	17 (35)	0.77	84 (37)	111 (58)	**<0.001**	46 (26)	20 (30)	0.50	158 (33)	148 (48)	**<0.001**

Table 40: Reported messages received by disability (based on socio-demographic characteristics)

Indicators	**Indonesia**			**Kenya**			**Zambia**			**Overall**		
	Person without Disability Message received (yes) **N=156**	Person with disability Message received (yes) **N=143**	p-value	Person without Disability Message received (yes) **N=239**	Person with disability Message received (yes) **N=231**	p-value	Person without Disability Message received (yes) **N=158**	Person with disability Message received (yes) **N=151**	p-value	Person without Disability Message received (yes) **N=553**	Person with disability Message received (yes) **N=525**	p-value
Types of region												
Urban	76 (49)	68 (48)	0.84	92 (39)	82 (36)	0.50	31 (20)	29 (19)	0.93	199 (36)	179 (34)	0.52
Rural	80 (51)	75 (52)		147 (62)	149 (65)		127 (80)	122 (81)		354 (64)	346 (66)	
Region/ province/ county												
North Zakarta	78 (50)	68 (48)	0.67	-	-		-	-		78 (14)	68 (13)	0.93
North Bangdung	78 (50)	75 (52)		-	-		-	-		78 (14)	75 (14)	
Monze	-	-		-	-		54 (34)	51 (34)	0.99	54 (9.8)	51 (9.7)	
Samfya	-	-		-	-		51 (32)	50 (33)		51 (9.2)	50 (9.5)	
Mwandi	-	-		-	-		53 (34)	50 (33)		53 (9.6)	50 (9.5)	
Embu	-	-		60 (25)	63 (27)	0.43	-	-		60 (11)	63 (12)	
Homabay	-	-		78 (33)	66 (29)		-	-		78 (14)	66 (13)	
Kwale	-	-		42 (18)	52 (23)		-	-		42 (7.6)	52 (9.9)	
Taita Taveta	-	-		59 (25)	50 (22)		-	-		59 (11)	50 (9.5)	
Ethnicity												

Jawa	43 (28)	33 (23)	0.50	-	-		-	-		43 (7.8)	33 (6.3)	0.77
Sunda	82 (53)	84 (59)		-	-		-	-		82 (15)	84 (16)	
Betawi	10 (6.4)	12 (8.4)		-	-		-	-		10 (1.8)	12 (2.3)	
Bemba	-	-		-	-		47 (30)	51 (34)	0.52	47 (8.5)	51 (9.7)	
Nyanja	-	-		-	-		1 (0.6)	1 (0.7)		1 (0.2)	1 (0.2)	
Tonga	-	-		-	-		47 (30)	48 (32)		47 (8.5)	48 (9.1)	
Lozi	-	-		-	-		56 (35)	49 (33)		56 (10)	49 (9.3)	
Embu	-	-		53 (22)	58 (25)	0.52	-	-		53 (9.6)	58 (11)	
Luo	-	-		80 (34)	68 (29)		-	-		80 (15)	68 (13)	
Mijikenda	-	-		34 (14)	40 (17)		-	-		34 (6.1)	40 (7.6)	
Taita	-	-		51 (21)	40 (17)		-	-		51 (9.2)	40 (7.6)	
Others_Zambia	-	-		-	-		7 (4.4)	2 (1.3)		7 (1.3)	2 (0.4)	
Others_Indonesia	21 (14)	14 (9.8)		-	-		-	-		21 (3.8)	14 (2.7)	
Others_Kenya	-	-		21 (8.8)	25 (11)		-	-		21 (3.8)	25 (4.8)	
Language												
Sign language	0 (0.0)	1 (0.7)	0.48	4 (1.7)	7 (3.0)	0.37	-	-		4 (0.7)	8 (1.5)	0.25
Indonesia	126 (81)	105 (73)	0.13	-	-		-	-		126 (23)	105 (20)	0.27
Sunda	76 (49)	74 (52)	0.60	-	-		-	-		76 (14)	74 (14)	0.87
Verbal	-	-		153 (64)	163 (71)	0.13	-	-		153 (28)	163 (31)	0.22
English	-	-		77 (32)	44 (19)	**0.001**	-	-		77 (14)	44 (8.4)	**0.004**
Swahili	-	-		144 (60)	85 (37)	**<0.001**	-	-		144 (26)	85 (16)	**<0.001**
Dhuluo	-	-		78 (33)	66 (29)	0.34	-	-		78 (14)	66 (13)	0.46
Embu	-	-		32 (13)	44 (19)	0.096*	-	-		32 (5.8)	44 (8.4)	0.096*
Taita	-	-		25 (11)	21 (9.1)	0.61	-	-		25 (4.5)	21 (4.0)	0.65
tonga	-	-		-	-		52 (33)	51 (34)	0.87	52 (9.4)	51 (9.7)	0.86
Logi	-	-		-	-		59 (37)	50 (33)	0.44	59 (11)	50 (9.5)	0.53
Nyanja	-	-		-	-		15 (9.5)	9 (6.0)	0.25	15 (2.7)	9 (1.7)	0.27
Bemba	-	-		-	-		53 (34)	53 (35)	0.77	53 (9.6)	53 (10)	0.78
Other	7 (4.5)	5 (3.5)	0.77	28 (12)	31 (13)	0.58	8 (5.1)	4 (2.6)	0.17	43 (7.8)	40 (7.6)	0.93
Sex of the respondent												
Male	60 (39)	52 (36)	0.71	102 (43)	93 (40)	0.59	58 (37)	50 (33)	0.80	220 (40)	195 (37)	0.67
Female	96 (62)	91 (64)		137 (57)	138 (60)		99 (63)	100 (66)		332 (60)	329 (63)	
Other	-	-		-	-		1 (0.6)	1 (0.7)		1 (0.2)	1 (0.2)	
Age of the respondent (in years)												
Younger	90 (58)	71 (50)	0.16	140 (59)	120 (52)	0.15	109 (69)	104 (69)	0.98	339 (61)	295 (56)	0.088*
Older	66 (42)	72 (50)		99 (41)	111 (48)		49 (31)	47 (31)		214 (39)	230 (44)	
5 quantiles of SES												
1 (poorest)	23 (15)	27 (19)	0.66	35 (15)	46 (20)	0.27	20 (13)	40 (27)	**0.046**	78 (14)	113 (22)	**0.018**
2	26 (17)	30 (21)		46 (19)	47 (20)		34 (22)	28 (19)		106 (19)	105 (20)	
3	37 (24)	29 (20)		46 (19)	49 (21)		35 (22)	27 (18)		118 (21)	105 (20)	
4	36 (23)	28 (20)		52 (22)	48 (21)		35 (22)	26 (17)		123 (22)	102 (19)	
5 (richest)	34 (22)	29 (20)		60 (25)	41 (18)		34 (22)	30 (20)		128 (23)	100 (19)	
Education (completed in years)												
No education	12 (7.7)	15 (11)	0.23	38 (16)	69 (30)	**0.003**	9 (5.7)	25 (17)	**0.006**	59 (11)	109 (21)	**<0.001**
Primary education	7 (4.5)	12 (8.4)		127 (53)	109 (47)		40 (25)	42 (28)		174 (32)	163 (31)	
Secondary education	123 (79)	109 (76)		58 (24)	40 (17)		100 (63)	81 (54)		281 (51)	230 (44)	
Higher education	14 (9.0)	7 (4.9)		16 (6.7)	13 (5.6)		9 (5.7)	3 (2.0)		39 (7.1)	23 (4.4)	
Employment status												
Full time employment	20 (13)	5 (3.5)	**0.001**	6 (2.5)	3 (1.3)	**0.003**	11 (7.0)	2 (1.3)	**<0.001**	37 (6.7)	10 (1.9)	**<0.001**
Part-time employment	11 (7.1)	7 (4.9)		20 (8.4)	12 (5.2)		4 (2.5)	3 (2.0)		35 (6.3)	22 (4.2)	
Self-employed	26 (17)	27 (19)		54 (23)	36 (16)		28 (18)	21 (14)		108 (20)	84 (16)	
Home-maker	69 (44)	62 (43)		19 (7.9)	17 (7.4)		14 (8.9)	7 (4.6)		102 (18)	86 (16)	
Student	13 (8.3)	8 (5.6)		22 (9.2)	23 (10)		18 (11)	10 (6.6)		53 (9.6)	41 (7.8)	
Retired	13 (8.3)	14 (9.8)		14 (5.9)	19 (8.2)		13 (8.2)	6 (4.0)		40 (7.2)	39 (7.4)	
Unemployed	4 (2.6)	20 (14)		98 (41)	93 (40)		66 (42)	100 (66)		168 (30)	213 (41)	
Pre-school/ not to school yet	-	-		-	-		0 (0.0)	2 (1.3)		0 (0.0)	2 (0.4)	
Other	-	-		6 (2.5)	28 (12)		4 (2.5)	0 (0.0)		10 (1.8)	28 (5.3)	

Table 41: Factor associated with the reach of behaviour change messages among person with disabilities

	Indonesia			Kenya			Zambia			Overall		
Indicators		**Message received**			**Message received**			**Message received**			**Message received**	
	Yes	No	AOR (95% CI)	Yes	No	AOR (95% CI)	Yes	No	AOR (95% CI)	Yes	No	AOR (95% CI)
	N=143	**N=30**		**N=231**	**N=51**		**N=151**	**N=9**		**N=525**	**N=90**	
Types of region												

	Indonesia			Kenya			Zambia			Overall		
Indicators		**Message received**			**Message received**			**Message received**			**Message received**	
Urban	68 (48)	21 (70)	ref.	82 (36)	25 (49)	ref.	29 (19)	0 (0.0)	-	179 (34)	46 (51)	ref.
Rural	75 (52)	9 (30)	0.45 (0.05-4.03)	149 (65)	26 (51)	1.70 (0.78-3.69)	122 (81)	9 (100)	-	346 (66)	44 (49)	1.39 (0.68-2.89)
Region/ province/ county												
North Zakarta	68 (48)	21 (70)	-	-	-	-	-	-	-	68 (13)	21 (23)	-
North Bangdung	75 (52)	9 (30)	-	-	-	-	-	-	-	75 (14)	9 (10)	-
Monze	-	-	-	-	-	-	51 (34)	2 (22)	ref.	51 (9.7)	2 (2.2)	-
Samfya	-	-	-	-	-	-	50 (33)	3 (33)	2.40 (0.55-10.55)	50 (9.5)	3 (3.3)	-
Mwandi	-	-	-	-	-	-	50 (33)	4 (44)	5.90 (0.47-73.39)	50 (9.5)	4 (4.4)	-
Embu	-	-	-	63 (27)	21 (41)	ref.	-	-	-	63 (12)	21 (23)	-
Homabay	-	-	-	66 (29)	7 (14)	**13.5 (2.30-79.12)**	-	-	-	66 (13)	7 (7.8)	-
Kwale	-	-	-	52 (23)	12 (24)	**4.06 (1.54-10.70)**	-	-	-	52 (9.9)	12 (13)	-
Taita Taveta	-	-	-	50 (22)	11 (22)	1.78 (0.93-3.42)*	-	-	-	50 (9.5)	11 (12)	-
Ethnicity												
Jawa	33 (23)	10 (33)	-	-	-	-	-	-	-	33 (6.3)	10 (11)	-
Sunda	84 (59)	10 (33)	2.46 (0.28-21.87)	-	-	-	-	-	-	84 (16)	10 (11)	-
Betawi	12 (8.4)	6 (20)	**0.29 (0.18-0.51)**	-	-	-	-	-	-	12 (2.3)	6 (6.7)	-
Bemba	-	-	-	-	-	-	51 (34)	3 (33)	-	51 (9.7)	3 (3.3)	-
Tonga	-	-	-	-	-	-	48 (32)	2 (22)	-	48 (9.1)	2 (2.2)	-
Lozi	-	-	-	-	-	-	49 (33)	4 (44)	-	49 (9.3)	4 (4.4)	-
Embu	-	-	-	58 (25)	20 (39)	-	-	-	-	58 (11)	20 (22)	-
Luo	-	-	-	68 (29)	7 (14)	-	-	-	-	68 (13)	7 (7.8)	-
Mijikenda	-	-	-	40 (17)	8 (16)	-	-	-	-	40 (7.6)	8 (8.9)	-
Taita	-	-	-	40 (17)	10 (20)	-	-	-	-	40 (0.6)	10 (11)	-
Others_Zambia	-	-	-	-	-	-	3 (2.0)	0 (0.0)		3 (2.0)	0 (0.0)	-
Others_Indonesia	14 (9.8)	4 (13)	0.68 (0.17-2.67)	-	-	-	-	-	-	14 (2.7)	4 (4.4)	-
Others_Kenya	-	-	-	25 (11)	6 (12)	-	-	-	-	25 (4.8)	6 (6.7)	-
Language												
Sign language	1 (0.7)	2 (6.7)	-	7 (3.0)	6 (12)	0.49 (0.07-3.48)	-	-	-	8 (1.5)	8 (8.9)	-
Indonesia	105 (73)	23 (77)	-	-	-	-	-	-	-	105 (20)	23 (26)	-
Sunda	74 (52)	7 (23)	-	-	-	-	-	-	-	74 (14)	7 (7.8)	-
Verbal	-	-	-	163 (71)	37 (73)	-	-	-	-	163 (31)	37 (41)	-
English	-	-	-	44 (19)	2 (3.9)	0.79 (0.17-3.69)	-	-	-	44 (8.4)	2 (2.2)	-
Swahili	-	-	-	85 (37)	15 (29)	-	-	-	-	85 (16)	15 (17)	-
Dhuluo	-	-	-	66 (29)	8 (16)	0.24 (0.04-1.54)	-	-	-	66 (13)	8 (8.9)	-
Embu	-	-	-	44 (19)	9 (18)	-	-	-	-	44 (8.4)	9 (10)	-
Taita	-	-	-	21 (9.1)	5 (9.8)	-	-	-	-	21 (4.0)	5 (5.6)	-
tonga	-	-	-	-	-	-	51 (34)	2 (22)	-	51 (9.7)	2 (2.2)	-
Logi	-	-	-	-	-	-	50 (33)	4 (44)	-	50 (9.5)	4 (4.4)	-
Nyanja	-	-	-	-	-	-	9 (6.0)	1 (11)	-	9 (1.7)	1 (1.1)	-
Bemba	-	-	-	-	-	-	53 (35)	4 (44)	-	53 (10)	4 (4.4)	-
Other	5 (3.5)	2 (6.7)	-	31 (13.4)	6 (11.8)	-	4 (2.6)	0 (0.0)	-	35 (6.7)	6 (6.7)	-
Sex of the respondent												
Male	52 (36)	15 (50)	ref.	93 (40)	23 (45)	ref.	50 (33)	5 (56)	ref.	195 (37)	43 (48)	ref.
Female	91 (64)	15 (50)	1.23 (0.45-3.33)	138 (60)	28 (55)	1.42 (0.71-2.86)	100 (66)	4 (44)	2.49 (0.67-9.22)	329 (63)	47 (52)	**1.68 (1.03-2.72)**
Other	-	-	-	-	-	-	1 (0.7)	0 (0.0)	-	1 (0.2)	0 (0.0)	-
Age of the respondent (in years)												
Younger	71 (50)	14 (47)	ref.	120 (52)	29 (57)	ref.	104 (69)	5 (56)	ref.	295 (56)	48 (53)	ref.
Older	72 (50)	16 (53)	0.97 (0.38-2.44)	111 (48)	22 (43)	1.16 (0.37-3.59)	47 (31)	4 (44)	0.81 (0.21-3.10)	230 (44)	42 (47)	0.96 (0.58-1.60)
5 quantiles of SES												
1 (poorest)	27 (19)	15 (50)	ref.	46 (20)	20 (39)	ref.	40 (27)	4 (44)	-	113 (22)	39 (43)	ref.
2	30 (21)	5 (17)	**6.24 (2.22-17.57)**	47 (20)	12 (24)	1.06 (0.34-3.35)	28 (19)	1 (11)	-	105 (20)	18 (20)	1.87 (0.89-3.95)*
3	29 (20)	1 (3.3)	**23.4 (3.72-147.12)**	49 (21)	9 (18)	1.27 (0.41-3.91)	27 (18)	1 (11)	-	105 (20)	11 (12)	**3.86 (2.12-7.01)**
4	28 (20)	5 (17)	**7.79 (2.92-20.76)**	48 (21)	6 (12)	2 (0.49-8.18)	26 (17)	3 (33)	-	102 (19)	14 (16)	**3.09 (1.06-8.96)**
5 (richest)	29 (20)	4 (13)	**8.69 (1.79-42.02)**	41 (18)	4 (7.8)	1.53 (0.18-13.06)	30 (20)	0 (0.0)	-	100 (19)	8 (8.9)	**4.53 (1.40-14.62)**
Education (completed in years)												
No education	15 (11)	7 (23)	-	69 (30)	28 (55)	ref.	25 (17)	7 (78)	ref.	109 (21)	42 (47)	ref.
Primary education	12 (8.4)	2 (6.7)	-	109 (47)	22 (43)	2.07 (0.69-6.20)	42 (28)	0 (0.0)	1	163 (31)	24 (27)	**2.24 (1.15-4.36)**
Secondary education	109 (76)	19 (63)	-	40 (17)	0 (0.0)	1	81 (54)	2 (22)	10.64 (1.82-62.16)	230 (44)	21 (23)	**3.18 (1.97-5.16)**
Higher education	7 (4.9)	2 (6.7)	-	13 (5.6)	1 (2.0)	3.84 (0.23-63.48)	3 (2.0)	0 (0.0)	1	23 (4.4)	3 (3.3)	2.16 (0.57-8.21)
Employment status												
Full time employment	5 (3.5)	1 (3.3)	-	3 (1.3)	0 (0.0)	ref.	2 (1.3)	0 (0.0)	-	10 (1.9)	1 (1.1)	-
Part-time employment	7 (4.9)	3 (10)	-	12 (5.2)	3 (5.9)	0.64 (0.09-4.10)	3 (2.0)	0 (0.0)	-	22 (4.2)	6 (6.7)	-

	Indonesia			Kenya			Zambia			Overall		
Indicators		**Message received**			**Message received**			**Message received**			**Message received**	
Self-employed	27 (19)	2 (6.7)	-	36 (16)	3 (5.9)	1.16 (0.24-5.67)	21 (14)	0 (0.0)		84 (16)	5 (5.6)	-
Home-maker	62 (43)	8 (27)	-	17 (7.4)	1 (2.0)	3.50 (0.14-85.37)	7 (4.6)	0 (0.0)	-	86 (16)	9 (10)	-
Student	8 (5.6)	3 (10)	-	23 (10)	4 (7.8)	1.46 (0.29-7.47)	10 (6.6)	0 (0.0)	-	41 (7.8)	7 (7.8)	-
Retired	14 (9.8)	5 (17)	-	19 (8.2)	2 (3.9)	1.41 (0.22-9.03)	6 (4.0)	1 (11)	-	39 (7.4)	8 (8.9)	-
Unemployed	20 (14)	8 (27)	-	93 (40)	32 (63)	0.40 (0.09-1.79)	100 (66)	6 (67)	-	213 (41)	46 (51)	-
Pre-school/ not to school yet	-	-	-	-	-	-	2 (1.3)	0 (0.0)	-	2 (0.4)	0 (0.0)	-
Other	-	-	-	28 (12)	6 (12)	1	0 (0.0)	2 (22)	-	28 (5.3)	8 (8.9)	-
Types of disability												
Vision	36 (25)	10 (33)	**0.32 (0.11-0.93)**	56 (24)	9 (18)	1.06 (0.36-3.13)	44 (29)	5 (56)	**0.09 (0.01-0.67)**	136 (26)	24 (27)	0.71 (0.39-1.29)
Hearing	26 (18)	9 (30)	0.57 (0.25-1.31)	27 (12)	12 (24)	0.62 (0.19-2.05)	36 (24)	2 (22)	0.31 (0.37-2.57)	89 (17)	23 (26)	0.88 (0.44-1.76)
Mobility	66 (46)	11 (37)	0.73 (0.27-1.99)	141 (61)	23 (45)	1.47 (0.73-2.98)	62 (41)	4 (44)	1.40 (0.78-7.39)	269 (51)	38 (42)	1.38 (0.87-2.21)
Communication	25 (18)	11 (37)	0.54 (0.13-2.23)	27 (12)	19 (37)	0.55 (0.13-2.38)	25 (17)	3 (33)	4.14 (0.45-38.05)	77 (15)	33 (37)	0.58 (0.22-1.52)
Cognition	32 (22)	16 (53)	**0.16 (0.05-0.55)**	42 (18)	21 (41)	0.69 (0.21-2.30)	46 (31)	3 (33)	1.79 (0.48-6.70)	120 (23)	40 (44)	0.53 (0.27-1.01)*
Self-care	12 (8.4)	6 (20)	0.85 (0.05-14.24)	52 (23)	19 (37)	0.77 (0.22-2.67)	25 (17)	6 (67)	**0.03 (0.001-.49)**	89 (17)	31 (34)	0.48 (0.19-1.20)
Anxiety	29 (20)	3 (10)	4.49 (0.04-9.80)	40 (17)	6 (12)	1.18 (0.36-3.89)	8 (5.3)	1 (11)	0.88 (0.11-7.33)	77 (15)	10 (11)	1.73 (0.62-4.82)
Depression	6 (4.2)	1 (3.3)	0.62 (0.04-9.80)	31 (13)	5 (9.8)	1.77 (0.65-4.82)	10 (6.6)	1 (11)	0.38 (0.06-2.38)	47 (9.0)	7 (7.8)	1.71 (0.48-6.11)

Bold indicates significant at 5% level
* indicates significant at 10% level
Variables included in the multivariate model which were significant into the bivariate association

Table 42: Reported messages received by ageing (based on socio-demographic characteristics)

Indicators	**Indonesia**			**Kenya**			**Zambia**			**Overall**		
	Younger	**Older**	**p-value**	**Younger**	**Older**	**p-value**	**Younger**	**Older**	**p-value**	**Younger**	**Older**	**p-value**
	N=161	N=138		N=260	N=210		N=213	N=96		N=634	N=444	
Types of region												
Urban	73 (45)	71 (51)	0.29	108 (42)	66 (31)	**0.024**	44 (21)	16 (17)	0.41	225 (36)	153 (35)	0.73
Rural	88 (55)	67 (49)		152 (59)	144 (69)		169 (79)	80 (83)		409 (65)	291 (66)	
Region/ province/ county												
North Zakarta	73 (45)	73 (53)	0.19	-	-	**<0.001**	-	-	**0.010**	73 (12)	73 (16)	**<0.001**
North Bangdung	88 (55)	65 (47)		-	-		-	-		88 (14)	65 (15)	
Monze	-	-		-	-		65 (31)	40 (42)		65 (10)	40 (9.0)	
Samfya	-	-		-	-		81 (38)	20 (21)		81 (13)	20 (4.5)	
Mwandi	-	-		-	-		67 (32)	36 (38)		67 (11)	36 (8.1)	
Embu	-	-		50 (19)	73 (35)		-	-		50 (7.9)	73 (16)	
Homabay	-	-		80 (31)	64 (31)		-	-		80 (13)	64 (14)	
Kwale	-	-		65 (25)	29 (14)		-	-		65 (10)	29 (6.5)	
Taita Taveta	-	-		65 (25)	44 (21)		-	-		65 (10)	44 (9.9)	
Ethnicity							-	-				
Jawa	39 (24)	37 (28)	0.058*	-	-	-	80 (38)	18 (19)	**0.008**	39 (6.2)	37 (8.3)	**<0.001**
Sunda	96 (60)	70 (51)		-	-	-	2 (0.9)	0 (0.0)		96 (15)	70 (16)	
Betawi	14 (8.7)	8 (5.8)		-	-	-	56 (26)	39 (41)		14 (2.2)	8 (1.8)	
Bemba	12 (7.5)	23 (17)		-	-	-	70 (33)	35 (37)		80 (13)	18 (4.1)	
Nyanja	-	-	-	-	-	-	-	-	-	2 (0.3)	0 (0.0)	
Tonga	-	-	-	-	-	-	-	-	-	56 (8.8)	39 (8.8)	
Lozi	-	-	-	-	-	-	-	-	-	70 (11)	35 (7.9)	
Embu	-	-	-	42 (16)	69 (33)	**<0.001**	-	-	-	42 (6.6)	69 (16)	
Luo	-	-	-	84 (32)	64 (31)		-	-	-	84 (13)	64 (14)	
Mijikenda	-	-	-	52 (20)	22 (11)		-	-	-	52 (8.2)	22 (5.0)	
Taita	-	-	-	54 (21)	37 (18)		-	-	-	54 (8.5)	37 (8.3)	

Indicators	Indonesia			Kenya			Zambia			Overall		
	Younger	Older	p-value	Younger	Older	p-value	Younger	Older	p-value	Younger	Older	p-value
	N=161	N=138		N=260	N=210		N=213	N=96		N=634	N=444	
Others_Zambia	-	-	-	-	-	-	5 (2.3)	4 (4.2)		5 (0.8)	4 (0.9)	
Others_Indonesia	-	-	-	-	-	-	-	-	-	12 (1.9)	23 (5.2)	
Others_Kenya	-	-	-	28 (11)	18 (8.6)		-	-	-	28 (4.4)	18 (4.1)	
Language												
Sign language	1 (0.6)	0 (0.0)	-	9 (3.5)	2 (1.0)	0.12	0 (0.0)	0 (0.0)	-	10 (1.6)	2 (0.5)	0.14
Indonesia	121 (75)	110 (80)	1.00	-	-	-	-	-	-	121 (19)	110 (25)	**0.025**
Arab	-	-	0.35	-	-	-	-	-	-	0 (0.0)	1 (0.2)	0.23
Jawa	-	-	-	-	-	-	-	-	-	1 (0.2)	4 (0.9)	0.077*
Sunda	85 (53)	65 (47)	0.28	-	-	-	-	-	-	85 (13)	65 (15)	0.56
Betawi	-	-	-	-	-	-	-	-	-	1 (0.2)	0 (0.0)	0.40
Aceh	-	-	-	-	-	-	-	-	-	0 (0.0)	1 (0.2)	0.23
Verbal	-	-	-	175 (67)	141 (67)	0.97	-	-	-	175 (28)	141 (32)	0.14
English	-	-	-	90 (35)	31 (15)	**<0.001**	-	-	-	90 (14)	31 7.0)	**<0.001**
Swahili	-	-	-	144 (55)	85 (41)	**0.001**	-	-	-	144 (23)	85 (19.)	0.16
Dhuluo	-	-	-	80 (31)	64 (31)	0.95	-	-	-	80 (13)	64 (14)	0.39
Embu	-	-	-	29 (11)	47 (22)	**0.001**	-	-	-	29 (4.6)	47 (11)	**<0.001**
Mijikenda	-	-	-	23 (8.8)	4 (1.9)	**0.001**	-	-	-	23 (3.6)	4 (0.9)	**0.005**
tonga	-	-	-	-	-	-	62 (29)	41 (43)	**0.019**	62 (9.8)	41 (9.2)	0.76
Logi	-	-	-	-	-	-	72 (34)	37 (39)	0.42	72 (11)	37 (8.3)	0.11
Nyanja	-	-	-	-	-	-	14 (6.6)	10 (10)	0.24	14 (2.2)	10 (2.3)	0.96
Bemba	-	-	-	-	-	-	85 (40)	21 (22)	**0.002**	85 (13)	21 (4.7)	**<0.001**
Other	3 (1.9)	9 (6.5)	0.24	32 (12)	27 (13)	0.86	2 (0.9)	0 (0.0)	0.34	35 (5.5)	30 (6.8)	0.40
Sex of the respondent												
Male	57 (35)	55 (40)	0.43	117 (45)	78 (37)	0.086*	68 (32)	40 (42)	0.17	242 (38)	173 (39)	0.48
Female	104 (65)	83 (60)		143 (55)	132 (63)		143 (67)	56 (58)		390 (62)	271 (61)	
Other	-	-		-	-		2 (0.9)	0 (0.0)		2 (0.3)	0 (0.0)	
5 quantiles of SES												
1 (poorest)	27 (17)	23 (17)	0.091*	46 (18)	35 (17)	0.13	39 (18)	21 (22)	**0.048**	112 (18)	79 (18)	0.11
2	26 (16)	30 (22)		54 (21)	39 (19)		34 (16)	28 (29)		114 (18)	97 (22)	
3	45 (28)	21 (15)		46 (18)	49 (23)		47 (22)	15 (16)		138 (22)	85 (19)	
4	30 (19)	34 (25)		49 (19)	51 (24)		44 (21)	17 (18)		123 (19)	102 (23)	
5 (richest)	33 (21)	30 (22)		65 (25)	36 (17)		49 (23)	15 (16)		147 (23)	81 (18)	
Education (completed in years)												
No education	9 (5.6)	18 (13)	0.12	24 (9.2)	83 (40)	**<0.001**	19 (8.9)	15 (16)	**0.028**	52 (8.2)	116 (26)	**<0.001**
Primary education	10 (6.2)	9 (6.5)		137 (53)	99 (47)		52 (24)	30 (31)		199 (31)	138 (31)	
Secondary education	132 (82)	100 (73)		76 (29)	22 (11)		136 (64)	45 (47)		344 (54)	167 (38)	
Higher education	10 (6.2)	11 (8.0)		23 (8.8)	6 (2.9)		6 (2.8)	6 (6.3)		39 (6.2)	23 (5.2)	
Employment status												
Full time employment	20 (12)	5 (3.6)	**<0.001**	8 (3.1)	1 (0.5)	**<0.001**	12 (5.6)	1 (1.0)	**<0.001**	40 (6.3)	7 (1.6)	**<0.001**
Part-time employment	13 (8.1)	5 (3.6)		29 (11)	3 (1.4)		5 (2.3)	2 (2.1)		47 (7.4)	10 (2.3)	
Self-employed	23 (14)	30 (22)		46 (18)	44 (21)		40 (19)	9 (9.4)		109 (17)	83 (19)	
Home-maker	68 (42)	63 (46)		14 (5.4)	22 (11)		16 (7.5)	5 (5.2)		98 (16)	90 (20)	
Student	21 (13)	0 (0.0)		45 (17)	0 (0.0)		28 (13)	0 (0.0)		94 (15)	0 (0.0)	
Retired	0 (0.0)	27 (20)		1 (0.4)	32 (15)		3 (1.4)	16 (17)		4 (0.6)	75 (17)	

Indicators	Indonesia			Kenya			Zambia			Overall		
	Younger	Older	p-value	Younger	Older	p-value	Younger	Older	p-value	Younger	Older	p-value
	N=161	N=138		N=260	N=210		N=213	N=96		N=634	N=444	
Unemployed	16 (9.9)	8 (5.8)		102 (39)	89 (42)		103 (48)	63 (66)		221 (35)	160 (36)	
Pre-school/ not to school yet	-	-		-	-		2 (0.9)	0 (0.0)		2 (0.3)	0 (0.0)	
Other	-	-		15 (5.8)	19 (9.0)		4 (1.9)	0 (0.0)		19 (3.0)	19 (4.3)	

Table 43: Reported hygiene products received by disability status (based on socio-demographic characteristics)

Indicators	Indonesia			Kenya			Zambia			Overall		
	Person without Disability	Person with disability	p-value	Person without Disability	Person with disability	p-value	Person without Disability	Person with disability	p-value	Person without Disability	Person with disability	p-value
	N=101	N=103		N=47	N=44		N=22	N=25		N=170	N=172	
Types of region												
Urban	54 (54)	60 (58)	0.49	17 (36)	8 (18)	**0.055**	5 (23)	2 (8)	0.16	76 (45)	70 (41)	0.45
Rural	47 (47)	43 (42)		30 (64)	36 (82)		17 (77)	23 (92)		94 (55)	102 (59)	
Region/ province/ county												
North Zakarta	54 (54)	60 (58)	0.49	-	-	-	-	-	-	54 (32)	60 (35)	0.64
North Bangdung	47 (47)	43 (42)	-	-	-	-	-	-	-	47 (28)	43 (25)	
Monze	-	-	-	-	-	-	1 (5)	4 (16)	0.42	1 (0.6)	4 (2.3)	
Samfya	-	-	-	-	-	-	15 (68)	14 (56)		15 (8.8)	14 (8.1)	
Mwandi	-	-	-	-	-	-	6 (27)	7 (28)		6 (3.5)	7 (4.1)	
Embu	-	-	-	5 (11)	6 (14)	0.31	-	-	-	5 (2.9)	6 (3.5)	
Homabay	-	-	-	16 (34)	10 (23)		-	-	-	16 (9.4)	10 (5.8)	
Kwale	-	-	-	18 (38)	24 (55)		-	-	-	18 (11)	24 (14)	
Taita Taveta	-	-	-	8 (17)	4 (9)		-	-	-	8 (4.7)	4 (2.3)	
Ethnicity												
Jawa	29 (29)	30 (29)	0.65	-	-	-	-	-	-	29 (17)	30 (17)	0.61
Sunda	52 (52)	51 (50)		-	-	-	-	-	-	52 (31)	51 (30)	
Betawi	8 (7.9)	13 (13)		-	-	-	-	-	-	8 (4.7)	13 (7.6)	
Bemba	-	-	-	-	-	-	14 (64)	15 (60)	0.40	14 (8.2)	15 (8.7)	
Tonga	-	-	-	-	-	-	0 (0)	3 (12)		0 (0.0)	3 (1.7)	
Lozi	-	-	-	-	-	-	7 (32)	6 (24)		7 (4.1)	6 (3.5)	
Embu	-	-	-	3 (6)	5 (11)	0.26	-	-	-	3 (1.8)	5 (2.9)	
Luo	-	-	-	16 (34)	10 (23)		-	-	-	16 (9.4)	10 (5.8)	
Mijikenda	-	-	-	17 (36)	24 (55)		-	-	-	17 (10)	24 (14)	
Taita	-	-	-	7 (15)	3 (7)		-	-	-	7 (4.1)	3 (1.7)	
Others_Zambia	-	-	-	-	-	-	1 (5)	1 (4)		1 (0.6)	1 (0.6)	
Others_Indonesia	12 (12)	9 (8.7)		-	-	-	-	-	-	12 (7.1)	9 (5.2)	
Others_Kenya	-	-	-	4 (9)	2 (5)		-	-	-	4 (2.4)	2 (1.2)	
Sex of the respondent												
Male	43 (43)	42 (41)	0.79	24 (51)	17 (39)	0.23	13 (59)	6 (24)	**0.014**	80 (47)	65 (38)	0.083*
Female	58 (57)	61 (59)		23 (49)	27 (61)		9 (41)	19 (76)		90 (53)	107 (62)	
Age of the respondent (in years)												
Younger	57 (56)	44 (43)	0.050*	32 (68)	28 (64)	0.65	16 (73)	21 (84)	0.35	105 (62)	93 (54)	0.15
Older	44 (44)	59 (57)		15 (32)	16 (36)		6 (27)	4 (16)		65 (38)	79 (46)	
5 quantiles of SES												
1 (poorest)	12 (12)	21 (20)	0.30	5 (11)	8 (18)	0.052*	2 (9)	9 (36)	0.21	19 (11)	38 (22)	**0.039**
2	17 (17)	18 (18)		9 (19)	7 (16)		1 (5)	2 (8)		27 (16)	27 (16)	
3	26 (26)	17 (17)		12 (26)	7 (16)		6 (27)	6 (24)		44 (26)	30 (17)	
4	25 (25)	22 (21)		4 (9)	13 (30)		4 (18)	3 (12)		33 (19)	38 (22)	
5 (richest)	21 (21)	25 (24)		17 (36)	9 (20)		9 (41)	5 (20)		47 (28)	39 (23)	
Education (completed in years)												
No education	9 (8.9)	14 (14)	0.13	5 (11)	15 (34)	**0.035**	1 (5)	5 (20)	0.22	15 (8.8)	34 (20)	**0.010**
Primary education	4 (4.0)	10 (9.7)		24 (51)	20 (45)		4 (18)	7 (28)		32 (19)	37 (22)	
Secondary education	79 (78)	75 (73)		14 (30)	6 (14)		14 (64)	12 (48)		107 (63)	93 (54)	
Higher education	9 (8.9)	4 (3.9)		4 (9)	3 (7)		3 (14)	1 (4)		16 (9.4)	8 (4.7)	
Employment status												
Full time employment	15 (15)	3 (2.9)	**0.002**	2 (4)	2 (5)	0.27	8 (36)	1 (4)	**0.007**	25 (15)	6 (3.5)	**<0.001**
Part-time employment	9 (8.9)	4 (3.9)		7 (15)	2 (5)		1 (5)	1 (4)		17 (10)	7 (4.1)	

Indicators	Indonesia			Kenya			Zambia			Overall		
	Person without Disability	Person with disability	p-value	Person without Disability	Person with disability	p-value	Person without Disability	Person with disability	p-value	Person without Disability	Person with disability	p-value
	N=101	N=103		N=47	N=44		N=22	N=25		N=170	N=172	
Self-employed	15 (15)	21 (20)		7 (15)	4 (9)		2 (9)	3 (12)		24 (14)	28 (16)	
Home-maker	42 (42)	40 (39)		0 (0)	1 (2)		3 (14)	1 (4)		42 (25)	41 (24)	
Student	9 (8.9)	8 (7.8)		7 (15)	6 (14)		2 (9)	0 (0)		19 (11)	15 (8.7)	
Retired	8 (7.9)	11 (11)		4 (9)	1 (2)		-	-		14 (8.2)	12 (7.0)	
Unemployed	3 (3.0)	16 (16)		19 (40)	24 (55)		5 (23)	19 (76)		27 (16)	59 (34)	
Other	-	-		1 (2)	4 (9)		1 (5)	0 (0)		2 (1.2)	4 (2.3)	

Table 44: Factor associated with the reach of hygiene products among person with disabilities

Indicators	Indonesia			Kenya			Zambia			Overall		
	Reach (Yes) N=103	Reach (No) N=70	AOR (95% CI)	Reach (Yes) N=47	Reach (No) N=44	AOR (95% CI)	Reach (Yes) N=22	Reach (No) N=25	AOR (95% CI)	Reach (Yes) N=170	Reach (No) N=172	AOR (95% CI)
Types of region												
Urban	60 (58)	29 (41)	ref.	17 (36)	8 (18)	ref.	5 (23)	2 (8)	ref.	76 (45)	70 (41)	ref.
Rural	43 (42)	41 (59)	0.38 (0.12-1.20)*	30 (64)	36 (82)	**3.2 (1.38-7.67)**	17 (77)	23 (92)	13.74 (1.55-121.79)	94 (55)	102 (59)	**1.71 (1.0-2.9)**
Region/ province/ county												
North Zakarta	60 (58)	29 (41)	-	-	-	-	-	-	-	60 (35)	29 (6.6)	-
North Bangdung	43 (42)	41 (59)	-	-	-	-	-	-	-	43 (25)	41 (9.3)	-
Monze	-	-	-	-	-	-	1 (5)	4 (16)	ref.	4 (2.3)	49 (11)	-
Samfya	-	-	-	-	-	-	15 (68)	14 (56)	**0.06 (0.01-0.66)**	14 (8.1)	39 (8.8)	-
Mwandi	-	-	-	-	-	-	6 (27)	7 (28)	0.30 (0.01-6.24)	7 (4.1)	47 (11)	-
Embu	-	-	-	5 (11)	6 (14)	-	-	-	-	6 (3.5)	78 (18)	-
Homabay	-	-	-	16 (34)	10 (23)	-	-	-	-	10 (5.8)	63 (14)	-
Kwale	-	-	-	18 (38)	24 (55)	-	-	-	-	24 (14)	40 (9.0)	-
Taita Taveta	-	-	-	8 (17)	4 (9)	-	-	-	-	4 (2.3)	57 (13)	-
Ethnicity												
Jawa	30 (29)	13 (19)	ref.	-	-	-			-	30 (17)	13 (2.9)	-
Sunda	51 (50)	43 (61.4)	1.09 (0.52-2.27)	-	-	-			-	51 (30)	43 (9.7)	-
Betawi	13 (13)	5 (7.1)	1.57 (0.41-6.0)	-	-	-			-	13 (7.6)	5 (1.1)	-
Bemba	-	-	-	-	-	-	14 (64)	15 (60)	ref.	15 (8.7)	39 (8.8)	-
Tonga	-	-	-	-	-	-	0 (0)	3 (12)	**0.01 (0-0.22)**	3 (1.7)	47 (11)	-
Lozi	-	-	-	-	-	-	7 (32)	6 (24)	0.17 (0.01-2.63)	6 (3.5)	47 (11)	-
Embu	-	-		3 (6)	5 (11)	ref.			-	5 (2.9)	73 (16)	-
Luo	-	-		16 (34)	10 (23)	3.04 (0.64-14.34)	-	-	-	10 (5.8)	65 (15)	-
Mijikenda	-	-		17 (36)	24 (55)	**26.615 (4.10-172.5)**	-	-	-	24 (14)	24 (5.4)	-
Taita	-	-		7 (15)	3 (7)	1.31 (0.25-6.92)	-	-	-	3 (1.7)	47 (11)	-
Others_Zambia	-	-		-	-	-	1 (5)	1 (4)	2.75 (0.09-78.38)	1 (0.6)	1 (0.2)	-
Others_Indonesia	9 (8.7)	9 (12.9)	0.38 (0.09-1.49)	-	-	-	-	-	-	9 (5.2)	9 (2.0)	-
Others_Kenya	-	-	-	4 (9)	2 (5)	2.15 (0.16-28.19)	-	-	-	2 (1.2)	29 (6.6)	-
Sex of the respondent												
Male	42 (41)	25 (36)	ref.	24 (51)	17 (39)	ref.	13 (59)	6 (24)	ref.	80 (47)	65 (38)	ref.
Female	61 (59)	45 (64)	0.95 (0.58-1.58)	23 (49)	27 (61)	1.57 (0.53-4.60)	9 (41)	19 (76)	0.97 (0.95-1.0)*	90 (53)	107 (62)	0.99 (0.86-1.13)
Age of the respondent (in years)												
Younger	44 (43)	41 (59)	ref.	32 (68)	28 (64)	ref.	16 (73)	21 (84)	ref.	105 (62)	93 (54)	ref.
Older	59 (57)	29 (41)	1.88 (0.72-4.90)	15 (32)	16 (36)	0.73 (0.21-2.47)	6 (27)	4 (16)	0.31 (0.08-1.17)*	65 (38)	79 (46)	1.11 (0.76-1.61)
5 quantiles of SES												
1 (poorest)	21 (20)	21 (30.0)	ref.	5 (11)	8 (18)	ref.	2 (9)	9 (36)	ref.	19 (11)	38 (22)	ref.
2	18 (18)	17 (24.3)	1.38 (0.62-3.11)	9 (19)	7 (16)	1.33 (0.16-11.17)	1 (5)	2 (8)	0.45 (0.14-1.39)	27 (16)	27 (16)	1.13 (0.68-1.90)
3	17 (17)	13 (18.6)	1.72 (0.57-5.18)	12 (26)	7 (16)	1.71 (0.32-9.00)	6 (27)	6 (24)	2.15 (0.49-9.43)	44 (26)	30 (17)	**2.25 (1.35-3.75)**
4	22 (21)	11 (15.7)	2.19 (0.75-6.41)	4 (9)	13 (30)	3.94 (0.68-22.76)	4 (18)	3 (12)	1.25 (0.37-4.21)	33 (19)	38 (22)	**2.52 (1.49-4.27)**
5 (richest)	25 (24)	8 (11.4)	4.89 (1.74-13.73)	17 (36)	9 (20)	3.15 (0.44-22.73)	9 (41)	5 (20)	3.21 (0.38-27.47)	47 (28)	39 (23)	**3.46 (2-5.98)**
Education (completed in years)												
No education	14 (14)	8 (11)	-	5 (11)	15 (34)	-	1 (5)	5 (20)	-	15 (8.8)	34 (20)	**ref.**
Primary education	10 (9.7)	4 (5.7)	-	24 (51)	20 (45)	-	4 (18)	7 (28)	-	32 (19)	37 (22)	1.01 (0.59-1.71)
Secondary education	75 (73)	53 (76)	-	14 (30)	6 (14)	-	14 (64)	12 (48)	-	107 (63)	93 (54)	1.01 (0.59-1.74)
Higher education	4 (3.9)	5 (7.1)	-	4 (9)	3 (7)	-	3 (14)	1 (4)	-	16 (9.4)	8 (4.7)	0.96 (0.42-2.19)
Employment status												
Full time employment	3 (2.9)	3 (4.3)	-	2 (4)	2 (5)	ref.	8 (36)	1 (4)	-	25 (15)	6 (3.5)	ref.
Part-time employment	4 (3.9)	6 (8.6)	-	7 (15)	2 (5)	0.18 (0.02-1.67)	1 (5)	1 (4)	-	17 (10)	7 (4.1)	0.67 (0.25-1.75)
Self-employed	21 (20)	8 (11)	-	7 (15)	4 (9)	**0.06 (0.01-0.33)**	2 (9)	3 (12)	-	24 (14)	28 (16)	**0.28 (0.12-0.64)**
Home-maker	40 (39)	30 (43)	-	0 (0)	1 (2)	0.04 (0-1.36)*	3 (14)	1 (4)	-	42 (25)	41 (24)	**0.29 (0.13-0.69)**

Indicators	Indonesia			Kenya			Zambia			Overall		
	Reach (Yes) N=103	Reach (No) N=70	AOR (95% CI)	Reach (Yes) N=47	Reach (No) N=44	AOR (95% CI)	Reach (Yes) N=22	Reach (No) N=25	AOR (95% CI)	Reach (Yes) N=170	Reach (No) N=172	AOR (95% CI)
Student	8 (7.8)	3 (4.3)	-	7 (15)	6 (14)	0.24 (0.03-1.66)	2 (9)	0 (0)	-	19 (11)	15 (8.7)	0.56 (0.23-1.39)
Retired	11 (11)	8 (11)	-	4 (9)	1 (2)	**0.01 (0.001-0.09)**	-	-	-	14 (8.2)	12 (7.0)	**0.28 (0.11-0.71)**
Unemployed	16 (16)	12 (17)	-	19 (40)	24 (55)	**0.13 (0.02-0.71)**	5 (23)	19 (76)	-	27 (16)	59 (34)	**0.39 (0.18-0.90)**
Other	-	-	-	1 (2)	4 (9)	**0.09 (0.01-0.67)**	1 (5)	0 (0)	-	2 (1.2)	4 (2.3)	**0.31 (0.09-1.05)**
Types of disability												
Vision	29 (28)	17 (24)	1.15 (0.49-2.68)	16 (36)	49 (21)	2.99 (0.77-11.66)	11 (44)	38 (28)	1.42 (0.43-4.63)	56 (33)	104 (24)	**1.79 (1.14-2.79)**
Hearing	17 (17)	18 (26)	0.52 (0.28-0.96)	5 (11)	34 (14)	1.18 (0.33-4.20)	2 (8.0)	36 (27)	0.19 (0.01-2.64)	24 (14)	88 (20)	0.68 (0.37-1.27)
Mobility	52 (51)	25 (36)	1.21 (0.63-2.29)	24 (55)	140 (59)	1.32 (0.38-4.52)	9 (36)	57 (42)	0.73 (0.27-1.95)	85 (49)	222 (50)	1.28 (0.88-1.87)
Communication	22 (21)	14 (20)	1.42 (0.87-2.31)	5 (11)	41 (17)	1.21 (0.17-8.37)	2 (8.0)	26 (19)	1.22 (0.04-38.38)	29 (17)	81 (18)	1.21 (0.60-2.43)
Cognition	25 (24)	23 (33)	0.48 (0.21-1.10)*	8 (18)	55 (23)	0.49 (0.17-1.44)	4 (16)	45 (33)	0.39 (0.07-2.05)	37 (22)	123 (28)	0.64 (0.37-1.11)
Self-care	11 (11)	7 (10)	1.10 (0.44-2.76)	7 (16)	64 (27)	0.57 (0.18-1.77)	2 (8.0)	29 (22)	0.34 (0.03-3.41)	20 (12)	100 (23)	**0.57 (0.29-1.34)**
Anxiety	17 (17)	15 (21)	1.27 (0.42-3.80)	15 (34)	31 (13)	1.19 (0.33-4.36)	0 (0.0)	9 (6.7)	-	32 (19)	55 (12)	1.47 (0.82-2.62)
Depression	3 (2.9)	4 (5.7)	0.58 (0.12-2.75)	10 (23)	26 (11)	1.97 (0.48-8.08)	2 (8.0)	9 (6.7)	3.10 (0.65-14.89)	15 (8.7)	39 (8.8)	1.71 (0.73-4.03)

Bold indicates significant at 5% level
* indicates significant at 10% level
Variables included in the multivariate model which were significant into the bivariate association

Table 45: Reported hygiene products received by ageing (based on socio-demographic characteristics)

Indicators	Indonesia			Kenya			Zambia			Overall		
	Younger	Older	p-value	Younger	Older	p-value	Younger	Older	p-value	Younger	Older	p-value
	N=75	N=49		N=230	N=193		N=180	N=67		N=485	N=309	
Types of region												
Urban	38 (51)	27 (55)	0.63	106 (46)	67 (35)	**0.018**	43 (24)	14 (21)	0.62	187 (39)	108 (35)	0.31
Rural	37 (49)	22 (45)		124 (54)	126 (65)		137 (76)	53 (79)		298 (61)	201 (65)	
Region/ province/ county												
North Zakarta	38 (51)	27 (55)	0.63	-	-	-	-	-	-	38 (7.8)	27 (8.7)	**<0.001**
North Bangdung	37 (49)	22 (45)		-	-	-	-	-	-	37 (7.6)	22 (7.1)	
Monze	-	-	-	-	-	-	63 (35)	27 (40)	**0.026**	63 (13)	27 (8.7)	
Samfya	-	-	-	-	-	-	80 (44)	18 (27)		80 (17)	18 (5.8)	
Mwandi	-	-	-	-	-	-	37 (21)	22 (33)		37 (7.6)	22 (7.1)	
Embu	-	-	-	44 (19)	60 (31)	**0.002**	-	-	-	44 (9.1)	60 (19)	
Homabay	-	-	-	70 (30)	61 (32)		-	-	-	70 (14)	61 (20)	
Kwale	-	-	-	48 (21)	19 (9.8)		-	-	-	48 (9.9)	19 (6.1)	
Taita Taveta	-	-	-	68 (30)	53 (28)		-	-	-	68 (14)	53 (17)	
Ethnicity												
Jawa	15 (20)	14 (29)	0.57	-	-	-	-	-	-	15 (3.1)	14 (4.5)	**<0.001**
Sunda	40 (53)	25 (51)		-	-	-	-	-	-	40 (8.2)	25 (8.1)	
Betawi	11 (15)	4 (8)		-	-	-	-	-	-	11 (2.3)	4 (1.3)	
Bemba	-	-	-	-	-	-	78 (43)	16 (24)	0.060*	78 (16)	16 (5.2)	
Nyanja	-	-	-	-	-	-	2 (1.1)	0 (0.0)		2 (0.4)	0 (0.0)	
Tonga	-	-	-	-	-	-	54 (30)	27 (40)		54 (11)	27 (8.7)	
Lozi	-	-	-	-	-	-	41 (23)	21 (31)		41 (8.5)	21 (6.8)	
Embu	-	-	-	36 (16)	60 (31)	**<0.001**	-	-	-	36 (7.4)	60 (19)	
Luo	-	-	-	73 (32)	61 (33)		-	-	-	73 (15)	61 (20)	
Mijikenda	-	-	-	42 (18)	15 (7.8)		-	-	-	42 (8.7)	15 (4.9)	
Taita	-	-	-	57 (25)	45 (23)		-	-	-	57 (12)	45 (15)	
Others_Zambia	-	-	-	-	-	-	5 (2.8)	3 (4.5)		5 (1.0)	3 (1.0)	
Others_Indonesia	9 (12)	6 (12)		-	-	-	-	-	-	9 (1.9)	6 (1.9)	
Others_Kenya	-	-	-	22 (9.6)	12 (6.2)		-	-	-	22 (4.5)	12 (3.9)	
Sex of the respondent												
Male	32 (43)	22 (45)	0.81	104 (45)	70 (36)	0.062*	50 (28)	33 (49)	**0.005**	186 (38)	125 (41)	0.45
Female	43 (57)	27 (55)		126 (55)	123 (64)		128 (71)	34 (51)		297 (61)	184 (60)	
Other	-	-		-	-		2 (1.1)	0 (0.0)		2 (0.4)	0 (0.0)	
Disability status												
person without Disability	47 (63)	22 (45)	0.052*	120 (52)	88 (46)	0.18	97 (54)	38 (57)	0.69	264 (54)	148 (48)	0.072*
Person with disability	28 (37)	27 (55)		110 (48)	105 (54)		83 (46)	29 (43)		221 (46)	161 (52)	
5 quantiles of SES												

Indicators	Indonesia			Kenya			Zambia			Overall		
	Younger	Older	p-value	Younger	Older	p-value	Younger	Older	p-value	Younger	Older	p-value
1 (poorest)	12 (16)	5 (10)	0.36	36 (16)	31 (16)	0.36	32 (18)	9 (13)	**0.048**	80 (17)	45 (15)	0.36
2	10 (13)	11 (22)		50 (22)	37 (19)		26 (14)	21 (31)		86 (18)	69 (22)	
3	18 (24)	8 (16)		46 (20)	48 (25)		37 (21)	10 (15)		101 (21)	66 (21)	
4	19 (25)	10 (20)		45 (20)	45 (23)		38 (21)	14 (21)		102 (21)	69 (22)	
5 (richest)	16 (21)	15 (31)		53 (23)	32 (17)		47 (26)	13 (19)		116 (24)	60 (19)	
Education (completed in years)												
No education	5 (7)	10 (20)	**0.037**	23 (10)	74 (38)	**<0.001**	17 (9.4)	10 (15)	0.079*	45 (9.3)	94 (30)	**<0.001**
Primary education	5 (7)	4 (8)		120 (52)	95 (49.2)		38 (21)	17 (25)		163 (34)	116 (38)	
Secondary education	61 (81)	29 (59)		69 (30)	19 (9.8)		119 (66)	34 (51)		249 (51)	82 (27)	
Higher education	4 (5)	6 (12)		18 (7.8)	5 (2.6)		6 (3.3)	6 (9.0)		28 (5.8)	17 (5.5)	
Employment status												
Full time employment	11 (15)	3 (6)	**<0.001**	5 (2.2)	0 (0.0)	**<0.001**	12 (6.7)	1 (1.5)	**<0.001**	28 (5.8)	4 (1.3)	**<0.001**
Part-time employment	8 (11)	2 (4)		30 (13)	5 (2.6)		5 (2.8)	2 (3.0)		43 (8.9)	9 (2.9)	
Self-employed	10 (13)	12 (24)		39 (17)	36 (19)		37 (21)	9 (13.4)		86 (18)	57 (18)	
Home-maker	27 (36)	18 (37)		12 (5.2)	21 (11)		15 (8.3)	3 (4.5)		54 (11)	42 (14)	
Student	12 (16)	0 (0)		44 (19)	0 (0.0)		23 (13)	0 (0.0)		79 (16)	0 (0.0)	
Retired	0 (0)	10 (20)		0 (0.0)	25 (13)		3 (1.7)	13 (19)		3 (0.6)	48 (16)	
Unemployed	7 (9)	4 (8)		87 (38)	90 (47)		82 (46)	39 (58)		176 (36)	133 (43)	
Other	-	-		13 (5.7)	16 (8.3)		3 (1.7)	0 (0.0)		16 (3.3)	16 (5.2)	

Table 46: Reported intervention components received with the types of disability

	Indonesia								Kenya								Zambia								Overall							
Intervention components	vision	hearing	mobility	communication	remembering	self-care	anxiety	depression	vision	hearing	mobility	communication	remembering	self care	anxiety	depression	vision	hearing	mobility	communication	remembering	self care	anxiety	depression	vision	hearing	mobility	communication	remembering	self care	anxiety	depression
	N=46	N=35	N=77	N=36	N=48	N=18	N=32	N=7	N=65	N=39	N=164	N=46	N=63	N=71	N=46	N=36	N=49	N=38	N=66	N=28	N=49	N=31	N=9	N=11	N=160	N=112	N=307	N=110	N=160	N=120	N=87	N=54
Received behavior change messages	36 (78)	26 (74)	66 (86)	25 (69)	32 (67)	12 (67)	29 (91)	6 (86)	56 (86)	27 (69)	141 (86)	27 (59)	42 (67)	52 (73)	40 (87)	31 (86)	44 (90)	36 (94)	62 (94)	25 (89)	46 (94)	25 (81)	8 (89)	10 (91)	136 (85)	89 (80)	269 (88)	77 (70)	120 (75)	99 (74)	77 (89)	47 (87)
Types of behaviour change messages received																																
Social distancing	32 (70)	23 (66)	56 (73)	18 (50)	22 (46)	9 (50)	21 (66)	4 (57)	45 (69)	21 (54)	115 (70)	16 (35)	24 (38)	43 (61)	30 (65)	21 (58)	32 (65)	31 (82)	49 (74)	23 (82)	39 (80)	24 (77)	6 (67)	9 (82)	109 (68)	75 (67)	220 (72)	57 (52)	85 (53)	76 (63)	57 (66)	34 (63)
Mask use	35 (76)	25 (71)	65 (84)	24 (67)	29 (60)	12 (67)	27 (84)	6 (86)	55 (85)	20 (51)	124 (76)	24 (52)	31 (49)	47 (66)	36 (78)	27 (75)	38 (78)	34 (90)	54 (82)	25 (89)	44 (90)	24 (77)	8 (89)	8 (73)	128 (80)	79 (71)	243 (79)	73 (66)	104 (65)	83 (69)	71 (82)	41 (76)
Hand washing with soap	34 (74)	23 (66)	54 (70)	21 (58)	25 (52)	12 (67)	23 (72)	5 (71)	49 (75)	18 (46)	120 (73)	20 (44)	29 (46)	40 (56)	34 (74)	26 (72)	36 (74)	26 (68)	53 (80)	19 (68)	42 (86)	22 (71)	7 (78)	8 (73)	119 (74)	67 (60)	227 (74)	60 (55)	96 (60)	74 (62)	64 (74)	39 (72)
Message about surface cleaning/ assistive device cleaning	6 (13)	4 (11)	9 (12)	1 (2.8)	3 (6.3)	0 (0.0)	2 (6.3)	0 (0)	5 (7.7)	3 (7.7)	13 (7.9)	4 (8.7)	3 (4.8)	10 (14)	2 (4.3)	2 (5.6)	13 (27)	19 (50)	18 (27)	13 (46)	18 (37)	14 (45)	2 (22)	3 (27)	24 (15)	26 (23)	40 (13)	18 (16)	24 (15)	24 (20)	6 (6.9)	5 (9.3)
Message about Isolation/ Quarantine	7 (15)	4 (11)	6 (7.7)	0 (0.0)	3 (6.3)	1 (5.6)	5 (16)	0 (0)	7 (11)	0 (0.0)	15 (9.1)	0 (0.0)	0 (0.0)	5 (7.0)	3 (6.5)	1 (2.8)	2 (4.1)	4 (11)	6 (9.1)	3 (11)	4 (8.2)	6 (19)	1 (11)	2 (18)	16 (10)	8 (7.1)	27 (8.8)	3 (2.7)	7 (4.4)	12 (10)	9 (10)	3 (5.6)
Message about People with disability/ Caregivers	3 (6.5)	2 (5.7)	1 (1.3)	0 (0.0)	0 (0.0)	0 (0.0)	2 (6.3)	0 (0)	1 (1.5)	0 (0.0)	2 (1.2)	0 (0.0)	0 (0.0)	2 (2.8)	1 (2.2)	0 (0.0)	3 (6.1)	4 (11)	3 (4.5)	4 (14)	3 (6.1)	3 (9.7)	1 (11)	1 (9.1)	7 (4.4)	6 (5.4)	6 (2.0)	4 (3.6)	3 (1.9)	5 (4.2)	4 (4.6)	1 (1.9)
Can't remember	1 (2.2)	1 (2.9)	1 (1.3)	1 (2.8)	3 (6.3)	0 (0.0)	2 (6.3)	0 (0)	1 (1.5)	4 (10)	6 (3.7)	1 (2.2)	7 (11)	2 (2.8)	3 (6.5)	2 (5.6)	1 (2.0)	0 (0.0)	1 (1.5)	0 (0.0)	1 (2.0)	0 (0.0)	0 (0.0)	1 (9.1)	3 (1.9)	5 (4.5)	8 (2.6)	2 (1.8)	11 (6.9)	2 (1.7)	5 (5.7)	3 (5.6)
Received Hygiene products	29 (63)	17 (49)	52 (68)	22 (61)	25 (52)	11 (61)	17 (53)	3 (43)	16 (25)	5 (13)	24 (15)	5 (11)	8 (13)	7 (9.9)	15 (33)	10 (28)	11 (22)	2 (5.3)	9 (14)	2 (7.1)	4 (8.2)	2 (6.5)	0 (0.0)	2 (18)	56 (35)	24 (21)	85 (28)	29 (26)	37 (23)	20 (17)	32 (37)	15 (28)
Types of Hygiene products received																																
Soap/ Alcohol based hand rub products received	17 (37)	14 (40)	30 (39)	16 (44)	17 (35)	7 (39)	10 (31)	2 (29)	10 (15)	2 (5.1)	12 (7.3)	4 (8.7)	5 (7.9)	6 (8.5)	10 (22)	7 (19)	2 (4.1)	0 (0.0)	6 (9.1)	1 (3.6)	0 (0.0)	2 (6.5)	0 (0.0)	1 (9.1)	29 (18)	16 (14)	48 (16)	21 (19)	22 (14)	15 (13)	20 (23)	10 (19)
Mask products received	29 (63)	17 (49)	51 (66)	20 (56)	23 (48)	10 (56)	17 (53)	3 (43)	14 (22)	5 (13)	22 (13)	4 (8.7)	8 (13)	6 (8.5)	14 (30)	8 (22)	10 (20)	2 (5.3)	5 (7.6)	2 (7.1)	4 (8.2)	2 (6.5)	0 (0.0)	2 (18)	53 (33)	24 (21)	78 (25)	26 (24)	35 (22)	18 (15)	31 (36)	13 (24)
Detergents/ surface cleaners products received	1 (2.2)	1 (2.9)	3 (3.9)	1 (2.8)	1 (2.1)	0 (0.0)	0 (0.0)	0 (0)	2 (3.1)	0 (0.0)	1 (0.6)	0 (0.0)	0 (0.0)	1 (1.4)	1 (2.2)	2 (5.6)	0 (0.0)	0 (0.0)	1 (1.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	3 (1.9)	1 (0.9)	5 (1.6)	1 (0.9)	1 (0.6)	1 (0.8)	1 (1.1)	2 (3.7)

Table 47: Components of public place handwashing station observed at different regions (spot check)

Indicators	Indonesia			Kenya					Zambia				Overall
	North Jakarta	Bandung Barat	Total	Embu	Homabay	Kwale	Taita Taveta	Total	Monze	Samfya	Mwandi	Total	
	N=33	N=19	N=52	N=6	N=5	N=25	N=15	N=51	N=16	N=29	N=12	N=57	N=160
Functional Handwashing station	31 (94)	11 (58)	42 (81)	4 (67)	4 (80)	18 (72)	11 (73)	37 (72)	14 (88)	21 (72)	10 (83)	45 (79)	124 (78)
Structure of handwashing station													
Fixed structure	10 (30)	3 (16)	13 (25)	6 (100)	3 (60)	10 (40)	2 (13)	21 (41)	9 (56)	23 (79)	10 (83)	42 (74)	76 (48)
Moveable / mobile structure	23 (70)	16 (84)	39 (75)	0 (0.0)	2 (40)	14 (56)	12 (80)	28 (55)	7 (44)	6 (21)	2 (17)	15 (26)	82 (51)
No structure just a designated place with a tap	-	-	-	0 (0.0)	0 (0.0)	1 (4)	1 (7)	2 (4)	-	-	-	-	2 (1.3)
Components available at handwashing entry path													
Smooth flat surface	8 (24)	7 (37)	15 (29)	5 (83)	5 (100)	19 (76)	6 (40)	35 (69)	12 (75)	25 (86)	5 (42)	42 (74)	92 (58)
Uneven flat surface	23 (70)	11 (58)	34 (65)	1 (17)	0 (0.0)	3 (12)	8 (53)	12 (24)	4 (25)	3 (10)	6 (50)	13 (23)	59 (37)
Stairs	5 (15)	1 (5)	6 (12)	1 (17)	0 (0.0)	1 (4)	1 (7)	3 (6)	0 (0.0)	1 (3)	2 (17)	3 (5)	12 (78)
Surface is not slippery	22 (67)	13 (68)	35 (67)	3 (50)	4 (80)	8 (32)	9 (60)	24 (47)	14 (88)	17 (59)	0 (0)	31 (54)	90 (56)
Ramp for wheelchair access	13 (39)	4 (21)	17 (33)	0 (0.0)	0 (0.0)	2 (8)	1 (7)	3 (6)	8 (50)	12 (41)	2 (17)	22 (39)	42 (26)
Ramp is not steep	18 (55)	7 (37)	25 (48)	0 (0.0)	1 (20)	2 (8)	0 (0)	3 (6)	7 (44)	1 (3)	0 (0)	8 (14)	36 (23)
Adequate space for wheel chair accommodation	10 (30)	3 (16)	13 (25)	1 (17)	5 (100)	8 (32)	8 (53)	22 (43)	11 (69)	18 (62)	3 (25)	32 (56)	67 (42)
No barrier for wheel chair entry	7 (21)	2 (11)	9 (17)	1 (17)	2 (40)	6 (24)	7 (47)	16 (31)	3 (19)	6 (21)	2 (17)	11 (19)	36 (23)
Land mark/ guidance rope/ tactile marking	-	-	-	0 (0.0)	0 (0.0)	1 (4)	0 (0.0)	1 (2)	0 (0.0)	1 (3)	0 (0.0)	1 (2)	2 (1)
Support rails	-	-	-	0 (0.0)	1 (20)	3 (12)	0 (0.0)	4 (8)	-	-	-	-	4 (2.5)
Components available at handwashing area													
Handwashing area is not slippery	32 (97)	17 (89)	49 (94)	6 (100)	5 (100)	19 (76)	8 (53)	38 (75)	14 (88)	26 (90)	0 (0.0)	40 (70)	127 (79)
Surface around the handwashing area is flat	14 (42)	10 (53)	24 (46)	4 (67)	3 (60)	7 (28)	4 (27)	18 935)	12 (75)	12 (41)	4 (33)	28 (49)	70 (44)
Surface around the handwashing area is bumpy	19 (58)	9 (47)	28 (54)	0 (0.0)	0 (0.0)	2 (8)	4 (27)	6 (12)	6 (38)	2 (7)	2 (17)	10 (18)	44 (28)
Handwashing area is visibly clean	20 (61)	14 (74)	34 (65)	5 (83)	3 (60)	17 (68)	10 (67)	35 (69)	12 (75)	18 (62)	12 (100)	42 (74)	111 (69)
Sitting arrangement available during handwashing	6 (18)	0 (0.0)	6 (12)	-	-	-	-	-	0 (0.0)	0 (0.0)	1 (8)	1 (2)	7 (4)
Adequate space for wheel chair accommodation	9 (27)	3 (16)	12 (23)	0 (0.0)	2 (40)	2 (8)	7 (47)	11 (22)	11 (69)	15 (52)	4 (33)	30 (53)	53 (33)
Availability of multiple taps and basin facility	0 (0.0)	2 (11)	2 (4)	1 (17)	2 (40)	6 (24)	1 (7)	10 (20)	8 (50)	6 (21)	2 (17)	16 (28)	28 (18)
Availability of water	31 (94)	13 (68)	44 (85)	4 (67)	5 (100)	15 (60)	11 (73)	35 (69)	12 (75)	23 (79)	10 (83)	45 (79)	124 (78)
Water is available is such area that wheel chair user or children can easily access	5 (15)	1 (5)	6 (12)	0 (0.0)	0 (0.0)	0 (0.0)	5 (33)	5 (10)	8 (50)	3 (10)	3 (25)	14 (25)	25 (16)
Availability of handwashing agent	25 (76)	9 (47)	34 (65)	2 (33)	5 (100)	12 (48)	4 (27)	23 (45)	2 (13)	3 (10)	3 (25)	8 (14)	65 (41)
Handwashing agent is available is such area that wheel chair user or children can easily access	5 (15)	1 (5)	6 (12)	0 (0.0)	1 (20)	2 (8)	2 (13)	5 (10)	1 (6)	0 (0.0)	1 (8)	2 (4)	13 (8)
Types of water sources													
Handpump Tube-well	-	-	-	3 (50)	0 (0.0)	0 (0.0)	0 (0.0)	3 (6)	0 (0.0)	2 (7)	6 (50)	8 (14)	11 (7)
Water bucket	-	-	-	0 (0.0)	2 (40)	9 (36)	14 (93)	25 (49)	5 (31)	7 (24)	2 (17)	14 (25)	39 (24)
Regular tap (screw down valve)	21 (64)	6 (32)	27 (52)	5 (83)	2 (40)	16 (64)	1 (7)	24 (47)	9 (56)	20 (69)	4 (33)	33 (58)	84 (53)
Elbow or forearm operated tap	4 (12)	1 (5)	5 (10)	-	-	-	-	-	-	-	-	-	5 (3)
Foot operated tap	9 (27)	12 (63)	21 (40)	0 (0.0)	0 (0.0)	2 (8)	1 (7)	3 (6)	2 (13)	0 (0.0)	0 (0.0)	2 (4)	26 (16)
Water dispenser tap (lever or push button)	1 (3)	0 (0.0)	1 (2)	0 (0.0)	1 (20)	0 (0.0)	0 (0.0)	1 (2)	1 (6)	0 (0.0)	0 (0.0)	1 (2)	3 (1.9)
Tap with automated sensor	1 (3)	0 (0.0)	1 (2)	-	-	-	-	-	-	-	-	-	1 (0.6)
Ball valve tap with extended handle	1 (3)	0 (0.0)	1 (2)	0 (0.0)	1 (20)	0 (0.0)	0 (0.0)	1 (2)	-	-	-	-	2 (1.3)
Butterfly tap (ball valve)	-	-	-	0 (0.0)	1 (20)	0 (0.0)	0 (0.0)	1 (2)	-	-	-	-	1 (0.6)
Others	-	-	-	-	-	-	-	-	0 (0.0)	2 (7)	0 (0.0)	2 (4)	2 (1.3)
Types of water supply connection													
Permanent pipe network	13 (39)	9 (47)	22 (42)	5 (83)	0 (0.0)	6 (24)	1 (7)	12 (24)	9 (56)	21 (72)	3 (25)	33 (58)	67 (42)
Frequently refillable Individual storage tank	18 (55)	9 (47)	27 (52)	1 (17)	5 (100)	19 (76)	14 (93)	39 (76)	7 (44)	8 (28)	9 (75)	24 (42)	75 (47)
Others	2 (6)	1 (5)	3 (6)	-	-	-	-	-	-	-	-	-	18 (11)
Availability of color contrast at the handwashing station	0 (0)	2 (11)	2 (4)	4 (67)	1 (20)	8 (32)	2 (13)	15 (29)	4 (25)	10 (34)	1 (8)	15 (26)	32 (20)
Availability of lighting facility (day)	33 (100)	19 (100)	52 (100)	5 (83)	5 (100)	8 (32)	15 (100)	33 (65)	16 (100)	28 (97)	0 (0.0)	44 (77)	129 (81)
Availability of lighting facility (night)	6 (18)	0 (0.0)	6 (12)	2 (33)	2 (40)	14 (56)	4 (27)	22 (43)	2 (13)	11 (38)	2 (17)	15 (26)	43 (27)

Table 48: Attitude towards COVID-19 key prevention measures by disability

Indicators	Indonesia			Kenya			Zambia			Overall		
	Person with disability N=173	Person without Disability N=167	p-value	Person with disability N=282	Person without Disability N=260	p-value	Person with disability N=160	Person without Disability N=161	p-value	Person with disability N=615	Person without Disability N=588	p-value
When do you think social distancing should be maintained												
Public place	157 (91)	160 (96)	0.063*	186 (66)	212 (82)	**<0.001**	116 (73)	125 (78)	0.29	459 (75)	497 (85)	**<0.001**
At work	15 (8.7)	16 (9.6)	0.77	35 (12)	44 (17)	0.14	21 (13)	26 (16)	0.44	71 (12)	86 (15)	0.11
Social gathering	32 (19)	31 (19)	0.99	185 (66)	200 (77)	**0.004**	127 (79)	140 (87)	0.069*	344 (56)	371 (63)	**0.011**
Religious place	25 (15)	28 (17)	0.56	144 (51)	146 (56)	0.24	110 (69)	118 (73)	0.37	279 (45)	292 (50)	0.14
Visiting suspected covid-19 patients	5 (2.9)	14 (8.4)	**0.027**	9 (3.2)	11 (4.2)	0.52	31 (19)	36 (22)	0.51	45 (7.3)	61 (10)	0.062*
At home	14 (8.1)	5 (3.0)	**0.041**	20 (7.1)	19 (7.3)	0.92	13 (8.1)	19 (12)	0.27	47 (7.6)	43 (7.3)	0.83
Maintaining social distancing is an effective way to reduce the risk of COVID-19 infection												
Strongly agree	26 (15)	35 (21)	**0.013**	124 (44)	139 (54)	0.087*	74 (46)	76 (47)	0.89	224 (36)	250 (43)	**0.008**
Agree	116 (67)	121 (73)		124 (44)	100 (39)		68 (43)	71 (44)		308 (50)	292 (50)	
Neutral	28 (16)	10 (6.0)		29 (10)	14 (5.4)		17 (11)	13 (8.1)		74 (12)	37 (6.3)	
Disagree	3 (1.7)	1 (0.6)		3 (1.1)	4 (1.5)		1 (0.6)	1 (0.6)		7 (1.1)	6 (1.0)	
Strongly disagree	-	--		2 (0.7)	3 (1.2)		-	--		2 (0.3)	3 (0.5)	
Wearing a mask is an effective way to reduce the risk of COVID-19 transmission												
Strongly agree	32 (19)	52 (31)	**0.004**	161 (57)	159 (61)	0.30	73 (46)	84 (52)	0.16	266 (43)	295 (50)	**0.001**
Agree	121 (70)	109 (65)		98 (35)	91 (35)		75 (47)	72 (45)		294 (48)	272 (46)	
Neutral	17 (9.8)	4 (2.4)		18 (6.4)	7 (2.7)		12 (7.5)	5 (3.1)		47 (7.6)	16 (2.7)	
Disagree	3 (1.7)	2 (1.2)		4 (1.4)	2 (0.8)					7 (1.1)	4 (0.7)	
Strongly disagree	-	-		1 (0.4)	1 (0.4)		-	-		1 (0.2)	1 (0.2)	
Reusing the same mask without washing is unhygienic												
Strongly agree	20 (12)	45 (27)	**<0.001**	100 (36)	103 (40)	0.098*	73 (46)	65 (40)	0.55	193 (31)	213 (36)	**0.007**
Agree	127 (73)	105 (63)		135 (48)	130 (50)		63 (39)	68 (42)		325 (53)	303 (52)	
Neutral	21 (12)	7 (4.2)		34 (12)	14 (5.4)		16 (10)	15 (9.3)		71 (12)	36 (6.1)	
Disagree	5 (2.9)	9 (5.4)		11 (3.9)	10 (3.8)		6 (3.8)	12 (7.5)		22 (3.6)	31 (5.3)	
Strongly disagree	0 (0.0)	1 (0.6)		2 (0.7)	3 (1.2)		2 (1.3)	1 (0.6)		4 (0.7)	5 (0.9)	
Covering your mouth while coughing and sneezing is effective in reducing COVID transmission												
Strongly agree	26 (15)	36 (22)	**0.034**	116 (41)	118 (45)	**0.044**	73 (46)	81 (50)	0.79	215 (35)	235 (40)	**0.005**
Agree	123 (71)	122 (73)		137 (49)	129 (50)		76 (48)	72 (45)		336 (55)	323 (55)	
Neutral	23 (13)	9 (5.4)		28 (9.9)	11 (4.2)		10 (6.3)	7 (4.3)		61 (9.9)	27 (4.6)	
Disagree	1 (0.6)	0 (0.0)		0 (0.0)	2 (0.8)		1 (0.6)	1 (0.6)		2 (0.3)	3 (0.5)	
Strongly disagree	-	-		1 (0.4)	0 (0.0)		--			1 (0.2)	0 (0.0)	
Frequently washing hands using cleaning agents is an effective way to reduce the risk of COVID-19 transmission												
Strongly agree	26 (15)	38 (23)	**0.014**	151 (54)	162 (62)	0.088*	76 (48)	82 (51)	0.13	253 (41)	282 (48)	**<0.001**
Agree	128 (74)	124 (74)		108 (38)	87 (34)		69 (43)	74 (46)		305 (50)	285 (49)	
Neutral	18 (10)	5 (3.0)		20 (7.1)	8 (3.1)		14 (8.8)	5 (3.1)		52 (8.5)	18 (3.1)	
Disagree	1 (0.6)	0 (0.0)		3 (1.1)	2 (0.8)		1 (0.6)	0 (0.0)		5 (0.8)	2 (0.3)	
Strongly disagree	--	-		0 (0.0)	1 (0.4)		-	-		0 (0.0)	1 (0.2)	
Touching eyes, nose and mouth without Hand Washing with Soap will increase the chance of infection from COVID												
Strongly agree	15 (8.7)	30 (18)	**0.006**	75 (27)	97 (37)	**0.026**	59 (37)	63 (39)	0.12	149 (24)	190 (32)	**<0.001**
Agree	118 (68)	118 (71)		156 (55)	135 (52)		63 (39)	76 (47)		337 (55)	329 (56)	
Neutral	37 (21)	17 (10)		32 (11)	20 (7.7)		35 (22)	21 (13)		104 (17)	58 (9.9)	
Disagree	3 (1.7)	2 (1.2)		18 (6.4)	8 (3.1)		3 (1.9)	1 (0.6)		24 (3.9)	11 (1.9)	
Strongly disagree	-	-		1 (0.4)	0 (0.0)		-	-		1 (0.2)	0 (0.0)	
Hand Washing with Soap is an important activity for preventing the spread of COVID												
Strongly agree	20 (12)	28 (17)	**0.005**	103 (37)	110 (42)	0.28	69 (43)	79 (49)	0.23	192 (31)	217 (37)	**0.001**
Agree	130 (75)	134 (80)		144 (51)	130 (50)		78 (49)	75 (47)		352 (57)	339 (58)	
Neutral	22 (13)	5 (3.0)		27 (9.6)	13 (5.0)		13 (8.1)	6 (3.7)		62 (10)	24 (4.1)	
Disagree	1 (0.6)	0 (0.0)		7 (2.5)	6 (2.3)		0 (0.0)	1 (0.6)		8 (1.3)	7 (1.2)	

Indicators	Indonesia			Kenya			Zambia			Overall		
	Person with disability N=173	Person without Disability N=167	p-value	Person with disability N=282	Person without Disability N=260	p-value	Person with disability N=160	Person without Disability N=161	p-value	Person with disability N=615	Person without Disability N=588	p-value
Strongly disagree	-	-		1 (0.4)	1 (0.4)		-	-		1 (0.2)	1 (0.2)	

Table 49: Attitude towards COVID-19 key prevention measures by ageing

Indicators	Indonesia			Kenya			Zambia			Overall		
	Older N=162	Younger N=178	p-value	Older N=246	Younger N=296	p-value	Older N=102	Younger N=219	p-value	Older N=510	Younger N=693	p-value
When do you think social distancing should be maintained												
Public place	149 (92)	168 (94)	0.38	178 (72)	220 (74)	0.61	78 (77)	163 (74)	0.69	405 (79)	551 (80)	0.97
At work	8 (4.9)	23 (13)	**0.011**	21 (8.5)	58 (20)	**<0.001**	9 (8.8)	38 (17)	**0.044**	38 (7.5)	119 (17)	**<0.001**
Social gathering	24 (15)	39 (22)	0.093*	172 (70)	213 (72)	0.60	83 (81)	184 (84)	0.56	279 (55)	436 (63)	**0.004**
Religious place	28 (17)	25 (14)	0.41	143 (58)	147 (50)	**0.049**	60 (59)	168 (77)	**0.001**	231 (45)	340 (49)	0.20
Visiting suspected covid-19 patients	4 (2.5)	15 (8.4)	**0.017**	5 (2.0)	15 (5.1)	0.062*	18 (18)	49 (22)	0.33	27 (5.3)	79 (11)	**<0.001**
At home	12 (7.4)	7 (3.9)	0.16	17 (6.9)	22 (7.4)	0.81	6 (5.9)	26 (20)	0.095*	35 (6.9)	55 (7.9)	0.48
Maintaining social distancing is an effective way to reduce the risk of COVID-19 infection												
Strongly agree	30 (19)	31 (17)	0.83	121 (49)	142 (48)	0.79	47 (46)	103 (47)	0.041	198 (39)	276 (40)	0.78
Agree	113 (70)	124 (70)		103 (42)	121 (41)		39 (38)	100 (46)		255 (50)	345 (50)	
Neutral	18 (11)	20 (11)		16 (6.5)	27 (9.1)		16 (16)	14 (6.4)		50 (9.8)	61 (8.8)	
Disagree	1 (0.6)	3 (1.7)		3 (1.2)	4 (1.4)		0 (0.0)	2 (0.9)		4 (0.8)	9 (1.3)	
Strongly disagree	-	-		3 (1.2)	2 (0.7)		-	-		3 (0.6)	2 (0.3)	
Wearing a mask is an effective way to reduce the risk of COVID-19 transmission												
Strongly agree	33 (20)	51 (29)	0.12	146 (59)	174 (59)	0.95	50 (49)	107 (49)	0.36	229 (45)	332 (48)	0.81
Agree	119 (74)	111 (62)		87 (35)	102 (35)		44 (43)	103 (47)		250 (49)	316 (46)	
Neutral	7 (4.3)	14 (7.9)		10 (4.1)	15 (5.1)		8 (7.8)	9 (4.1)		25 (4.9)	38 (5.5)	
Disagree	3 (1.9)	2 (1.1)		2 (0.8)	4 (1.4)		-	-		5 (1.0)	6 (0.9)	
Strongly disagree	-	-		1 (0.4)	1 (0.3)		-	-		1 (0.2)	1 (0.1)	
Reusing the same mask without washing is unhygienic												
Strongly agree	29 (18)	36 (20)	0.61	81 (33)	122 (41)	0.19	41 (40)	97 (44)	0.60	151 (30)	255 (37)	**0.049**
Agree	116 (72)	116 (65)		134 (55)	131 (44)		42 (41)	89 (41)		292 (57)	336 (49)	
Neutral	12 (7.4)	16 (9.0)		19 (7.7)	29 (9.8)		12 (12)	19 (8.7)		43 (8.4)	64 (9.2)	
Disagree	5 (3.1)	9 (5.1)		10 (4.1)	11 (3.7)		5 (4.9)	13 (5.9)		20 (3.9)	33 (4.8)	
Strongly disagree	0 (0.0)	1 (0.6)		2 (0.8)	3 (1.0)		2 (2.0)	1 (0.5)		4 (0.8)	5 (0.7)	
Covering your mouth while coughing and sneezing is effective in reducing COVID transmission												
Strongly agree	29 (18)	33 (19)	0.63	94 (38)	140 (47)	**0.027**	47 (46)	107 (49)	0.21	170 (33)	280 (40)	**0.047**
Agree	120 (74)	125 (70)		138 (56)	128 (43)		47 (46)	101 (46)		305 (60)	354 (51)	
Neutral	13 (8.0)	19 (11)		14 (5.7)	25 (8.4)		6 (5.9)	11 (5.0)		33 (6.5)	55 (7.9)	
Disagree	0 (0.0)	1 (0.6)		0 (0.0)	2 (0.7)		2 (2.0)	0 (0.0)		2 (0.4)	3 (0.4)	
Strongly disagree	-	-		0 (0.0)	1 (0.3)		-	-		0 (0.0)	1 (0.1)	
Frequently washing hands using cleaning agents is an effective way to reduce the risk of COVID-19 transmission												
Strongly agree	29 (18)	35 (20)	0.58	141 (57)	172 (58)	0.27	51 (50)	107 (49)	0.39	221 (43)	314 (45)	0.29
Agree	124 (77)	128 (72)		94 (38)	101 (34)		42 (41)	101 (46)		260 (51)	330 (48)	
Neutral	9 (5.6)	14 (7.9)		9 (3.7)	19 (6.4)		9 (8.8)	10 (4.6)		27 (5.3)	43 (6.2)	
Disagree	0 (0.0)	1 (0.6)		1 (0.4)	4 (1.4)		0 (0.0)	1 (0.5)		1 (0.2)	6 (0.9)	
Strongly disagree	-	-		1 (0.4)	0 (0.0)		-	-		1 (0.2)	0 (0.0)	
Touching eyes, nose and mouth without Hand Washing with Soap will increase the chance of infection from COVID												
Strongly agree	19 (12)	26 (15)	0.33	67 (27)	105 (36)	0.14	38 (37)	84 (38)	0.29	124 (24)	215 (31)	**0.048**
Agree	116 (72)	120 (67)		145 (59)	146 (49)		42 (41)	97 (44)		303 (59)	363 (52)	

Indicators	Indonesia			Kenya			Zambia			Overall		
	Older N=162	Younger N=178	p-value	Older N=246	Younger N=296	p-value	Older N=102	Younger N=219	p-value	Older N=510	Younger N=693	p-value
Neutral	23 (14)	31 (17)		23 (9.3)	29 (9.8)		19 (19)	37 (17)		65 (13)	97 (14)	
Disagree	4 (2.5)	1 (0.6)		10 (4.1)	16 (5.4)		3 (2.9)	1 (0.5)		17 (3.3)	18 (2.6)	
Strongly disagree	-	-		1 (0.4)	0 (0.0)		-	-		1 (0.2)	0 (0.0)	
Hand Washing with Soap is an important activity for preventing the spread of COVID												
Strongly agree	22 (14)	26 (15)	0.76	95 (39)	118 (40)	1.00	45 (44)	103 (47)	**0.009**	162 (32)	247 (36)	0.55
Agree	128 (79)	136 (76)		126 (51)	148 (50)		44 (43)	109 (50)		298 (58)	393 (57)	
Neutral	12 (7.4)	15 (8.4)		18 (7.3)	22 (7.4)		12 (12)	7 (3.2)		42 (8.2)	44 (6.3)	
Disagree	0 (0.0)	1 (0.6)		6 (2.4)	7 (2.4)		1 (1.0)	0 (0.0)		7 (1.4)	8 (1.2)	
Strongly disagree	-	-		1 (0.4)	1 (0.3)		-	-		1 (0.2)	1 (0.1)	

Table 50: Maintenance of different COVID-19 preventive measures by disability status

Indicators	Indonesia			Kenya			Zambia			Overall		
	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value
	N=173	N=167		N=282	N=260		N=160	N=161		N=615	N=588	
Usually maintain social distancing												
Public place	108 (62)	122 (73)	**0.036**	161 (57)	201 (77)	**<0.001**	93 (58)	106 (66)	0.15	362 (59)	429 (73)	**<0.001**
At work	12 (6.9)	16 (9.6)	0.38	23 (8.2)	36 (14)	**0.034**	9 (5.6)	21 (13)	**0.022**	44 (7.2)	73 (12)	**0.002**
Social gathering	29 (17)	32 (19)	0.56	149 (53)	177 (68)	**<0.001**	98 (61)	117 (73)	**0.030**	276 (45)	326 (55)	**<0.001**
Religious place	22 (13)	28 (17)	0.29	125 (44)	144 (55)	**0.010**	88 (55)	105 (65)	0.062*	235 (38)	277 (47)	**0.002**
Visiting suspected covid-19 patients	5 (2.9)	11 (6.6)	0.11	9 (3.2)	10 (3.8)	0.68	19 (12)	31 (19)	0.068*	33 (5.4)	52 (8.8)	**0.019**
At home	13 (7.5)	4 (2.4)	**0.030**	25 (8.9)	24 (9.2)	0.88	18 (11)	20 (12)	0.75	56 (9.1)	48 (8.2)	0.56
When other people maintain	4 (2.3)	11 (6.6)	0.055*	10 (3.5)	15 (5.8)	0.22	6 (3.8)	14 (8.7)	0.067*	20 (3.3)	40 (6.8)	**0.005**
Frequency of wearing face mask												
Every day	107 (62)	124 (74)	**0.008**	146 (52)	181 (70)	**<0.001**	34 (21)	60 (37)	**<0.001**	287 (47)	365 (62)	**<0.001**
3-4 times per week	29 (17)	19 (11)		42 (15)	36 (14)		36 (23)	46 (29)		107 (17)	101 (17)	
1-2 times per week	7 (4.0)	12 (7.2)		39 (14)	23 (8.8)		29 (18)	26 (16)		75 (12)	61 (10)	
A few times per month	13 (7.5)	8 (4.8)		35 (12)	15 (5.8)		41 (26)	21 (13)		89 (15)	44 (7.5)	
Never	17 (9.8)	4 (2.4)		20 (7.1)	5 (1.9)		20 (13)	8 (5.0)		57 (9.3)	17 (2.9)	
Places of wearing face mask												
In a crowed place	40 (23)	39 (23)	0.96	183 (65)	203 (78)	**<0.001**	121 (76)	137 (85)	**0.033**	344 (56)	379 (65)	**0.003**
If I feel sick	14 (8.1)	17 (10)	0.50	16 (5.7)	8 (3.1)	0.14	32 (20)	45 (28)	0.095*	62 (10)	70 (12)	0.31
Whenever go outside	142 (82)	150 (90)	**0.040**	205 (73)	203 (78)	0.15	59 (37)	79 (49)	**0.027**	406 (66)	432 (74)	**0.005**

Indicators	Indonesia			Kenya			Zambia			Overall		
	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value
	N=173	N=167		N=282	N=260		N=160	N=161		N=615	N=588	
When visiting patient	3 (1.7)	2 (1.2)	0.68	13 (4.6)	7 (2.7)	0.24	34 (21)	49 (30)	0.060*	50 (8.1)	58 (9.9)	0.29
When visiting older people	3 (1.7)	0 (0.0)	0.087*	22 (7.8)	17 (6.5)	0.57	15 (9.4)	30 (19)	**0.017**	40 (6.5)	47 (8.0)	0.32
Only in places where wearing masks are mandatory	6 (3.5)	2 (1.2)	0.17	8 (2.8)	22 (8.5)	**0.004**	28 (18)	36 (22)	0.28	42 (6.8)	60 (10)	**0.036**
When going to work	9 (5.2)	8 (4.8)	0.86	18 (6.4)	41 (16)	**<0.001**	9 (5.6)	18 (11)	0.073*	36 (5.9)	67 (11)	**<0.001**
At home	5 (2.9)	4 (2.4)	0.78	28 (9.9)	17 (6.5)	0.15	7 (4.4)	6 (3.7)	0.77	40 (6.5)	27 (4.6)	0.15
In shopping	10 (5.8)	10 (6.0)	0.94	60 (21)	81 (31)	**0.009**	18 (11)	29 (18)	0.087*	88 (14)	120 (20)	**0.005**
Sneezing/ coughing etiquettes												
Cough / sneeze into my elbow	15 (8.7)	27 (16)	**0.036**	79 (28)	97 (37)	**0.021**	102 (64)	113 (70)	0.22	196 (32)	237 (40)	**0.002**
Cough / sneeze into my hand	116 (67)	116 (70)	0.63	104 (37)	89 (34)	0.52	92 (58)	91 (57)	0.86	312 (51)	296 (50)	0.89
Cough / sneeze into tissue paper	26 (15)	25 (15)	0.99	17 (6.0)	13 (5.0)	0.60	15 (9.4)	23 (14)	0.17	58 (9.4)	61 (10)	0.58
Use a face covering e.g. towels, piece of cloth etc	42 (24)	34 (20)	0.39	126 (45)	157 (60)	**<0.001**	36 (23)	38 (24)	0.81	204 (33)	229 (39)	**0.037**
Do nothing	29 (17)	10 (6.0)	**0.002**	35 (12)	8 (3.1)	**<0.001**	6 (3.8)	3 (1.9)	0.31	70 (11)	21 (3.6)	**<0.001**
Places of maintaining sneezing/ coughing etiquettes												
In a crowed place	41 (24)	42 (25)	0.76	186 (66)	201 (77)	**0.003**	129 (81)	144 (89)	**0.027**	356 (58)	387 (66)	**0.005**
If I feel sick	24 (14)	41 (25)	**0.012**	31 (11)	35 (14)	0.38	71 (44)	86 (53)	0.11	126 (21)	162 (28)	**0.004**
Whenever go outside	109 (63)	117 (70)	0.17	143 (51)	151 (58)	0.085*	62 (39)	68 (42)	0.52	314 (51)	336 (57)	**0.034**
When visiting patient	2 (1.2)	0 (0.0)	0.16	10 (3.5)	7 (2.7)	0.57	35 (22)	44 (27)	0.26	47 (7.6)	51 (8.7)	0.51
When visiting older people	4 (2.3)	2 (1.2)	0.44	15 (5.3)	25 (9.6)	0.056*	24 (15)	30 (19)	0.38	43 (7.0)	57 (9.7)	0.090*
Only if I see other people following it	6 (3.5)	2 (1.2)	0.17	2 (0.7)	8 (3.1)	**0.041**	2 (1.3)	2 (1.2)	0.99	10 (1.6)	12 (2.0)	0.59
When going to work	5 (2.9)	7 (4.2)	0.52	13 (4.6)	23 (8.8)	**0.048**	10 (6.3)	16 (9.9)	0.23	28 (4.6)	46 (7.8)	**0.018**
At home	44 (25.4)	38 (23)	0.56	95 (34)	80 (31)	0.47	53 (33)	52 (32)	0.87	192 (31)	170 (29)	0.38
Avoiding touching nose, face with unwashed/ non-sanitized hands	106 (61)	121 (73)	**0.029**	212 (75)	222 (85)	**0.003**	118 (74)	122 (76)	0.68	436 (71)	465 (79)	**0.001**
Practice of washing hands at the critical times												
Before eating	165 (95)	163 (98)	0.27	251 (89)	243 (94)	0.068*	145 (91)	151 (94)	0.29	561 (91)	557 (95)	**0.018**
Before touching face, mouth, nose, eyes	25 (15)	40 (24)	**0.026**	34 (12)	28 (11)	0.64	65 (41)	69 (43)	0.69	124 (20)	137 (23)	0.19
Before feeding	30 (17)	33 (20)	0.57	40 (14)	44 (17)	0.38	57 (36)	63 (39)	0.52	127 (21)	140 (24)	0.19
After defecation	104 (60)	101 (61)	0.95	143 (51)	150 (58)	0.10	143 (89)	147 (91)	0.56	390 (63)	398 (68)	0.12
After eating	143 (83)	154 (92)	**0.008**	132 (47)	131 (50)	0.41	119 (74)	137 (85)	**0.017**	394 (64)	422 (72)	**0.004**
After feeding	36 (21)	41 (25)	0.41	17 (6.0)	34 (13)	**0.005**	56 (35)	51 (32)	0.53	109 (18)	126 (21)	0.11

Indicators	Indonesia			Kenya			Zambia			Overall		
	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value
	N=173	N=167		N=282	N=260		N=160	N=161		N=615	N=588	
After returning home	69 (40)	94 (56)	**0.002**	147 (52)	177 (68)	**<0.001**	84 (53)	100 (62)	0.082*	300 (49)	371 (63)	**<0.001**
After taking care for others	7 (4.0)	12 (7.2)	0.21	15 (5.3)	25 (9.6)	0.056*	19 (12)	32 (20)	0.050*	41 (6.7)	69 (12)	**0.002**
When visible dirt seen	26 (15.0)	44 (26)	**0.010**	60 (21)	72 (28)	0.082*	90 (56)	93 (58)	0.78	176 (27)	209 (36)	**0.010**
After sneezing/ coughing	11 (6.4)	25 (15)	**0.010**	10 (3.5)	22 (8.5)	**0.015**	57 (36)	64 (39.8)	0.45	78 (13)	111 (19)	**0.003**
Others (Please specify)	1 (0.6)	2 (1.2)	0.54	12 (4.3)	12 (4.6)	0.84	2 (1.3)	4 (2.5)	0.41	15 (2.4)	18 (3.1)	0.51
Preventive measures follow after returning home												
Wash hands with soap	143 (83)	156 (93)	**0.002**	222 (79)	220 (85)	0.077*	126 (79)	139 (86)	0.073*	491 (80)	515 (88)	**<0.001**
Wash hands without soap	9 (5.2)	10 (6.0)	0.75	42 (15)	38 (15)	0.93	47 (29)	38 (24)	0.24	98 (16)	86 (15)	0.53
Take shower with soap	85 (49)	88 (53)	0.51	24 (8.5)	45 (17)	**0.002**	17 (11)	27 (17)	0.11	126 (21)	160 (27)	**0.006**
Take shower without soap	4 (2.3)	0 (0.0)	**0.048**	5 (1.8)	5 (1.9)	0.90	16 (10)	21 (13)	0.39	25 (4.1)	26 (4.4)	0.76
Disinfect hands with sanitizer	9 (5.2)	13 (7.8)	0.33	27 (9.6)	41 (16)	**0.030**	30 (19)	36 (22)	0.42	66 (11)	90 (15)	**0.018**
Disinfect clothes and shoes	2 (1.2)	1 (0.6)	0.58	6 (2.1)	9 (3.5)	0.34	5 (3.1)	10 (6.2)	0.19	13 (2.1)	20 (3.4)	0.17
Dispose of mask	79 (46)	99 (59)	**0.012**	61 (22)	82 (32)	**0.009**	22 (14)	33 (21)	0.11	162 (26)	214 (36)	**<0.001**
Disinfect/wash mask	2 (1.2)	0 (0.0)	0.16	42 (15)	48 (19)	0.26	27 (17)	31 (19)	0.58	71 (12)	79 (13)	0.32
Keep distance from the family members before washing properly	3 (1.7)	2 (1.2)	0.68	14 (5.0)	15 (5.8)	0.68	11 (6.9)	28 (17)	**0.004**	28 (4.6)	45 (7.7)	**0.024**
Wash/ dispose accessories	3 (1.7)	0 (0.0)	0.087*	2 (0.7)	11 (4.2)	**0.007**	9 (5.6)	13 (8.1)	0.39	14 (2.3)	24 (4.1)	0.074*
Do not take any preventive measures	18 (10)	2 (1.2)	**<0.001**	21 (7.4)	3 (1.2)	**<0.001**	10 (6.3)	4 (2.5)	0.099*	49 (8.0)	9 (1.5)	**<0.001**
Handwashing materials												
Water only	7 (4.0)	6 (3.6)	0.83	24 (8.5)	9 (3.5)	**0.014**	27 (17)	29 (18)	0.79	58 (9.4)	44 (7.5)	0.23
Water with soap	166 (96)	161 (96)		258 (92)	251 (97)		133 (83)	132 (82)		557 (91)	544 (93)	
	N=17	N=0		N=94	N=15		N=18	N=1		N=129	N=16	
Cleaning/ disinfecting assistive devices	11 (65)	-		64 (68)	11 (73)	0.68	7 (39)	1 (100)	0.23	82 (64)	12 (75)	0.37
Assistive device cleaning/ disinfecting materials	N=11	N=0		N=94	N=15					N=265	N=176	
Water	2 (18)	-		17 (18)	1 (7)	0.27	2 (1.3)	0 (0.0)	0.15	21 (7.9)	1 (0.6)	**<0.001**
Cleaning agents (soap, antibacterial liquid or spray, vinegar)	11 (100)	-		49 (52)	8 (53)	0.93	5 (3.1)	1 (0.6)	0.098*	65 (25)	9 (5.1)	**<0.001**
Frequency of cleaning assistive device	N=11	N=0		N=64	N=11		N=7	N=1		N=82	N=12	
Daily	4 (36)	-		22 (34)	8 (73)	0.26	2 (29)	1 (100)	0.59	28 (34)	9 (75)	0.17
Once in a week	4 (36)	-		13 (20)	0 (0.0)		2 (29)	0 (0.0)		19 (23)	0 (0.0)	

Indicators	Indonesia			Kenya			Zambia			Overall		
	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value
	N=173	N=167		N=282	N=260		N=160	N=161		N=615	N=588	
Twice in a week				8 (13)	0 (0.0)					8 (10)	0 (0.0)	
Thrice in a week				7 (11)	2 (18)		2 (29)	0 (0.0)		9 (11)	2 (17)	
weekly	1 (9.0)	-		6 (9)	1 (9.0)					7 (9.0)	1 (8.0)	
Once in two weeks	2 (18)	-		2 (3)	0 (0.0)					4 (5.0)	0 (0.0)	
Others				3 (5)	0 (0.0)					3 (4.0)	0 (0.0)	
Clean/ decontaminate surfaces												
Whenever it's visibly dirty	112 (65)	124 (74)	0.057*	149 (53)	172 (66)	**0.002**	127 (79)	145 (90)	**0.008**	388 (63)	441 (75)	**<0.001**
After coming back home	21 (12)	28 (17)	0.22	18 (6.4)	29 (11)	**0.049**	28 (18)	34 (21)	0.41	67 (11)	91 (16)	**0.019**
Whenever I think it could be contaminated	15 (8.7)	15 (9.0)	0.92	66 (23)	86 (33)	**0.012**	72 (45)	77 (48)	0.61	153 (25)	178 (30)	**0.036**
I don't decontaminate surfaces	48 (28)	27 (16)	**0.010**	84 (30)	39 (15)	**<0.001**	22 (14)	15 (9.3)	0.21	154 (25)	81 (14)	**<0.001**
Cleaning agents for surface areas	N=125	N=140		N=198	N=221		N=152	N=156		N=475	N=517	
Cleaning agent (soap, antibacterial liquid or spray, vinegar)	108 (86)	122 (87)	0.86	156 (79)	158 (72)	0.085*	105 (69)	116 (74)	0.30	369 (78)	396 (77)	0.68
Water	17 (14)	18 (13)		42 (21)	63 (29)		47 (31)	40 (26)		106 (22)	121 (23)	

Table 51: Maintenance of different COVID-19 preventive measures by ageing

Indicators	Indonesia			Kenya			Zambia			Overall		
	Older	Younger	p-value	Older	Younger	p-value	Older	Younger	p-value	Older	Younger	p-value
	N=162	N=178		N=246	N=296		N=102	N=219		N=510	N=693	
Usually maintain social distancing												
Public place	101 (62)	129 (73)	**0.046**	163 (66)	199 (67)	0.81	64 (63)	135 (62)	0.85	328 (64)	463 (67)	0.37
At work	6 (3.7)	22 (12)	**0.004**	18 (7.3)	41 (14)	**0.015**	8 (7.8)	22 (10)	0.53	32 (6.3)	85 (12)	**<0.001**
Social gathering	26 (16)	35 (20)	0.39	142 (58)	184 (62)	0.29	71 (70)	144 (66)	0.49	239 (47)	363 (52)	0.059*
Religious place	23 (14)	27 (15)	0.80	132 (54)	137 (46)	0.087*	50 (49)	143 (65)	**0.006**	205 (40)	307 (44)	0.15
Visiting suspected covid-19 patients	2 (1.2)	14 (7.9)	**0.004**	6 (2.4)	13 (4.4)	0.22	15 (15)	35 (16)	0.77	23 (4.5)	62 (8.9)	**0.003**
At home	11 (6.8)	6 (3.4)	0.15	24 (9.8)	25 (8.4)	0.60	13 (13)	25 (11)	0.73	48 (9.4)	56 (8.1)	0.42
When other people maintain	6 (3.7)	9 (5.1)	0.54	9 (3.7)	16 (5.4)	0.33	6 (5.9)	14 (6.4)	0.86	21 (4.1)	39 (5.6)	0.23
Frequency of wearing face mask												
Every day	98 (61)	133 (75)	**0.009**	148 (60)	179 (61)	0.52	27 (27)	67 (31)	0.054*	273 (54)	379 (55)	0.97

3-4 times per week	30 (19)	18 (10)		30 (12)	48 (16)		33 (32)	49 (22)		93 (18)	115 (17)	
1-2 times per week	14 (8.6)	5 (2.8)		33 (13)	29 (9.8)		10 (9.8)	45 (21)		57 (11)	79 (11)	
A few times per month	8 (4.9)	13 (7.3)		24 (9.8)	26 (8.8)		24 (24)	38 (17)		56 (11)	77 (11)	
Never	12 (7.4)	9 (5.1)		11 (4.5)	14 (4.7)		8 (7.8)	20 (9.1)		31 (6.1)	43 (6.2)	
Places of wearing face mask												
In a crowed place	34 (21)	45 (25)	0.35	163 (66)	223 (75)	**0.020**	86 (84)	172 (79)	0.23	283 (56)	440 (64)	**0.005**
If I feel sick	13 (8.0)	18 (10)	0.50	13 (5.3)	11 (3.7)	0.38	20 (20)	57 (26)	0.21	46 (9.0)	86 (12)	0.063*
Whenever go outside	138 (85)	154 (87)	0.72	192 (78)	216 (73)	0.17	33 (32)	105 (48)	**0.009**	363 (71)	475 (69)	0.33
When visiting patient	2 (1.2)	3 (1.7)	0.73	8 (3.3)	12 (4.1)	0.62	25 (25)	58 (27)	0.71	35 (6.9)	73 (11)	**0.028**
When visiting older people	1 (0.6)	2 (1.1)	0.62	17 (6.9)	22 (7.4)	0.81	16 (16)	29 (13)	0.56	34 (6.7)	53 (7.6)	0.52
Only in places where wearing masks are mandatory	2 (1.2)	6 (3.4)	0.19	17 (6.9)	13 (4.4)	0.20	18 (18)	46 (21)	0.48	37 (7.3)	65 (9.4)	0.19
When going to work	5 (3.1)	12 (6.7)	0.12	19 (7.7)	40 (14)	**0.031**	6 (5.9)	21 (9.6)	0.27	30 (5.9)	73 (11)	**0.004**
At home	8 (4.9)	1 (0.6)	**0.012**	29 (12)	16 (5.4)	**0.007**	5 (4.9)	8 (3.7)	0.60	42 (8.2)	25 (3.6)	**<0.001**
In shopping	7 (4.3)	13 (7.3)	0.24	54 (22)	87 (29)	**0.049**	9 (8.8)	38 (17)	**0.044**	70 (14)	138 (20)	**0.005**
Sneezing/ coughing etiquettes												
Cough / sneeze into my elbow	17 (11)	25 (14)	0.32	57 (23)	119 (40)	**<0.001**	52 (51)	163 (74)	**<0.001**	126 (25)	307 (44)	**<0.001**
Cough / sneeze into my hand	105 (65)	127 (71)	0.20	99 (40)	94 (32)	**0.040**	66 (65)	117 (53)	0.057*	270 (53)	338 (49)	0.15
Cough / sneeze into tissue paper	26 (16)	25 (14)	0.61	4 (1.6)	26 (8.8)	**<0.001**	10 (9.8)	28 (13)	0.44	40 (7.8)	79 (11)	**0.041**
Use a face covering e.g. towels, piece of cloth etc	42 (26)	34 (19)	0.13	129 (52)	154 (52)	0.92	26 (26)	48 (22)	0.48	197 (39)	236 (34)	0.10
Do nothing	20 (12)	19 (11)	0.63	21 (8.5)	22 (7.4)	0.64	5 (4.9)	4 (1.8)	0.12	46 (9.0)	45 (6.5)	0.10
Places of maintaining sneezing/ coughing etiquettes												
In a crowed place	40 (25)	43 (24)	0.91	179 (73)	208 (70)	0.52	82 (80)	191 (87)	0.11	301 (59)	442 (64)	0.093*
If I feel sick	29 (18)	36 (20)	0.59	32 (13)	34 (12)	0.59	48 (47)	109 (50)	0.65	109 (21)	179 (26)	0.073*
Whenever go outside	107 (66)	119 (67)	0.88	135 (55)	159 (54)	0.79	30 (29)	100 (46)	**0.006**	272 (53)	378 (55)	0.68
When visiting patient	1 (0.6)	1 (0.6)	0.95	6 (2.4)	11 (3.7)	0.40	20 (20)	59 (27)	0.16	27 (5.3)	71 (10)	**0.002**
When visiting older people	2 (1.2)	4 (2.2)	0.48	19 (7.7)	21 (7.1)	0.78	16 (16)	38 (17)	0.71	37 (7.3)	63 (9.1)	0.25
Only if I see other people following it	6 (3.7)	2 (1.1)	0.12	5 (2.0)	5 (1.7)	0.77	0 (0.0)	4 (1.8)	0.17	11 (2.2)	11 (1.6)	0.47
When going to work	5 (3.1)	7 (3.9)	0.67	14 (5.7)	22 (7.4)	0.42	5 (4.9)	21 (9.6)	0.15	24 (4.7)	50 (7.2)	0.073*
At home	41 (25)	41 (23)	0.62	86 (35)	89 (30)	0.23	24 (24)	81 (37)	0.017	151 (30)	211 (30)	0.75
Avoiding touching nose, face with unwashed/ non-sanitized hands	109 (67)	118 (66)	0.85	192 (78)	242 (82)	0.28	70 (69)	170 (78)	0.084*	371 (73)	530 (77)	0.14
Practice of washing hands at the critical times												
Before eating	155 (96)	173 (97)	0.45	237 (96)	257 (87)	**<0.001**	96 (94)	200 (91)	0.38	488 (96)	630 (91)	**0.001**
Before touching face, mouth, nose, eyes	25 (15)	40 (23)	0.099*	25 (10)	37 (13)	0.39	41 (40)	93 (43)	0.70	91 (18)	170 (25)	**0.005**

Before feeding	24 (15)	39 (22)	0.093*	43 (18)	41 (14)	0.25	37 (36)	83 (38)	0.78	104 (20)	163 (24)	0.20
After defecation	97 (60)	108 (61)	0.88	144 (59)	149 (50)	0.057*	92 (90)	198 (90)	0.95	333 (65)	455 (66)	0.90
After eating	137 (85)	160 (90)	0.14	115 (47)	148 (50)	0.45	89 (87)	167 (76)	**0.022**	341 (67)	475 (69)	0.54
After feeding	30 (19)	47 (26)	0.083*	22 (8.9)	29 (9.8)	0.73	35 (34)	72 (33)	0.80	87 (17)	148 (21)	0.063*
After returning home	81 (50)	82 (46)	0.47	153 (62)	171 (58)	0.30	61 (60)	123 (56)	0.54	295 (58)	376 (54)	0.22
After taking care for others	7 (4.3)	12 (6.7)	0.33	20 (8.1)	20 (6.8)	0.54	11 (11)	40 (18)	0.088*	38 (7.5)	72 (10)	0.081*
When visible dirt seen	32 (20)	38 (21)	0.72	53 (22)	79 (27)	0.16	42 (41)	141 (64)	**<0.001**	127 (25)	258 (37)	**<0.001**
After sneezing/ coughing	14 (8.6)	22 (12)	0.27	13 (5.3)	19 (6.4)	0.58	30 (29)	91 (42)	**0.037**	57 (11)	132 (19)	**<0.001**
Others (Please specify)	2 (1.2)	1 (0.6)	0.51	3 (1.2)	21 (7.1)	**<0.001**	0 (0.0)	6 (2.7)	0.092*	5 (1.0)	28 (4.0)	**0.001**
Preventive measures follow after returning home												
Wash hands with soap	142 (88)	157 (88)	0.88	207 (84)	235 (79)	0.16	76 (75)	189 (86)	**0.010**	425 (83)	581 (84)	0.82
Wash hands without soap	10 (6.2)	9 (5.1)	0.65	36 (15)	44 (15)	0.94	32 (31)	53 (24)	0.18	78 (15)	106 (15)	1.00
Take shower with soap	69 (43)	104 (58)	**0.004**	24 (9.8)	45 (15)	0.058*	10 (9.8)	34 (16)	0.17	103 (20)	183 (26)	**0.012**
Take shower without soap	3 (1.9)	1 (0.6)	0.27	5 (2.0)	5 (1.7)	0.77	14 (14)	23 (11)	0.40	22 (4.3)	29 (4.2)	0.91
Disinfect hands with sanitizer	10 (6.2)	12 (6.7)	0.83	27 (11)	41 (14)	0.31	16 (16)	50 (23)	0.14	53 (10)	103 (15)	**0.023**
Disinfect clothes and shoes	1 (0.6)	2 (1.1)	0.62	7 (2.8)	8 (2.7)	0.92	5 (4.9)	10 (4.6)	0.89	13 (2.5)	20 (2.9)	0.72
Dispose of mask	82 (51)	96 (54)	0.54	60 (24)	83 (28)	0.34	16 (16)	39 (18)	0.64	158 (31)	218 (32)	0.86
Disinfect/wash mask	1 (0.6)	1 (0.6)	0.95	51 (21)	39 (13)	**0.019**	20 (20)	38 (17)	0.62	72 (14)	78 (11)	0.14
Keep distance from the family members before washing properly	1 (0.6)	4 (2.2)	0.21	9 (3.7)	20 (6.8)	0.11	8 (7.8)	31 (14)	0.11	18 (3.5)	55 (7.9)	**0.002**
Wash/ dispose accessories	2 (1.2)	1 (0.6)	0.51	5 (2.0)	8 (2.7)	0.61	8 (7.8)	14 (6.4)	0.63	15 (2.9)	23 (3.3)	0.71
Do not take any preventive measures	9 (5.6)	11 (6.2)	0.81	8 (3.3)	16 (5.4)	0.23	11 (11)	3 (1.4)	**<0.001**	28 (5.5)	30 (4.3)	0.35
Handwashing materials												
Water only	8 (4.9)	5 (2.8)	0.31	13 (5.3)	20 (6.8)	0.48	33 (32)	23 (11)	**<0.001**	54 (11)	48 (6.9)	**0.024**
Water with soap	154 (95)	173 (97)		233 (95)	276 (93)		69 (68)	196 (90)		456 (89)	645 (93)	
	N=12	N=5		N=70	N=39		N=8	N=11		N=90	N=55	
Cleaning/ disinfecting assistive devices	9 (75)	2 (40)	0.17	49 (70)	26 (67)	0.72	2 (25)	6 (55)	0.20	60 (67)	34 (62)	0.55
Assistive device cleaning/ disinfecting materials	N=9	N=2		N=70	N=39		N=102	N=219		N=181	N=260	
Water	2 (22)	0 (0.0)	0.46	12 (17)	6 (15)	0.81	0 (0.0)	2 (0.9)	0.33	14 (7.7)	8 (3.1)	**0.027**
Cleaning agents (soap, antibacterial liquid or spray, vinegar)	9 (100)	2 (100)		37 (53)	20 (51)	0.87	1 (1.0)	5 (2.3)	0.42	47 (26)	27 (10)	**<0.001**
Frequency of cleaning assistive device	N=9	N=2		N=49	N=26		N=2	N=6		N=60	N=34	
Daily	3 (33)	1 (50)	0.46	20 (41)	10 (38)	0.17	1 (50)	2 (33)	0.22	24 (40)	13 (38)	0.46
Once in a week	4 (44)	0 (0.0)		4 (8.0)	9 (35)		0 (0.0)	2 (33)		8 (13)	11 (32)	
Twice in a week	-	-		7 (14.0)	1 (4)		-	-		7 (12)	1 (3.0)	

Thrice in a week	-	-		7 (14.0)	2 (8)		0 (0.0)	2 (33)		7 (12)	4 (12)	
weekly	1 (11)	0 (0.0)		5 (10.0)	2 (8)		-	-		6 (10)	2 (6.0)	
Once in two weeks	1 (11)	1 (50)		2 (4.0)	0 (0.0)		-	-		3 (5.0)	1 (3.0)	
Others	-	-		2 (4.0)	1 (4)		-	-		2 (3.0)	1 (3.0)	
Clean/ decontaminate surfaces												
Whenever it's visibly dirty	108 (67)	128 (72)	0.29	147 (60)	174 (59)	0.82	84 (82)	188 (86)	0.42	339 (67)	490 (71)	0.12
After coming back home	22 (14)	27 (15)	0.68	18 (7.3)	29 (9.8)	0.31	21 (21)	41 (19)	0.69	61 (12)	97 (14)	0.30
Whenever I think it could be contaminated	12 (7.4)	18 (10)	0.38	62 (25)	90 (30)	0.18	42 (41)	107 (49)	0.20	116 (23)	215 (31)	**0.001**
I don't decontaminate surfaces	39 (24)	36 (20)	0.39	57 (23)	66 (22)	0.81	15 (15)	22 (10)	0.22	111 (22)	124 (18)	0.094*
Cleaning agents for surface areas	N=123	N=142		N=189	N=230		N=95	N=213		N=407	N=585	
Cleaning agent (soap, antibacterial liquid or spray, vinegar)	106 (86)	124 (87)	0.78	132 (70)	182 (79)	**0.029**	57 (60)	164 (77)	**0.002**	295 (73)	470 (80)	**0.004**
Water	17 (14)	18 (13)		57 (30)	48 (21)		38 (40)	49 (23)		112 (28)	115 (20)	

Table 52: Impact of socio-economic status on the COVID-19 knowledge, practice by disability status

	Person with disability						**Person without disability**						**Overall**					
Indicators	**1st quantile**	**2nd quantile**	**3rd quantile**	**4th quantile**	**5th quantile**	**p-value**	**1st quantile**	**2nd quantile**	**3rd quantile**	**4th quantile**	**5th quantile**	**p-value**	**1st quantile**	**2nd quantile**	**3rd quantile**	**4th quantile**	**5th quantile**	**p-value**
	N=152	**N=123**	**N=116**	**N=116**	**N=108**		**N=91**	**N=116**	**N=125**	**N=125**	**N=131**		**N=243**	**N=239**	**N=241**	**N=241**	**N=239**	
Knowledge																		
Knowledge of COVID-10 spread																		
Patients coughing	103 (68)	82 (67)	88 (76)	81 (70)	90 (83)	**0.025**	73 (80)	94 (81)	100 (80)	108 (86)	114 (87)	0.38	176 (72)	176 (74)	188 (78)	189 (78)	204 (85)	**0.007**
Patients sneezing	82 (54)	69 (56)	75 (65)	74 (64)	75 (69)	0.069*	62 (68)	81 (70)	98 (78)	95 (76)	103 (79)	0.23	144 (59)	150 (63)	173 (72)	169 (70)	178 (75)	**0.001**
Social gathering without maintaining social distancing	51 (34)	41 (33)	55 (47)	58 (50)	54 (50)	**0.004**	31 (34)	59 (51)	57 (46)	62 (50)	71 (54)	**0.043**	82 (34)	100 (42)	112 (47)	120 (50)	125 (52)	**<0.001**
Not wearing mask	51 (34)	65 (53)	66 (57)	71 (61)	73 (68)	**<0.001**	46 (51)	76 (66)	92 (74)	96 (77)	101 (77)	**<0.001**	97 (40)	141 (59)	158 (66)	167 (69)	174 (73)	**<0.001**
Living with COVID-19 patient	19 (13)	16 (13)	16 (14)	12 (10)	14 (13)	0.95	10 (11)	25 (22)	22 (18)	15 (12)	25 (19)	0.15	29 (12)	41 (17)	38 (16)	27 (11)	39 (16)	0.22
Contact with contaminated surfaces	11 (7.2)	11 (8.9)	21 (18)	16 (14)	14 (13)	0.062*	6 (6.6)	15 (13)	18 (14)	18 (14)	22 (17)	0.27	17 (7.0)	26 (11)	39 (16)	34 (14)	36 (15)	**0.016**
Handshaking	38 (25)	38 (31)	48 (41)	52 (45)	45 (42)	**0.003**	31 (34)	47 (41)	53 (42)	58 (46)	72 (55)	**0.027**	69 (28)	85 (36)	101 (42)	110 (46)	117 (49)	**<0.001**
Knowledge of COVID-19 risk population																		
Individuals with chronic diseases	40 (26)	39 (32)	52 (45)	49 (42)	55 (51)	**<0.001**	26 (29)	54 (47)	57 (46)	60 (48)	68 (52)	**0.011**	66 (27)	93 (39)	109 (45)	109 (45)	123 (52)	**<0.001**
Pregnant women	19 (13)	13 (11)	19 (16)	9 (7.8)	15 (14)	0.33	10 (11)	17 (15)	17 (14)	15 (12)	16 (12)	0.94	29 (12)	30 (13)	36 (15)	24 (10)	31 (13)	0.58
Older people	54 (36)	60 (49)	76 (66)	75 (65)	79 (73)	**<0.001**	43 (47)	68 (59)	78 (62)	89 (71)	85 (65)	**0.008**	97 (40)	128 (54)	154 (64)	164 (68)	164 (69)	**<0.001**

	Person with disability						Person without disability						Overall					
Indicators	**1st quantile**	**2nd quantile**	**3rd quantile**	**4th quantile**	**5th quantile**	**p-value**	**1st quantile**	**2nd quantile**	**3rd quantile**	**4th quantile**	**5th quantile**	**p-value**	**1st quantile**	**2nd quantile**	**3rd quantile**	**4th quantile**	**5th quantile**	**p-value**
	N=152	**N=123**	**N=116**	**N=116**	**N=108**		**N=91**	**N=116**	**N=125**	**N=125**	**N=131**		**N=243**	**N=239**	**N=241**	**N=241**	**N=239**	
People with disability	19 (13)	13 (11)	16 (14)	15 (13)	23 (21)	0.17	8 (8.8)	17 (15)	15 (12)	24 (19)	24 (18)	0.16	27 (11)	30 (13)	31 (13)	39 (16)	47 (20)	0.056
Children	29 (19)	16 (13)	31 (27)	24 (21)	38 (35)	**<0.001**	14 (15)	28 (24)	38 (30)	43 (34)	38 (29)	**0.026**	43 (18)	44 (18)	69 (29)	67 (28)	76 (32)	**<0.001**
Migrants from other parts of the world having COVID-19	16 (11)	7 (5.7)	5 (4.3)	8 (6.9)	5 (4.6)	0.23	8 (8.8)	14 (12)	12 (9.6)	7 (5.6)	11 (8.4)	0.52	24 (9.9)	21 (8.8)	17 (7.1)	15 (6.2)	16 (6.7)	0.52
Anyone (irrespective to health condition or age)	42 (28)	44 (36)	22 (19)	24 (21)	38 (35)	**0.006**	33 (36)	44 (38)	34 (27)	47 (38)	45 (34)	0.38	75 (31)	88 (37)	56 (23)	71 (30)	83 (35)	**0.015**
Knowledge of COVID-19 preventive measures																		
Frequent hand washing with cleaning agents.	102 (67)	97 (79)	92 (79)	88 (76)	95 (88)	**0.002**	76 (84)	97 (84)	108 (86)	108 (86)	119 (91)	0.46	178 (73)	194 (81)	200 (83)	196 (81)	214 (90)	**<0.001**
Maintaining minimum of 3 feet social distancing	69 (45)	65 (53)	79 (68)	72 (62)	76 (70)	**<0.001**	59 (65)	84 (72)	92 (74)	108 (86)	108 (82)	**0.001**	128 (53)	149 (62)	171 (71)	180 (75)	184 (77)	**<0.001**
Using face mask at outside home	89 (59)	91 (74)	93 (80)	91 (75)	96 (89)	**<0.001**	69 (76)	89 (77)	100 (80)	110 (88)	121 (92)	**0.001**	158 (65)	180 (75)	193 (80)	201 (83)	217 (91)	**<0.001**
Isolation while tested positive	10 (6.6)	9 (7.3)	13 (11)	17 (15)	14 (13)	0.15	4 (4.4)	14 (12)	19 (15)	17 (14)	28 (21)	**0.009**	14 (5.8)	23 (9.6)	32 (13)	34 (14)	42 (18)	**<0.001**
Quarantine while sick especially after close contact with patient	2 (1.3)	4 (3.3)	6 (5.2)	8 (6.9)	5 (4.6)	0.20	1 (1.1)	7 (6.0)	3 (2.4)	10 (8.0)	20 (15)	**<0.001**	3 (1.2)	11 (4.6)	9 (3.7)	18 (7.5)	25 (11)	**<0.001**
Avoiding mass gathering	36 (24)	37 (30)	49 (42)	56 (48)	50 (46)	**<0.001**	25 (28)	57 (49)	49 (39)	64 (51)	77 (59)	**<0.001**	61 (25)	94 (39)	98 (41)	120 (50)	127 (53)	**<0.001**
COVID-19 vaccines	37 (24)	43 (35)	53 (46)	47 (41)	55 (51)	**<0.001**	28 (31)	54 (47)	57 (46)	59 (47)	68 (52)	**0.035**	65 (27)	97 (41)	110 (46)	106 (44)	123 (52)	**<0.001**
Cleaning the frequently touched surfaces	9 (5.9)	14 (11)	17 (15)	9 (7.8)	8 (7.4)	0.11	0 (0.0)	11 (9.5)	15 (12)	15 (12)	27 (21)	**<0.001**	9 (3.7)	25 (11)	32 (13)	24 (10)	35 (15)	**<0.001**
Avoiding touching nose, eye, face with unclean hands	10 (6.6)	11 (8.9)	11 (9.5)	9 (7.8)	13 (12)	0.63	4 (4.4)	21 (18)	15 (12)	19 (15)	20 (15)	0.050*	14 (5.8)	32 (13)	26 (11)	28 (12)	33 (14)	**0.037**
Maintaining coughing, sneezing etiquette	8 (5.3)	11 (8.9)	15 (13)	11 (9.5)	14 (13)	0.18	5 (5.5)	17 (15)	19 (15)	15 (12)	19 (15)	0.22	13 (5.3)	28 (12)	34 (14)	26 (11)	33 (14)	**0.016**
Practice																		
COVID-19 preventive measures follow																		
Frequent hand washing with cleaning agents.	98 (65)	93 (76)	92 (79)	85 (73)	95 (88)	**<0.001**	76 (84)	94 (81)	111 (89)	112 (90)	119 (91)	0.11	174 (72)	187 (78)	203 (84)	197 (82)	214 (90)	**<0.001**
Maintaining minimum of 3 feet social distancing	62 (41)	55 (45)	69 (60)	61 (53)	76 (70)	**<0.001**	53 (58)	75 (65)	87 (70)	92 (74)	105 (80)	**0.005**	115 (47)	130 (54)	156 (65)	153 (64)	181 (76)	**<0.001**
Using face mask at outside home	83 (55)	81 (66)	93 (80)	84 (72)	96 (89)	**<0.001**	64 (70)	93 (80)	97 (78)	107 (86)	121 (92)	**<0.001**	147 (61)	174 (73)	190 (79)	191 (79)	217 (91)	**<0.001**
Avoiding mass gathering	30 (20)	38 (31)	44 (38)	48 (41)	47 (44)	**<0.001**	18 (20)	47 (41)	47 (36)	57 (46)	69 (53)	**<0.001**	48 (20)	85 (36)	91 (38)	105 (44)	116 (49)	**<0.001**
Vaccination	32 (21)	40 (33)	45 (39)	44 (38)	50 (46)	**<0.001**	27 (30)	57 (49)	51 (41)	61 (49)	65 (50)	**0.016**	59 (24)	97 (41)	96 (40)	105 (44)	115 (48)	**<0.001**
Cleaning the frequently touched surfaces	8 (5.3)	12 (9.8)	16 (14)	10 (8.6)	8 (7.4)	0.17	3 (3.3)	14 (12)	13 (10)	10 (8.0)	17 (13)	0.13	11 (4.5)	26 (11)	29 (12)	20 (8.3)	25 (11)	**0.038**

	Person with disability						Person without disability						Overall					
Indicators	**1st quantile**	**2nd quantile**	**3rd quantile**	**4th quantile**	**5th quantile**	**p-value**	**1st quantile**	**2nd quantile**	**3rd quantile**	**4th quantile**	**5th quantile**	**p-value**	**1st quantile**	**2nd quantile**	**3rd quantile**	**4th quantile**	**5th quantile**	**p-value**
	N=152	**N=123**	**N=116**	**N=116**	**N=108**		**N=91**	**N=116**	**N=125**	**N=125**	**N=131**		**N=243**	**N=239**	**N=241**	**N=241**	**N=239**	
Avoiding touching nose, eye, face with unwashed/ unsanitized hands	10 (6.6)	10 (8.1)	15 (13)	7 (6.0)	13 (12)	0.21	5 (5.5)	17 (15)	12 (9.6)	16 (13)	18 (14)	0.23	15 (6.2)	27 (11)	27 (11)	23 (9.5)	31 (13)	0.14
Maintaining coughing, sneezing etiquette	10 (6.6)	10 (8.1)	15 (13)	10 (8.6)	13 (12)	0.37	6 (6.6)	16 (14)	14 (11)	19 (15)	21 (16)	0.25	16 (6.6)	26 (11)	29 (12)	29 (12)	34 (14)	0.099*
Maintaining social distancing	104 (68)	92 (75)	92 (79)	81 (70)	85 (79)	0.17	67 (74)	96 (83)	110 (88)	111 (89)	116 (89)	**0.010**	171 (70)	188 (79)	202 (84)	192 (80)	201 (84)	**0.001**
Place of maintaining social distancing																		
Public place	78 (51)	73 (59)	77 (66)	65 (56)	69 (64)	0.099*	43 (47)	85 (73)	96 (77)	102 (82)	103 (79)	**<0.001**	121 (50)	158 (66)	173 (72)	167 (69)	172 (72)	**<0.001**
At work	5 (3.3)	4 (3.3)	11 (9.5)	10 (8.6)	14 (13)	**0.011**	3 (3.3)	12 (10)	9 (7.2)	11 (8.8)	38 (29)	**<0.001**	8 (3.3)	16 (6.7)	20 (8.3)	21 (8.7)	52 (22)	**<0.001**
Social gathering	59 (39)	49 (40)	61 (53)	55 (48)	52 (48)	0.13	49 (54)	60 (52)	63 (50)	72 (58)	82 (63)	0.29	108 (44)	109 (46)	124 (52)	127 (53)	134 (56)	0.055*
Religious place	47 (31)	44 (36)	53 (46)	47 (41)	44 (41)	0.13	29 (32)	56 (48)	64 (51)	53 (42)	75 (57)	**0.003**	76 (31)	100 (42)	117 (49)	100 (42)	119 (50)	**<0.001**
Visiting suspected covid-19 patients	7 (4.6)	4 (3.3)	9 (7.8)	2 (1.7)	11 (10)	**0.032**	5 (5.5)	13 (11)	9 (7.2)	8 (6.4)	17 (13)	0.19	12 (4.9)	17 (7.1)	18 (7.5)	10 (4.1)	28 (12)	**0.013**
At home	15 (9.9)	8 (6.5)	11 (9.5)	7 (6.0)	15 (14)	0.25	5 (5.5)	9 (7.8)	9 (7.2)	8 (6.4)	17 (13)	0.23	20 (8.2)	17 (7.1)	20 (8.3)	15 (6.2)	32 (13)	0.052*
When people around me are maintaining social distancing	1 (0.7)	8 (6.5)	4 (3.4)	3 (2.6)	4 (3.7)	0.11	2 (2.2)	8 (6.9)	8 (6.4)	7 (5.6)	15 (12)	0.098*	3 (1.2)	16 (6.7)	12 (5.0)	10 (4.1)	19 (7.9)	**0.009**
Frequency of wearing face mask																		
Every day	61 (40)	54 (44)	56 (48)	53 (46)	63 (58)	**0.004**	55 (60)	64 (55)	76 (61)	80 (64)	90 (69)	0.089*	116 (48)	118 (49)	132 (55)	133 (55)	153 (64)	**<0.001**
3-4 times per week	22 (15)	23 (19)	20 (17)	27 (23)	15 (14)		13 (14)	20 (17)	20 (16)	25 (20)	23 (18)		35 (14)	43 (18)	40 (17)	52 (22)	38 (16)	
1-2 times per week	23 (15)	17 (14)	11 (9.5)	11 (9.5)	13 (12)		7 (7.7)	15 (13)	16 (13)	12 (9.6)	11 (8.4)		30 (12)	32 (13)	27 (11)	23 (9.5)	24 (10)	
A few times per month	18 (12)	22 (18)	22 (19)	17 (15)	10 (9.3)		12 (13)	9 (7.8)	10 (8.0)	8 (6.4)	5 (3.8)		30 (12)	31 (13)	32 (13)	25 (10)	15 (6.3)	
Never	28 (18)	7 (5.7)	7 (6.0)	8 (6.9)	7 (6.5)		4 (4.4)	8 (6.9)	3 (2.4)	0 (0.0)	2 (1.5)		32 (13)	15 (6.3)	10 (4.1)	8 (3.3)	9 (3.8)	
Places of wearing face mask																		
In a crowed place	66 (43)	66 (54)	79 (68)	68 (59)	65 (60)	**0.001**	42 (46)	74 (64)	86 (69)	87 (70)	90 (69)	**0.002**	108 (44)	140 (59)	165 (69)	155 (64)	155 (65)	**<0.001**
If I feel sick	12 (7.9)	10 (8.1)	7 (6.0)	16 (14)	17 (16)	0.061*	3 (3.3)	12 (10)	17 (14)	19 (15)	19 (15)	0.057*	15 (6.2)	22 (9.2)	24 (10)	35 (15)	36 (15)	**0.007**
Whenever go outside	81 (53)	89 (72)	79 (68)	79 (68)	78 (72)	**0.004**	63 (69)	78 (67)	91 (73)	93 (74)	107 (82)	0.10	144 (59)	167 (70)	170 (71)	172 (71)	185 (77)	**<0.001**
When visiting patient	12 (7.9)	13 (11)	7 (6.0)	5 (4.3)	13 (12)	0.19	4 (4.4)	9 (7.8)	12 (9.6)	12 (9.6)	21 (16)	0.055*	16 (6.6)	22 (9.2)	19 (7.9)	17 (7.1)	34 (14)	**0.024**
When visiting older people	8 (5.3)	5 (4.1)	13 (11)	6 (5.2)	8 (7.4)	0.18	3 (3.3)	13 (11)	10 (8.0)	11 (8.8)	10 (7.6)	0.34	11 (4.5)	18 (7.5)	23 (9.5)	17 (7.1)	18 (7.5)	0.33
Only in places where wearing masks are mandatory	9 (5.9)	11 (8.9)	5 (4.3)	7 (6.0)	10 (9.3)	0.50	5 (5.5)	13 (11)	16 (13)	13 (10)	13 (9.9)	0.51	14 (5.8)	24 (10)	21 (8.7)	20 (8.3)	23 (9.6)	0.48
When going to work	3 (2.0)	7 (5.7)	7 (6.0)	5 (4.3)	14 (13)	**0.006**	1 (1.1)	9 (7.8)	9 (7.2)	12 (9.6)	36 (28)	**<0.001**	4 (1.6)	16 (6.7)	16 (6.6)	17 (7.1)	50 (21)	**<0.001**
At home	11 (7.2)	6 (4.9)	9 (7.8)	7 (6.0)	7 (6.5)	0.91	2 (2.2)	6 (5.2)	5 (4.0)	3 (2.4)	11 (8.4)	0.13	13 (5.3)	12 (5.0)	14 (5.8)	10 (4.1)	18 (7.5)	0.58

	Person with disability						Person without disability						Overall					
Indicators	**1st quantile**	**2nd quantile**	**3rd quantile**	**4th quantile**	**5th quantile**	**p-value**	**1st quantile**	**2nd quantile**	**3rd quantile**	**4th quantile**	**5th quantile**	**p-value**	**1st quantile**	**2nd quantile**	**3rd quantile**	**4th quantile**	**5th quantile**	**p-value**
	N=152	**N=123**	**N=116**	**N=116**	**N=108**		**N=91**	**N=116**	**N=125**	**N=125**	**N=131**		**N=243**	**N=239**	**N=241**	**N=241**	**N=239**	
In shopping	8 (5.3)	20 (16)	21 (18)	20 (17)	19 (18)	**0.008**	14 (15)	23 (20)	25 (20)	24 (19)	34 (26)	0.40	22 (9.1)	43 (18)	46 (19)	44 (18)	53 (22)	**0.003**
Sneezing/ coughing etiquettes																		
Cough / sneeze into my elbow	38 (25)	32 (26)	37 (32)	33 (28)	56 (52)	**<0.001**	20 (22)	50 (43)	51 (41)	48 (38)	68 (52)	**<0.001**	58 (24)	82 (34)	88 (37)	81 (34)	124 (52)	**<0.001**
Cough / sneeze into my hand	71 (47)	69 (56)	59 (51)	69 (60)	44 (41)	**0.036**	51 (56)	62 (53)	64 (51)	69 (55)	50 (38)	**0.031**	122 (50)	131 (55)	123 (51)	138 (57)	94 (39)	**0.001**
Cough / sneeze into tissue paper	11 (7.2)	4 (3.3)	9 (7.8)	15 (13)	19 (18)	**0.002**	1 (1.1)	15 (13)	8 (6.4)	14 (11)	23 (18)	**<0.001**	12 (4.9)	19 (7.9)	17 (7.1)	29 (12)	42 (18)	**<0.001**
Use a face covering e.g. towels, piece of cloth etc	36 (24)	38 (31)	39 (34)	42 (36)	49 (45)	**0.007**	27 (30)	45 (39)	52 (42)	47 (38)	58 (44)	0.26	63 (26)	83 (35)	91 (38)	89 (37)	107 (45)	**<0.001**
Do nothing	37 (24)	11 (8.9)	11 (9.5)	8 (6.9)	3 (2.8)	**<0.001**	8 (8.8)	6 (5.2)	5 (4.0)	1 (0.8)	1 (0.8)	**0.008**	45 (19)	17 (7.1)	16 (6.6)	9 (3.7)	4 (1.7)	**<0.001**
Places of maintaining sneezing/ coughing etiquettes																		
In a crowed place	68 (45)	71 (58)	76 (66)	75 (65)	66 (61)	**0.003**	47 (52)	81 (70)	85 (68)	83 (66)	91 (70)	**0.040**	115 (47)	152 (64)	161 (67)	158 (66)	157 (66)	**<0.001**
If I feel sick	25 (16)	18 (15)	22 (19)	26 (22)	35 (32)	**0.007**	14 (15)	33 (28)	37 (30)	33 (26)	45 (34)	**0.038**	39 (16)	51 (21)	59 (25)	59 (25)	80 (34)	**<0.001**
Whenever go outside	57 (38)	66 (54)	63 (54)	64 (55)	64 (59)	**0.003**	48 (53)	59 (51)	70 (56)	67 (54)	92 (70)	**0.014**	105 (43)	125 (52)	133 (55)	131 (54)	156 (65)	**<0.001**
When visiting patient	16 (11)	4 (3.3)	9 (7.8)	6 (5.2)	12 (11)	0.092*	4 (4.4)	16 (14)	8 (6.4)	8 (6.4)	15 (12)	0.065*	20 (8.2)	20 (8.4)	17 (7.1)	14 (5.8)	27 (11)	0.25
When visiting older people	9 (5.9)	6 (4.9)	8 (6.9)	8 (6.9)	12 (11)	0.41	5 (5.5)	15 (13)	11 (8.8)	13 (10)	13 (9.9)	0.49	14 (5.8)	21 (8.8)	19 (7.9)	21 (8.7)	25 (11)	0.45
Only if I see other people following it	1 (0.7)	0 (0.0)	2 (1.7)	4 (3.4)	3 (2.8)	0.18	1 (1.1)	2 (1.7)	1 (0.8)	1 (0.8)	7 (5.3)	**0.049**	2 (0.8)	2 (0.8)	3 (1.2)	5 (2.1)	10 (4.2)	**0.031**
When going to work	1 (0.7)	3 (2.4)	9 (7.8)	3 (2.6)	12 (11)	**<0.001**	1 (1.1)	8 (6.9)	8 (6.4)	11 (8.8)	18 (14)	**0.013**	2 (0.8)	11 (4.6)	17 (7.1)	14 (5.8)	30 (13)	**<0.001**
At home	38 (25)	32 (26)	41 (35)	41 (35)	40 (37)	0.098*	18 (20)	34 (29)	29 (23)	39 (31)	50 (38)	**0.022**	56 (23.0)	66 (27.6)	70 (29)	80 (33)	90 (38)	**0.007**
Avoiding touching nose, face with unwashed/ non-sanitized hands	104 (68)	81 (66)	81 (70)	86 (74)	84 (78)	0.28	65 (71)	81 (70)	102 (82)	105 (84)	112 (86)	**0.005**	169 (69.5)	162 (67.8)	183 (76)	191 (79)	196 (82)	**<0.001**
Preventive measures follow after returning home																		
Wash hands with soap	108 (71)	100 (81)	94 (81)	95 (82)	94 (87)	**0.023**	69 (76)	101 (87)	113 (90)	114 (91)	118 (90)	**0.005**	177 (72.8)	201 (84.1)	207 (86)	209 (87)	212 (89)	**<0.001**
Wash hands without soap	24 (16)	21 (17)	21 (18)	17 (15)	15 (14)	0.91	18 (20)	21 (18)	16 (13)	16 (13)	15 (12)	0.31	42 (17.3)	42 (17.6)	37 (15)	33 (14)	30 (13)	0.47
Take shower with soap	20 (13)	23 (19)	26 (22)	22 (19)	35 (32)	**0.004**	20 (22)	32 (28)	35 (28)	30 (24)	43 (33)	0.40	40 (16.5)	55 (23.0)	61 (25)	52 (22)	78 (33)	**<0.001**
Take shower without soap	7 (4.6)	1 (0.8)	7 (6.0)	4 (3.4)	6 (5.6)	0.25	2 (2.2)	11 (9.5)	5 (4.0)	3 (2.4)	5 (3.8)	0.050*	9 (3.7)	12 (5.0)	12 (5.0)	7 (2.9)	11 (4.6)	0.74
Disinfect hands with sanitizer	8 (5.3)	6 (4.9)	15 (13)	12 (10)	25 (23)	**<0.001**	11 (12)	15 (13)	12 (9.6)	20 (16)	32 (24)	**0.012**	19 (7.8)	21 (8.8)	27 (11)	32 (13)	57 (24)	**<0.001**
Disinfect clothes and shoes	2 (1.3)	0 (0.0)	5 (4.3)	4 (3.4)	2 (1.9)	0.14	1 (1.1)	6 (5.2)	2 (1.6)	4 (3.2)	7 (5.3)	0.26	3 (1.2)	6 (2.5)	7 (2.9)	8 (3.3)	9 (3.8)	0.50
Dispose of mask	22 (15)	26 (21)	38 (33)	35 (30)	41 (38)	**<0.001**	18 (20)	40 (35)	41 (33)	51 (41)	64 (49)	**<0.001**	40 (16.5)	66 (27.6)	79 (33)	86 (36)	105 (44)	**<0.001**
Disinfect/wash mask	11 (7.2)	15 (12)	17 (15)	16 (14)	12 (11)	0.34	2 (2.2)	16 (14)	9 (7.2)	23 (18)	29 (22)	**<0.001**	13 (5.3)	31 (13.0)	26 (11)	39 (16)	41 (17)	**<0.001**

	Person with disability						Person without disability						Overall					
Indicators	**1st quantile**	**2nd quantile**	**3rd quantile**	**4th quantile**	**5th quantile**	**p-value**	**1st quantile**	**2nd quantile**	**3rd quantile**	**4th quantile**	**5th quantile**	**p-value**	**1st quantile**	**2nd quantile**	**3rd quantile**	**4th quantile**	**5th quantile**	**p-value**
	N=152	**N=123**	**N=116**	**N=116**	**N=108**		**N=91**	**N=116**	**N=125**	**N=125**	**N=131**		**N=243**	**N=239**	**N=241**	**N=241**	**N=239**	
Keep distance from the family members before washing properly	6 (3.9)	4 (3.3)	8 (6.9)	8 (6.9)	2 (1.9)	0.25	4 (4.4)	9 (7.8)	10 (8.0)	7 (5.6)	15 (12)	0.31	10 (4.1)	13 (5.4)	18 (7.5)	15 (6.2)	17 (7.1)	0.54
Wash/ dispose accessories	3 (2.0)	2 (1.6)	3 (2.6)	2 (1.7)	4 (3.7)	0.83	0 (0.0)	6 (5.2)	6 (4.8)	1 (0.8)	11 (8.4)	**0.007**	3 (1.2)	8 (3.3)	9 (3.7)	3 (1.2)	15 (6.3)	**0.008**
Don't do anything	23 (15)	6 (4.9)	6 (5.2)	8 (6.9)	6 (5.6)	**0.006**	6 (6.6)	1 (0.9)	1 (0.8)	1 (0.8)	0 (0.0)	**<0.001**	29 (11.9)	7 (2.9)	7 (2.9)	9 (3.7)	6 (2.5)	**<0.001**
Practice of washing hands at the critical times																		
Before eating	133 (88)	113 (92)	108 (93)	106 (91)	101 (94)	0.42	85 (93)	108 (93)	120 (96)	119 (95)	125 (95)	0.82	218 (89.7)	221 (92.5)	228 (95)	225 (93)	226 (95)	0.20
Before touching face, mouth, nose, eyes	18 (12)	23 (19)	26 (22)	27 (23)	30 (28)	**0.020**	16 (18)	27 (23)	31 (25)	25 (20)	38 (29)	0.29	34 (14.0)	50 (20.9)	57 (24)	52 (22)	68 (29)	**0.004**
Before feeding	19 (13)	30 (24)	17 (15)	28 (24)	33 (31)	**0.002**	13 (14)	32 (28)	25 (20)	27 (22)	43 (33)	**0.013**	32 (13.2)	62 (25.9)	42 (17)	55 (23)	76 (32)	**<0.001**
After defecation	77 (51)	75 (61)	78 (67)	84 (72)	76 (70)	**0.001**	49 (54)	84 (72)	83 (66)	84 (67)	98 (75)	**0.015**	126 (51.9)	159 (66.5)	161 (67)	168 (70)	174 (73)	**<0.001**
After eating	91 (60)	81 (66)	69 (60)	78 (67)	75 (69)	0.37	65 (71)	82 (71)	98 (78)	86 (69)	91 (70)	0.45	156 (64.2)	163 (68.2)	167 (69)	164 (68)	166 (70)	0.73
After feeding	19 (13)	20 (16)	18 (16)	27 (23)	25 (23)	0.090*	9 (9.9)	32 (28)	21 (17)	25 (20)	39 (30)	**0.002**	28 (11.5)	52 (21.8)	39 (16)	52 (22)	64 (27)	**<0.001**
After returning home	46 (30)	54 (44)	61 (53)	66 (57)	73 (68)	**<0.001**	35 (39)	64 (55)	72 (58)	98 (78)	102 (78)	**<0.001**	81 (33.3)	118 (49.4)	133 (55)	164 (68)	175 (73)	**<0.001**
After taking care for others	5 (3.3)	8 (6.5)	7 (6.0)	13 (11)	8 (7.4)	0.15	2 (2.2)	15 (13)	10 (8.0)	14 (11)	28 (21)	**<0.001**	7 (2.9)	23 (9.6)	17 (7.1)	27 (11)	36 (15)	**<0.001**
When visible dirt seen	39 (26)	41 (33)	34 (29)	32 (28)	30 (28)	0.71	25 (28)	46 (40)	44 (35)	39 (31)	55 (42)	0.14	64 (26.3)	87 (36.4)	78 (32)	71 (30)	85 (36)	0.098*
After sneezing/ coughing	20 (13)	13 (11)	12 (10)	13 (11)	20 (19)	0.33	10 (11)	22 (19)	24 (19)	20 (16)	35 (27)	**0.047**	30 (12.3)	35 (14.6)	36 (15)	33 (14)	55 (23)	**0.013**
Other time	3 (2.0)	3 (2.4)	4 (3.4)	3 (2.6)	2 (1.9)	0.94	3 (3.3)	0 (0.0)	3 (2.4)	7 (5.6)	5 (3.8)	0.15	6 (2.5)	3 (1.3)	7 (2.9)	10 (4.1)	7 (2.9)	0.42
Handwashing materials																		
Water only	27 (18)	12 (9.8)	6 (5.2)	11 (9.5)	2 (1.9)	**<0.001**	13 (14)	13 (11)	8 (6.4)	6 (4.8)	4 (3.1)	**0.009**	40 (16.5)	25 (10.5)	14 (5.8)	17 (7.1)	6 (2.5)	**<0.001**
Water with soap	125 (82)	111 (90)	110 (95)	105 (91)	106 (98)		78 (86)	103 (89)	117 (94)	119 (95)	127 (97)		203 (83.5)	214 (89.5)	227 (94)	224 (93)	233 (98)	
	N=25	N=25	N=19	N=26	N=34		N=4	N=2	N=1	N=2	N=7		N=29	N=27	N=20	N=28	N=41	
Cleaning/ disinfecting assistive devices	14 (56)	12 (48)	15 (79)	18 (69)	23 (68)		2 (50)	2 (100)	1 (100)	1 (50)	6 (86)		16 (55)	14 (52)	16 (80)	19 (68)	29 (71)	
	N=14	N=12	N=15	N=18	N=23	0.22	N=2	N=2	N=1	N=1	N=6	0.49	N=16	N=14	N=16	N=19	N=29	0.20
Frequency of cleaning assistive device																		
Daily	4 (29)	3 (25)	6 (40)	4 (22)	11 (48)	0.40	2 (100)	2 (100)	1 (100)	0 (0)	4 (67)	0.51	6 (38)	5 (36)	7 (44)	4 (21)	15 (52)	0.24
Once in a week	3 (21)	4 (33)	2 (13)	6 (33)	4 (17)								3 (19)	4 (29)	2 (13)	6 (32)	4 (14)	
Twice in a week	1 (7)	1 (8)	3 (20)	2 (11)	1 (4.0)								1 (6)	1 (7)	3 (19)	2 (11)	1 (3)	
Thrice in a week	0 (0)	1 (8)	1 (7.0)	4 (22)	3 (13)		0 (0)	0 (0)	0 (0)	1 (100)	1 (17)		0 (0)	1 (7)	1 (6)	5 (26)	4 (14)	
weekly	1 (7)	1 (8)	2 (13)	1 (6.0)	2 (9.0)		0 (0)	0 (0)	0 (0)	0 (0)	1 (17)		1 (6)	1 (7)	2 (13)	1 (5)	3 (10)	

	Person with disability						Person without disability						Overall					
Indicators	**1st quantile**	**2nd quantile**	**3rd quantile**	**4th quantile**	**5th quantile**	**p-value**	**1st quantile**	**2nd quantile**	**3rd quantile**	**4th quantile**	**5th quantile**	**p-value**	**1st quantile**	**2nd quantile**	**3rd quantile**	**4th quantile**	**5th quantile**	**p-value**
	N=152	**N=123**	**N=116**	**N=116**	**N=108**		**N=91**	**N=116**	**N=125**	**N=125**	**N=131**		**N=243**	**N=239**	**N=241**	**N=241**	**N=239**	
Once in two weeks	1 (7)	1 (8)	0 (0)	1 (6.0)	1 (4.0)								1 (6)	1 (7)	0 (0)	1 (5)	1 (3)	
Other (Please specify)	3 (21)	0 (0)	0 (0)	0 (0)	0 (0)								3 (19)	0 (0)	0 (0)	0 (0)	0 (0)	
Clean/ decontaminate surfaces																		
Whenever it's visibly dirty	84 (55)	71 (58)	88 (76)	71 (61)	74 (69)	**0.004**	70 (77)	84 (72)	92 (74)	100 (80)	95 (73)	0.59	154 (63.4)	155 (64.9)	180 (75)	171 (71)	169 (71)	**0.042**
After coming back home	14 (9.2)	13 (11)	15 (13)	11 (9.5)	14 (13)	0.80	14 (15)	23 (20)	14 (11)	15 (12)	25 (19)	0.21	28 (11.5)	36 (15.1)	29 (12)	26 (11)	39 (16)	0.30
Whenever I think it could be contaminated	28 (18)	22 (18)	29 (25)	31 (27)	43 (40)	**<0.001**	10 (11)	32 (28)	39 (31)	40 (32)	57 (44)	**<0.001**	38 (15.6)	54 (22.6)	68 (28)	71 (30)	100 (42)	**<0.001**
I don't decontaminate surfaces	51 (34)	45 (37)	18 (16)	25 (22)	15 (14)	**<0.001**	14 (15)	23 (20)	20 (16)	12 (9.6)	12 (9.2)	0.075*	65 (26.7)	68 (28.5)	38 (16)	37 (15)	27 (11)	**<0.001**

Table 53: COVID-19 knowledge, practice stratified by gender

Indicators	**Indonesia**			**Kenya**			**Zambia**				**Overall**			
	Male	**Female**	**p-value**	**Male**	**Female**	**p-value**	**Male**	**Female**	**Other**	**p-value**	**Male**	**Female**	**Other**	**p-value**
	N=133	**N=207**		**N=225**	**N=317**		**N=114**	**N=205**	**N=2**		**N=472**	**N=729**	**N=2**	
Knowledge of COVID-10 spread														
Patients coughing	117 (88)	185 (89)	0.69	148 (66)	216 (68)	0.56	97 (85)	168 (82)	2 (100)	0.63	362 (77)	569 (78)	2 (100)	0.64
Patients sneezing	102 (77)	170 (82)	0.22	128 (57)	178 (56)	0.86	85 (75)	149 (73)	2 (100)	0.65	315 (67)	497 (68)	2 (100)	0.54
Social gathering without maintaining social distancing	21 (16)	63 (30)	**0.002**	98 (44)	136 (43)	0.88	85 (75)	134 (65)	2 (100)	0.15	204 (43)	333 (46)	2 (100)	0.21
Not wearing mask	82 (62)	130 (63)	0.83	124 (55)	169 (53)	0.68	85 (75)	145 (71)	2 (100)	0.52	291 (62)	444 (61)	2 (100)	0.51
Living with COVID-19 patient	14 (11)	26 (13)	0.57	12 (5.3)	11 (3.5)	0.29	48 (42)	63 (31)	0 (0.0)	0.072*	74 (16)	100 (14)	0 (0.0)	0.54
Contact with contaminated surfaces	3 (2.3)	6 (2.9)	0.72	30 (13)	39 (12)	0.72	34 (30)	39 (19)	1 (50)	0.060*	67 (14)	84 (11)	1 (50)	0.11
Handshaking	7 (5.3)	12 (5.8)	0.83	108 (48)	163 (51)	0.43	67 (59)	123 (60)	2 (100)	0.50	182 (39)	298 (41)	2 (100)	0.16
Knowledge of COVID-19 risk population														
Individuals with chronic diseases	48 (36)	79 (38)	0.70	95 (42)	133 (42)	0.95	58 (51)	86 (42)	1 (50)	0.30	201 (43)	298 (41)	1 (50)	0.82
Pregnant women	18 (14)	37 (18)	0.29	15 (6.7)	18 (5.7)	0.64	22 (19)	40 (20)	0 (0.0)	0.79	55 (12)	95 (13)	0 (0.0)	0.68
Older people	68 (51)	121 (59)	0.18	147 (65)	210 (66)	0.83	58 (51)	103 (50)	0 (0.0)	0.36	273 (58)	434 (60)	0 (0.0)	0.20
People with disability	20 (15)	39 (19)	0.37	27 (12)	27 (8.5)	0.18	32 (28)	28 (14)	1 (50)	**0.004**	79 (17)	94 (13)	1 (50)	0.065*

Indicators	Indonesia			Kenya			Zambia				Overall			
	Male	Female	p-value	Male	Female	p-value	Male	Female	Other	p-value	Male	Female	Other	p-value
	N=133	N=207		N=225	N=317		N=114	N=205	N=2		N=472	N=729	N=2	
Children	23 (17)	44 (21)	0.37	67 (30)	91 (29)	0.79	31 (27)	43 (21)	0 (0.0)	0.33	121 (26)	178 (24)	0 (0.0)	0.64
Migrants from other parts of the world having COVID-19	10 (7.5)	22 (10.6)	0.34	5 (2.2)	4 (1.3)	0.39	26 (23)	26 (13)	0 (0.0)	0.052*	41 (8.7)	52 (7.1)	0 (0.0)	0.57
Anyone (irrespective to health condition or age)	54 (41)	92 (44)	0.48	39 (17)	40 (13)	0.13	53 (47)	94 (46)	1 (50)	0.99	146 (31)	226 (31)	1 (50)	0.84
Knowledge of COVID-19 preventive measures														
Frequent hand washing with cleaning agents.	116 (87)	181 (87)	0.95	177 (79)	254 (80)	0.68	93 (82)	159 (78)	2 (100)	0.54	386 (82)	594 (82)	2 (100)	0.79
Maintaining minimum of 3 feet social distancing	97 (73)	172 (83)	**0.025**	141 (63)	189 (60)	0.47	82 (72)	129 (63)	2 (100)	0.16	320 (68)	490 (67)	2 (100)	0.60
Using face mask at outside home	106 (80)	175 (85)	0.25	171 (76)	262 (83)	0.057*	80 (70)	154 (75)	1 (50)	0.48	357 (76)	591 (81)	1 (50)	**0.048**
Isolation while tested positive	22 (17)	33 (16)	0.88	15 (6.7)	16 (5.0)	0.42	25 (22)	34 (17)	0 (0.0)	0.40	62 (13)	83 (11)	0 (0.0)	0.58
Quarantine while sick especially after close contact with patient	8 (6.0)	25 (12)	0.065*	4 (1.8)	4 (1.3)	0.62	10 (8.8)	15 (7.3)	0 (0.0)	0.82	22 (4.7)	44 (6.0)	0 (0.0)	0.56
Avoiding mass gathering	44 (33)	70 (34)	0.89	91 (40)	106 (33)	0.095*	73 (64)	114 (56)	2 (100)	0.17	208 (44)	290 (40)	2 (100)	0.083*
COVID-19 vaccines	57 (43)	99 (48)	0.37	49 (22)	59 (19)	0.36	93 (82)	142 (69)	2 (100)	**0.040**	199 (42)	300 (41)	2 (100)	0.23
Cleaning the frequently touched surfaces	6 (4.5)	10 (4.8)	0.89	19 (8.4)	19 (6.0)	0.27	34 (30)	37 (18)	0 (0.0)	**0.039**	59 (13)	66 (9.1)	0 (0.0)	0.14
Avoiding touching nose, eye, face with unclean hands	4 (3.0)	17 (8.2)	0.052*	10 (4.4)	13 (4.1)	0.85	48 (42)	41 (20)	0 (0.0)	**<0.001**	62 (13)	71 (9.7)	0 (0.0)	0.16
Maintaining coughing, sneezing etiquette	8 (6.0)	17 (8.2)	0.45	8 (3.6)	9 (2.8)	0.64	44 (39)	48 (23)	0 (0.0)	**0.011**	60 (13)	74 (10)	0 (0.0)	0.34
Practice														
COVID-19 preventive measures follow														
Frequent hand washing with cleaning agents.	109 (82)	173 (84)	0.70	175 (78)	266 (84)	0.071*	94 (83)	157 (77)	1 (50)	0.29	378 (80)	596 (82)	1 (50)	0.41
Maintaining minimum of 3 feet social distancing	86 (65)	149 (72)	0.15	134 (60)	167 (53)	0.11	77 (68)	120 (59)	2 (100)	0.15	297 (63)	436 (60)	2 (100)	0.29
Using face mask at outside home	96 (72)	171 (83)	**0.022**	171 (76)	256 (81)	0.18	78 (68)	146 (71)	1 (50)	0.72	345 (73)	573 (79)	1 (50)	0.061*
Avoiding mass gathering	31 (23)	61 (30)	0.21	75 (33)	101 (32)	0.72	75 (66)	100 (49)	2 (100)	**0.006**	181 (38)	262 (36)	2 (100)	0.13
Vaccination	52 (39)	91 (44)	0.38	43 (19)	55 (17)	0.60	89 (78)	140 (68)	2 (100)	0.12	184 (39)	286 (39)	2 (100)	0.21

Indicators	Indonesia			Kenya			Zambia				Overall			
	Male	Female	p-value	Male	Female	p-value	Male	Female	Other	p-value	Male	Female	Other	p-value
	N=133	N=207		N=225	N=317		N=114	N=205	N=2		N=472	N=729	N=2	
Cleaning the frequently touched surfaces	5 (3.8)	5 (2.4)	0.47	15 (6.7)	16 (5.0)	0.42	35 (31)	35 (17)	0 (0.0)	**0.014**	55 (12)	56 (7.7)	0 (0.0)	0.061*
Avoiding touching nose, eye, face with unwashed/ unsanitized hands	5 (3.8)	9 (4.3)	0.79	10 (4.4)	10 (3.2)	0.43	49 (43)	40 (20)	0 (0.0)	**<0.001**	64 (14)	59 (8.1)	0 (0.0)	**0.008**
Maintaining coughing, sneezing etiquette	9 (6.8)	13 (6.3)	0.86	9 (4.0)	10 (3.2)	0.60	46 (40)	47 (23)	0 (0.0)	**0.003**	64 (15)	70 (9.6)	0 (0.0)	0.091*
Maintaining social distancing	89 (67)	152 (73)	0.20	188 (84)	262 (83)	0.78	102 (90)	160 (78)	1 (50)	**0.020**	379 (80)	574 (79)	1 (50)	0.48
Place of maintaining social distancing														
Public place	85 (64)	145 (70)	0.24	154 (68)	208 (66)	0.49	81 (71)	117 (57)	1 (50)	**0.045**	320 (68)	470 (65)	1 (50)	0.44
At work	12 (9.0)	16 (7.7)	0.67	34 (15)	25 (7.9)	**0.008**	15 (13)	15 (7.3)	0 (0.0)	0.21	61 (13)	56 (7.7)	0 (0.0)	**0.010**
Social gathering	18 (14)	43 (21)	0.090*	143 (64)	183 (58)	0.17	83 (73)	131 (64)	1 (50)	0.24	244 (52)	357 (49)	1 (50)	0.65
Religious place	17 (13)	33 (16)	0.42	105 (47)	164 (52)	0.24	76 (67)	116 (57)	1 (50)	0.20	198 (42)	313 (43)	1 (50)	0.92
Visiting suspected covid-19 patients	5 (3.8)	11 (5.3)	0.51	7 (3.1)	12 (3.8)	0.67	24 (21)	26 (13)	0 (0.0)	0.12	36 (7.6)	49 (6.7)	0 (0.0)	0.77
At home	4 (3.0)	13 (6.3)	0.18	21 (9.3)	28 (8.8)	0.84	16 (14)	21 (10)	1 (50)	0.15	41 (8.7)	62 (8.5)	1 (50)	0.11
When people around me are maintaining social distancing	7 (5.3)	8 (3.9)	0.54	10 (4.4)	15 (4.7)	0.88	6 (5.3)	14 (6.8)	0 (0.0)	0.80	23 (4.9)	37 (5.1)	0 (0.0)	0.94
Frequency of wearing face mask														
Every day	98 (74)	133 (64)	0.057*	146 (65)	181 (57)	0.10	43 (38)	50 (24)	1 (50)	0.25	287 (61)	364 (50)	1 (50)	**0.001**
3-4 times per week	15 (11)	33 (16)		31 (14)	47 (15)		29 (25)	53 (26)	0 (0.0)		75 (17)	133 (18)	0 (0.0)	
1-2 times per week	3 (2.3)	16 (7.7)		18 (8.0)	44 (14)		16 (14)	39 (19)	0 (0.0)		37 (7.8)	99 (14)	0 (0.0)	
A few times per month	6 (4.5)	15 (7.2)		17 (7.6)	33 (10)		16 (14)	45 (22)	1 (50)		39 (8.3)	93 (13)	1 (50)	
Never	11 (8.3)	10 (4.8)		13 (5.8)	12 (3.8)		10 (8.8)	18 (8.8)	0 (0.0)		34 (7.2)	40 (5.5)	0 (0.0)	
Places of wearing face mask														
In a crowed place	31 (23)	48 (23)	0.98	168 (75)	218 (69)	0.14	97 (85)	159 (78)	2 (100)	0.21	296 (63)	425 (58)	2 (100)	0.16
If I feel sick	11 (8.3)	20 (9.7)	0.66	14 (6.2)	10 (3.2)	0.087*	34 (30)	43 (21)	0 (0.0)	0.15	59 (13)	73 (10)	0 (0.0)	0.36
Whenever go outside	111 (84)	181 (87)	0.30	163 (72)	245 (77)	0.20	47 (41)	90 (44)	1 (50)	0.88	321 (68)	516 (71)	1 (50)	0.49
When visiting patient	3 (2.3)	2 (1.0)	0.34	9 (4.0)	11 (3.5)	0.75	35 (31)	47 (23)	1 (50)	0.23	47 (10)	60 (8.2)	1 (50)	0.075*
When visiting older people	1 (0.8)	2 (1.0)	0.84	15 (6.7)	24 (7.6)	0.69	22 (19)	23 (11)	0 (0.0)	0.12	38 (8.1)	49 (6.7)	0 (0.0)	0.63

Indicators	Indonesia			Kenya			Zambia				Overall			
	Male	Female	p-value	Male	Female	p-value	Male	Female	Other	p-value	Male	Female	Other	p-value
	N=133	N=207		N=225	N=317		N=114	N=205	N=2		N=472	N=729	N=2	
Only in places where wearing masks are mandatory	1 (0.8)	7 (3.4)	0.12	13 (5.8)	17 (5.4)	0.84	21 (18)	43 (21)	0 (0.0)	0.67	35 (7.4)	67 (9.2)	0 (0.0)	0.51
When going to work	10 (7.5)	7 (3.4)	0.09*	35 (16)	24 (7.6)	**0.003**	13 (11)	14 (6.8)	0 (0.0)	0.34	58 (12)	45 (6.2)	0 (0.0)	**<0.001**
At home	3 (2.3)	6 (2.9)	0.72	16 (7.1)	29 (9.1)	0.40	2 (1.8)	10 (4.9)	1 (50)	**0.002**	21 (4.4)	45 (6.2)	1 (50)	**0.010**
In shopping	5 (3.8)	15 (7.2)	0.18	52 (23)	89 (28)	0.19	19 (17)	28 (14)	0 (0.0)	0.65	76 (16)	132 (18)	0 (0.0)	0.54
Sneezing/ coughing etiquettes														
Cough / sneeze into my elbow	14 (11)	28 (14)	0.41	76 (34)	100 (32)	0.58	80 (70)	134 (65)	1 (50)	0.60	170 (36)	262 (36)	1 (50)	0.92
Cough / sneeze into my hand	87 (65)	145 (70)	0.37	76 (34)	117 (37)	0.45	65 (57)	117 (57)	1 (50)	0.98	228 (48)	379 (52)	1 (50)	0.46
Cough / sneeze into tissue paper	13 (9.8)	38 (18)	**0.03**	11 (4.9)	19 (6.0)	0.58	21 (18)	17 (8.3)	0 (0.0)	**0.024**	45 (9.5)	74 (10)	0 (0.0)	0.84
Use a face covering e.g. towels, piece of cloth etc	28 (21)	48 (23)	0.64	111 (49)	172 (54)	0.26	33 (29)	41 (20)	0 (0.0)	0.14	172 (36)	261 (36)	0 (0.0)	0.56
Do nothing	17 (13)	22 (11)	0.54	26 (12)	17 (5.4)	**0.009**	4 (3.5)	5 (2.4)	0 (0.0)	0.83	47 (10)	44 (6.0)	0 (0.0)	**0.039**
Places of maintaining sneezing/ coughing etiquettes														
In a crowed place	32 (24)	51 (25)	0.90	163 (73)	224 (71)	0.65	95 (83)	176 (86)	2 (100)	0.70	290 (61)	451 (62)	2 (100)	0.53
If I feel sick	27 (20)	38 (18)	0.66	31 (14)	35 (11)	0.34	62 (54)	94 (46)	1 (50)	0.34	120 (25)	167 (23)	1 (50)	0.42
Whenever go outside	87 (65)	139 (67)	0.74	124 (55)	170 (54)	0.73	42 (37)	87 (42)	1 (50)	0.60	253 (54)	396 (54)	1 (50)	0.96
When visiting patient	1 (0.8)	1 (0.5)	0.75	11 (4.9)	6 (1.9)	**0.049**	34 (30)	44 (22)	1 (50)	0.18	46 (9.7)	51 (7.0)	1 (50)	**0.023**
When visiting older people	1 (0.8)	5 (2.4)	0.26	19 (8.4)	21 (6.6)	0.42	27 (24)	27 (13)	0 (0.0)	**0.045**	47 (10)	53 (7.3)	0 (0.0)	0.23
Only if I see other people following it	1 (0.8)	7 (3.4)	0.12	5 (2.2)	5 (1.6)	0.58	2 (1.8)	2 (1.0)	0 (0.0)	0.82	8 (1.7)	14 (1.9)	0 (0.0)	0.94
When going to work	6 (4.5)	6 (2.9)	0.43	23 (10)	13 (4.1)	**0.005**	9 (7.9)	16 (7.8)	1 (50)	0.093*	38 (8.1)	35 (4.8)	1 (50)	**0.003**
At home	24 (18)	58 (28)	**0.036**	63 (28)	112 (35)	0.072*	24 (21)	80 (39)	1 (50)	**0.004**	111 (24)	250 (34)	1 (50)	**<0.001**
Avoiding touching nose, face with unwashed/ non-sanitized hands	86 (65)	141 (68)	0.51	177 (79)	257 (81)	0.49	88 (77)	150 (73)	2 (100)	0.52	351 (74)	548 (75)	2 (100)	0.68
Preventive measures follow after returning home														
Wash hands with soap	114 (86)	185 (89)	0.31	183 (81)	259 (82)	0.91	96 (84)	167 (82)	2 (100)	0.67	393 (83)	611 (84)	2 (100)	0.80
Wash hands without soap	8 (6.0)	11 (5.3)	0.78	27 (12)	53 (17)	0.13	35 (31)	50 (24)	0 (0.0)	0.33	70 (15)	114 (16)	0 (0.0)	0.78
Take shower with soap	70 (53)	103 (50)	0.61	31 (14)	38 (12)	0.54	18 (16)	26 (13)	0 (0.0)	0.63	119 (25	167 (23)	0 (0.0)	0.48

Indicators	Indonesia			Kenya			Zambia				Overall			
	Male	Female	p-value	Male	Female	p-value	Male	Female	Other	p-value	Male	Female	Other	p-value
	N=133	N=207		N=225	N=317		N=114	N=205	N=2		N=472	N=729	N=2	
Take shower without soap	1 (0.8)	3 (1.4)	0.56	6 (2.7)	4 (1.3)	0.23	17 (15)	20 (9.8)	0 (0.0)	0.34	24 (5.1)	27 (3.7)	0 (0.0)	0.49
Disinfect hands with sanitizer	10 (7.5)	12 (5.8)	0.53	33 (15)	35 (11)	0.21	35 (31)	31 (15)	0 (0.0)	**0.003**	78 (17)	78 (11)	0 (0.0)	**0.012**
Disinfect clothes and shoes	0 (0.0)	3 (1.4)	0.16	4 (1.8)	11 (3.5)	0.24	5 (4.4)	10 (4.9)	0 (0.0)	0.93	9 (1.9)	24 (3.3)	0 (0.0)	0.35
Dispose of mask	62 (47)	116 (56)	0.090*	62 (28)	81 (26)	0.60	29 (25)	26 (13)	0 (0.0)	**0.012**	153 (32)	223 (31)	0 (0.0)	0.51
Disinfect/wash mask	1 (0.8)	1 (0.5)	0.75	38 (17)	52 (16)	0.88	23 (20)	35 (17)	0 (0.0)	0.63	62 (13)	88 (12)	0 (0.0)	0.75
Keep distance from the family members before washing properly	3 (2.3)	2 (1.0)	0.34	13 (5.8)	16 (5.0)	0.71	21 (18)	18 (8.8)	0 (0.0)	**0.036**	37 (7.8)	36 (4.9)	0 (0.0)	0.11
Wash/ dispose accessories	1 (0.8)	2 (1.0)	0.84	5 (2.2)	8 (2.5)	0.82	12 (11)	10 (4.9)	0 (0.0)	0.15	18 (3.8)	20 (2.7)	0 (0.0)	0.57
Don't do anything	12 (9.0)	8 (3.9)	**0.049**	15 (6.7)	9 (2.8)	**0.033**	4 (3.5)	10 (4.9)	0 (0.0)	0.81	31 (6.6)	27 (3.7)	0 (0.0)	0.073*
Practice of washing hands at the critical times														
Before eating	129 (97)	199 (96)	0.68	200 (89)	294 (93)	0.12	108 (95)	186 (91)	2 (100)	0.41	437 (93)	679 (93)	2 (100)	0.87
Before touching face, mouth, nose, eyes	27 (20)	38 (18)	0.66	25 (11)	37 (12)	0.84	51 (45)	82 (40)	1 (50)	0.69	103 (22)	157 (22)	1 (50)	0.62
Before feeding	20 (15)	43 (21)	0.18	37 (16)	47 (15)	0.61	45 (40)	75 (37)	0 (0.0)	0.48	102 (22)	165 (23)	0 (0.0)	0.69
After defecation	82 (62)	123 (59)	0.68	118 (52)	175 (55)	0.53	104 (91)	184 (90)	2 (100)	0.82	304 (64)	482 (66)	2 (100)	0.49
After eating	116 (87)	181 (87)	0.95	115 (51)	148 (47)	0.31	96 (84)	158 (77)	2 (100)	0.24	327 (69)	487 (67)	2 (100)	0.42
After feeding	28 (21)	49 (24)	0.57	22 (9.8)	29 (9.1)	0.80	40 (35)	67 (33)	0 (0.0)	0.55	90 (19)	145 (20)	0 (0.0)	0.74
After returning home	57 (43)	106 (51)	0.13	131 (58)	193 (61)	0.53	67 (59)	115 (56)	2 (100)	0.42	255 (54)	414 (57)	2 (100)	0.29
After taking care for others	8 (6.0)	11 (5.3)	0.78	18 (8.0)	22 (6.9)	0.64	19 (17)	32 (16)	0 (0.0)	0.80	45 (9.5)	65 (8.9)	0 (0.0)	0.85
When visible dirt seen	22 (17)	48 (23)	0.14	57 (25)	75 (24)	0.65	63 (55)	118 (58)	2 (100)	0.43	142 (30)	241 (33)	2 (100)	0.067
After sneezing/ coughing	13 (9.8)	23 (11)	0.70	10 (4.4)	22 (6.9)	0.22	46 (40)	74 (36)	1 (50)	0.71	69 (15)	119 (16)	1 (50)	0.30
Other time	1 (0.8)	2 (1.0)	0.84	11 (4.9)	13 (4.1)	0.66	1 (0.9)	5 (2.4)	0 (0.0)	0.60	13 (2.8)	20 (2.7)	0 (0.0)	0.97
Handwashing materials														
Water only	6 (4.5)	7 (3.4)	0.60	21 (9.3)	12 (3.8)	**0.008**	19 (17)	37 (18)	0 (0.0)	0.77	46 (9.7)	56 (7.7)	0 (0.0)	0.42
Water with soap	127 (96)	200 (97)		204 (91)	305 (96)		95 (83)	168 (82)	2 (100)		426 (90)	673 (92)	2 (100)	
	N=6	N=11		N=39	N=70		N=11	N=8			N=56	N=89		
Cleaning/ disinfecting assistive devices	3 (50)	8 (73)	0.35	26 (67)	49 (70)	0.72	6 (55)	2 (25)		0.20	35 (63)	59 (66)		0.64
	N=3	N=8		N=26	N=49		N=6	N=2			N=35	N=59		

Indicators	Indonesia			Kenya			Zambia				Overall			
	Male	Female	p-value	Male	Female	p-value	Male	Female	Other	p-value	Male	Female	Other	p-value
	N=133	N=207		N=225	N=317		N=114	N=205	N=2		N=472	N=729	N=2	
Frequency of cleaning assistive device														
Daily	1 (33)	3 (38)	0.82	11 (42)	19 (39)	0.70	2 (33)	1 (50)		0.62	14 (40)	23 (39)		0.50
Once in a week	1 (33)	3 (38)		4 (15)	9 (18)		1 (17)	1 (50)			6 (17)	13 (22)		
Twice in a week				3 (12)	5 (10)						3 (9)	5 (8)		
Thrice in a week				5 (19)	4 (8)		2 (33)	0 (0)			7 (20)	4 (7)		
weekly	0 (0)	1 (13)		2 (8)	5 (10)						2 (6)	6 (10)		
Once in two weeks	1 (33)	1 (13)		0 (0)	2 (4)						1 (3)	3 (5)		
Other (Please specify)				0 (0)	3 (6)						0 (0)	3 (5)		
Clean/ decontaminate surfaces														
Whenever it's visibly dirty	84 (63)	152 (73)	**0.045**	117 (52)	204 (64)	**0.004**	97 (85)	173 (84)	2 (100)	0.82	298 (63)	529 (73)	2 (100)	**0.002**
After coming back home	18 (14)	31 (15)	0.71	18 (8.0)	29 (9.1)	0.64	26 (23)	36 (18)	0 (0.0)	0.41	62 (13)	96 (13	0 (0.0)	0.86
Whenever I think it could be contaminated	7 (5.3)	23 (11)	0.064*	57 (25)	95 (30)	0.24	61 (54)	87 (42)	1 (50)	0.16	125 (27)	205 (28)	1 (50)	0.64
I don't decontaminate surfaces	36 (27)	39 (19)	0.074*	68 (30)	55 (17)	**<0.001**	13 (11)	23 (11)	1 (50)	0.23	117 (25)	117 (16)	1 (50)	**<0.001**

Table 54: Impact of types of region on COVID-19 knowledge, and hygiene practice by disability status

	Indonesia						Kenya						Zambia						Overall					
Indicators	Urban			Rural			Urban			Rural			Urban			Rural			Urban			Rural		
	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value
	N=89	N=84		N=84	N=83		N=107	N=104		N=175	N=156		N=29	N=31		N=131	N=130		N=225	N=219		N=390	N=369	
Knowledge																								
Knowledge of COVID-10 spread																								
Patients coughing	72 (81)	79 (94)	**0.009**	70 (83)	81 (98)	**0.002**	61 (57)	70 (68)	0.12	116 (66)	117 (75)	0.083*	25 (86)	28 (90)	0.62	100 (76)	114 (88)	**0.017**	158 (70)	177 (81)	0.009*	286 (73)	312 (85)	**<0.001**
Patients sneezing	58 (65)	72 (86)	**0.002**	64 (76)	78 (94)	**0.001**	46 (43)	64 (62)	**0.007**	99 (57)	97 (62)	0.30	22 (76)	30 (97)	**0.017**	86 (66)	98 (75)	0.085*	126 (56)	166 (76)	**<0.001**	249 (64)	273 (74)	**0.003**
Social gathering without	11 (12)	13 (15)	0.55	21 (25)	39 (47)	**0.003**	42 (39)	31 (30)	0.15	83 (47)	78 (50)	0.64	19 (66)	24 (77)	0.31	83 (63)	95 (73)	0.092*	72 (32)	68 (31)	0.83	187 (48)	212 (58)	**0.009**

	Indonesia						Kenya						Zambia						Overall					
Indicators	**Urban**			**Rural**			**Urban**			**Rural**			**Urban**			**Rural**			**Urban**			**Rural**		
	Person with disability	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**
	N=89	**N=84**		**N=84**	**N=83**		**N=107**	**N=104**		**N=175**	**N=156**		**N=29**	**N=31**		**N=131**	**N=130**		**N=225**	**N=219**		**N=390**	**N=369**	
maintaining social distancing																								
Not wearing mask	38 (43)	54 (64)	**0.004**	51 (61)	69 (83)	**0.001**	52 (49)	62 (60)	0.11	81 (46)	98 (63)	**0.003**	22 (76)	22 (71)	0.67	82 (63)	106 (82)	**<0.001**	112 (50)	138 (63)	**0.005**	214 (55)	273 (74)	**<0.001**
Living with COVID-19 patient	4 (4.0)	5 (6.0)	0.67	10 (12)	21 (25)	**0.026**	4 (3.7)	5 (4.8)	0.70	7 (4.0)	7 (4.5)	0.83	9 (31)	13 (42)	0.38	43 (33)	46 (35)	0.66	17 (7.6)	23 (11)	0.28	60 (15)	74 (20)	**0.092**
Contact with contaminated surfaces	4 (4.0)	1 (1.0)	0.19	1 (1.0)	3 (4.0)	0.31	20 (19)	13 (13)	0.22	15 (8.6)	21 (14)	0.15	6 (21)	9 (29)	0.46	27 (21)	32 (25)	0.44	30 (13)	23 (11)	0.36	43 (11)	56 (15)	**0.090**
Handshaking	2 (2.0)	4 (5.0)	0.37	5 (6.0)	8 (10)	0.37	41 (38)	53 (51)	0.065*	90 (51)	87 (56)	0.43	21 (72)	22 (71)	0.90	62 (47)	87 (67)	**0.001**	64 (28)	79 (36)	0.085*	157 (40)	182 (49)	**0.012**
Knowledge of COVID-19 risk population																								
Individuals with chronic diseases	26 (29)	24 (29)	0.93	40 (48)	37 (45)	0.69	34 (32)	47 (45)	**0.045**	69 (39)	78 (50)	0.053*	16 (55)	17 (55)	0.98	50 (38)	62 (48)	0.12	76 (34)	88 (40)	0.16	159 (41)	177 (48)	**0.046**
Pregnant women	11 (12)	5 (6.0)	0.15	17 (20)	22 (27)	0.34	8 (7.5)	4 (3.8)	0.25	14 (8.0)	7 (4.5)	0.19	3 (10)	7 (23)	0.20	22 (17)	30 (23)	0.20	22 (9.8)	16 (7.3)	0.35	53 (14)	59 (16)	0.35
Older people	37 (42)	37 (44)	0.74	59 (70)	56 (67)	0.70	61 (57)	64 (62)	0.50	114 (65)	118 (76)	**0.037**	21 (72)	21 (68)	0.69	52 (40)	67 (52)	0.055*	119 (53)	122 (56)	0.55	225 (58)	241 (65)	**0.031**
People with disability	11 (12)	5 (6.0)	0.15	21 (25)	22 (27)	0.82	7 (6.5)	10 (9.6)	0.41	15 (8.6)	22 (14)	0.11	7 (24)	7 (23)	0.89	25 (19)	22 (17)	0.65	25 (11)	22 (10)	0.72	61 (16)	66 (18)	0.41
Children	18 (20)	13 (15)	0.42	18 (21)	18 (22)	0.97	23 (22)	29 (28)	0.28	43 (25)	63 (40)	**0.002**	10 (34)	9 (29)	0.65	26 (20)	29 (22)	0.63	51 (23)	51 (23)	0.88	87 (22)	110 (30)	**0.018**
Migrants from other parts of the world having COVID-19	4 (4.0)	1 (1.0)	0.19	12 (14)	15 (18)	0.51	3 (2.8)	2 (1.9)	0.67	1 (0.6)	3 (1.9)	0.26	3 (10)	5 (16)	0.51	18 (14)	26 (20)	0.18	10 (4.4)	8 (3.7)	0.67	31 (7.9)	44 (12)	0.067*
Anyone (irrespective to health condition or age)	31 (35)	38 (45)	0.16	33 (39)	44 (53)	0.075*	14 (13)	18 (17)	0.39	23 (13)	24 (15)	0.56	10 (34)	9 (29)	0.65	59 (45)	70 (54)	0.15	55 (24)	65 (30)	0.21	115 (30)	138 (37)	**0.021**
Knowledge of COVID-19 preventive measures																								
Frequent hand washing with cleaning agents.	68 (76)	77 (92)	**0.006**	70 (83)	82 (99)	<**0.001**	70 (65)	80 (77)	0.065*	143 (82)	138 (89)	0.087*	22 (76)	24 (77)	0.89	101 (77)	107 (82)	0.30	160 (71)	181 (83)	**0.004**	314 (81)	327 (89)	**0.002**

	Indonesia						Kenya						Zambia						Overall					
Indicators	**Urban**			**Rural**			**Urban**			**Rural**			**Urban**			**Rural**			**Urban**			**Rural**		
	Person with disability	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**
	N=89	**N=84**		**N=84**	**N=83**		**N=107**	**N=104**		**N=175**	**N=156**		**N=29**	**N=31**		**N=131**	**N=130**		**N=225**	**N=219**		**N=390**	**N=369**	
Maintaining minimum of 3 feet social distancing	54 (61)	71 (85)	<**0.001**	67 (80)	77 (93)	**0.015**	38 (40)	65 (63)	**<0.001**	107 (61)	120 (77)	**0.002**	26 (90)	23 (74)	0.12	69 (53)	95 (73)	**<0.001**	118 (52)	159 (73)	**<0.001**	243 (62)	292 (79)	**<0.001**
Using face mask at outside home	63 (71)	68 (81)	0.12	73 (87)	77 (93)	0.21	73 (68)	82 (79)	0.081*	138 (79)	140 (90)	**0.007**	27 (93)	25 (81)	0.16	86 (66)	97 (75)	0.11	163 (72)	175 (80)	0.065*	297 (76)	314 (85)	**0.002**
Isolation while tested positive	4 (4.0)	11 (13)	**0.045**	16 (19)	24 (29)	0.14	8 (7.5)	7 (6.7)	0.83	7 (4.0)	9 (5.8)	0.45	5 (17)	11 (35)	0.11	23 (18)	20 (15)	0.64	17 (7.6)	29 (13)	**0.049**	46 (12)	53 (14)	0.29
Quarantine while sick especially after close contact with patient	2 (2.0)	2 (2.0)	0.95	9 (11)	20 (24)	**0.022**	3 (2.8)	2 (1.9)	0.67	1 (0.6)	2 (1.3)	0.50	2 (7.0)	6 (19)	0.16	8 (6.1)	9 (6.9)	0.79	7 (3.1)	10 (4.6)	0.42	18 (4.6)	31 (8.4)	**0.034**
Avoiding mass gathering	21 (24)	30 (36)	0.081*	26 (31)	37 (45)	0.069*	34 (32)	42 (40)	0.19	57 (33)	64 (41)	0.11	16 (55)	21 (68)	0.32	74 (57)	78 (60)	0.57	71 (32)	93 (43)	**0.017**	157 (40)	179 (49)	**0.022**
COVID-19 vaccines	21 (24)	31 (37)	0.056*	44 (52)	60 (72)	**0.008**	17 (16)	18 (17)	0.78	40 (23)	33 (21)	0.71	24 (83)	24 (77)	0.61	89 (68)	100 (77)	0.10	62 (28)	73 (33)	0.19	173 (44)	193 (52)	**0.029**
Cleaning the frequently touched surfaces	2 (2.0)	0 (0)	0.17	3 (4.0)	11 (13)	**0.024**	8 (7.5)	8 (7.7)	0.95	11 (6.3)	11 (7.1)	0.78	3 (10)	10 (32)	**0.040**	30 (23)	28 (22)	0.79	13 (5.8)	18 (8.2)	0.31	44 (11)	50 (14)	0.34
Avoiding touching nose, eye, face with unclean hands	1 (1.0)	1 (1.0)	0.97	4 (5.0)	15 (18)	**0.007**	3 (2.8)	5 (4.8)	0.45	4 (2.3)	11 (7.1)	**0.037**	7 (24)	11 (35)	0.34	35 (27)	36 (28)	0.86	11 (4.9)	17 (7.8)	0.21	43 (11)	62 (17)	**0.021**
Maintaining coughing, sneezing etiquette	4 (4.0)	1 (1.0)	0.19	4 (5.0)	16 (19)	**0.004**	5 (4.7)	4 (3.8)	0.77	1 (0.6)	7 (4.5)	**0.021**	9 (31)	10 (32)	0.92	36 (28)	37 (29)	0.86	18 (8.0)	15 (6.8)	0.64	41 (11)	60 (16)	**0.020**
Practice																								
COVID-19 preventive measures follow																								
Frequent hand washing with cleaning agents.	60 (67)	77 (92)	**<0.001**	66 (79)	79 (95)	**0.002**	68 (64)	88 (85)	**<0.001**	146 (83)	139 (89)	0.14	22 (76)	27 (87)	0.26	101 (77)	102 (79)	0.79	150 (67)	192 (88)	**<0.001**	313 (80)	320 (87)	**0.017**
Maintaining minimum of 3 feet social distancing	48 (54)	68 (81)	**<0.001**	56 (67)	63 (76)	0.19	39 (36)	56 (54)	0.011*	93 (53)	113 (72)	**<0.001**	24 (83)	22 (71)	0.28	63 (48)	90 (69)	**<0.001**	111 (49)	146 (67)	**<0.001**	212 (54)	266 (72)	**<0.001**

	Indonesia						Kenya						Zambia						Overall					
Indicators	**Urban**			**Rural**			**Urban**			**Rural**			**Urban**			**Rural**			**Urban**			**Rural**		
	Person with disability	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**
	N=89	**N=84**		**N=84**	**N=83**		**N=107**	**N=104**		**N=175**	**N=156**		**N=29**	**N=31**		**N=131**	**N=130**		**N=225**	**N=219**		**N=390**	**N=369**	
Using face mask at outside home	58 (65)	65 (77)	0.077*	69 (82)	75 (90)	0.12	68 (64)	84 (81)	**0.005**	137 (78)	138 (89)	**0.014**	25 (86)	27 (87)	0.92	80 (61)	93 (72)	0.074*	151 (67)	176 (80)	**0.002**	286 (73)	306 (83)	**0.001**
Avoiding mass gathering	18 (20)	28 (33)	0.051*	21 (25)	25 (30)	0.46	32 (30)	34 (33)	0.66	49 (28)	61 (39)	**0.032**	19 (66)	18 (58)	0.55	68 (52)	72 (55)	0.57	69 (31)	80 (37)	0.19	138 (35)	158 (43)	**0.036**
Vaccination	16 (18)	29 (35)	**0.013**	38 (45)	60 (72)	**<0.001**	15 (14)	18 (17)	0.51	36 (20)	29 (19)	0.65	20 (69)	24 (77)	0.46	86 (66)	101 (78)	**0.031**	51 (23)	71 (32)	**0.021**	160 (41)	190 (52)	**0.004**
Cleaning the frequently touched surfaces	2 (2.0)	1 (1.0)	0.59	2 (2.0)	5 (6.0)	0.24	8 (7.5)	6 (5.8)	0.62	9 (5.1)	8 (5.1)	1.00	8 (28)	7 (23)	0.65	25 (19)	30 (23)	0.43	18 (8.0)	14 (6.4)	0.51	36 (9.2)	43 (12)	0.27
Avoiding touching nose, eye, face with unwashed/ unsanitized hands	1 (1.0)	0 (0)	0.33	3 (4.0)	10 (12)	**0.041**	5 (4.7)	4 (3.8)	0.77	2 (1.1)	9 (5.8)	**0.019**	9 (31)	12 (39)	0.53	35 (27)	33 (25)	0.81	15 (6.7)	16 (7.3)	0.79	40 (10)	52 (14)	0.11
Maintaining coughing, sneezing etiquette	2 (2.0)	2 (2.0)	0.95	5 (6.0)	13 (16)	**0.043**	3 (2.8)	4 (3.8)	0.67	4 (2.3)	8 (5.1)	0.17	8 (28)	11 (35)	0.51	36 (28)	38 (29)	0.75	13 (5.8)	17 (7.8)	0.40	45 (12)	59 (16)	0.075*
Maintaining social distancing	55 (62)	56 (67)	0.50	62 (74)	68 (82)	0.21	80 (75)	96 (92)	**<0.001**	134 (77)	140 (90)	**0.002**	22 (76)	28 (90)	0.13	101 (77)	112 (86)	0.059*	157 (70)	180 (82)	**0.002**	297 (76)	320 (87)	**<0.001**
Place of maintaining social distancing																								
Public place	48 (54)	55 (65)	0.12	60 (71)	67 (81)	0.16	59 (55)	80 (77)	**<0.001**	102 (58)	121 (78)	**<0.001**	20 (69)	25 (81)	0.30	73 (56)	81 (62)	0.28	127 (56)	160 (73)	**<0.001**	235 (60)	269 (73)	**<0.001**
At work	7 (8.0)	4 (5.0)	0.40	5 (6.0)	12 (14)	0.069*	11 (10)	14 (14)	0.47	12 (6.9)	22 (14)	**0.030**	7 (24)	11 (35)	0.34	2 (1.5)	10 (7.7)	**0.017**	25 (11)	29 (13)	0.49	19 (4.9)	44 (12)	**<0.001**
Social gathering	7 (8.0)	11 (13)	0.26	22 (26)	21 (25)	0.90	53 (50)	60 (58)	0.23	96 (55)	117 (75)	**<0.001**	17 (59)	22 (71)	0.32	81 (62)	95 (73)	0.053*	77 (34)	93 (43)	0.074*	199 (51)	233 (63)	**<0.001**
Religious place	3 (3.0)	6 (7.0)	0.26	19 (23)	22 (27)	0.56	43 (40)	51 (49)	0.20	82 (47)	93 (60)	**0.020**	14 (48)	18 (58)	0.45	74 (57)	87 (67)	0.083*	60 (27)	75 (34)	0.083*	175 (45)	202 (55)	**0.007**
Visiting suspected covid-19 patients	1 (1.0)	0 (0)	0.33	4 (5.0)	11 (13)	0.055*	3 (2.8)	5 (4.8)	0.45	6 (3.4)	5 (3.2)	0.91	8 (28)	12 (39)	0.36	11 (8.4)	19 (15)	0.12	12 (5.3)	17 (7.8)	0.30	21 (5.4)	35 (9.5)	**0.031**
At home	9 (10)	1 (1.0)	**0.012**	4 (5.0)	3 (4.0)	0.71	16 (15)	9 (8.7)	0.16	9 (5.1)	15 (9.6)	0.12	7 (24)	7 (23)	0.89	11 (8.4)	13 (10)	0.65	32 (14)	17 (7.8)	**0.030**	24 (6.2)	31 (8.4)	0.23
When people around me are maintaining social distancing	3 (3.0)	4 (5.0)	0.64	1 (1.0)	7 (8.0)	**0.028**	3 (2.8)	6 (5.8)	0.29	7 (4.0)	9 (5.8)	0.45	2 (7.0)	4 (13)	0.44	4 (3.1)	10 (7.7)	0.096*	8 (3.6)	14 (6.4)	0.17	12 (3.1)	26 (7.0)	**0.012**

	Indonesia						Kenya						Zambia						Overall					
Indicators	**Urban**			**Rural**			**Urban**			**Rural**			**Urban**			**Rural**			**Urban**			**Rural**		
	Person with disability	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**
	N=89	**N=84**		**N=84**	**N=83**		**N=107**	**N=104**		**N=175**	**N=156**		**N=29**	**N=31**		**N=131**	**N=130**		**N=225**	**N=219**		**N=390**	**N=369**	
Frequency of wearing face mask			0.084*			**0.002**			**<0.001**			**0.002**			**0.050**			**0.002**			**<0.001**			**<0.001**
Every day	56 (63)	62 (74)		51 (61)	62 (75)		54 (51)	71 (68)		92 (53)	110 (71)		8 (28)	18 (58)		26 (20)	42 (32)		118 (52)	151 (69)		169 (43)	214 (58)	
3-4 times per week	14 (16)	12 (14)		15 (18)	7 (8.0)		20 (19)	15 (14)		22 (13)	21 (14)		14 (48)	11 (35)		22 (17)	35 (27)		48 (21)	38 (17)		59 (15)	63 (17)	
1-2 times per week	3 (3.0)	0 (0)		4 (5.0)	12 (14)		9 (8.4)	14 (14)		30 (17)	9 (5.8)		4 (14)	2 (6.0)		25 (19)	24 (19)		16 (7.1)	16 (7.3)		59 (15)	45 (12)	
A few times per month	5 (6.0)	7 (8.0)		8 (10)	1 (1.0)		11 (10)	4 (3.8)		24 (14)	11 (7.1)		3 (10)	0 (0)		38 (29)	21 (16)		19 (8.4)	11 (5.0)		70 (18)	33 (8.9)	
Never	11 (12)	3 (4.0)		6 (7.0)	1 (1.0)		13 (12)	0 (0.0)		7 (4.0)	5 (3.2)					20 (15)	8 (6.2)		24 (11)	3 (1.4)		33 (8.5)	14 (3.8)	
Places of wearing face mask																								
In a crowed place	14 (16)	18 (21)	0.33	26 (31)	21 (25)	0.42	55 (51)	76 (73)	**0.001**	128 (73)	127 (81)	0.074*	25 (86)	31 (100)	**0.032**	96 (73)	106 (82)	0.11	94 (42)	125 (57)	**0.001**	250 (64)	254 (69)	0.17
If I feel sick	2 (2.0)	6 (7.0)	0.13	12 (14)	11 (13)	0.85	2 (1.9)	1 (1.0)	0.58	14 (8.0)	7 (4.5)	0.19	6 (21)	9 (29)	0.46	26 (20)	36 (28)	0.14	10 (4.4)	16 (7.3)	0.20	52 (13)	54 (15)	0.61
Whenever go outside	71 (80)	74 (88)	0.14	71 (85)	76 (92)	0.16	72 (67)	75 (72)	0.45	133 (76)	128 (82)	0.18	14 (48)	17 (55)	0.61	45 (34)	62 (48)	**0.028**	157 (70)	166 (76)	0.15	249 (64)	266 (72)	**0.015**
When visiting patient	1 (1.0)	2 (2.0)	0.53	2 (2.0)	0 (0)	0.16	3 (2.8)	3 (2.9)	0.97	10 (5.7)	4 (2.6)	0.16	13 (45)	13 (42)	0.82	21 (16)	36 (28)	**0.023**	17 (7.6)	18 (8.2)	0.80	33 (8.5)	40 (11)	0.27
When visiting older people	1 (1.0)	0 (0)	0.33	2 (2.0)	0 (0)	0.16	7 (6.5)	4 (3.8)	0.38	15 (8.6)	13 (8.3)	0.94	8 (28)	7 (23)	0.65	7 (5.3)	23 (18)	**0.002**	16 (7.1)	11 (5.0)	0.36	24 (6.2)	36 (9.8)	0.066*
Only in places where wearing masks are mandatory	2 (2.0)	0 (0)	0.17	4 (5.0)	2 (2.0)	0.41	2 (1.9)	5 (4.8)	0.23	6 (3.4)	17 (11)	**0.008**	8 (28)	4 (13)	0.16	20 (15)	32 (25)	0.059*	12 (5.3)	9 (4.1)	0.54	30 (7.7)	51 (14)	**0.006**
When going to work	6 (7.0)	5 (6.0)	0.83	3 (4.0)	3 (4.0)	0.99	9 (8.4)	10 (9.6)	0.76	9 (5.1)	31 (20)	**<0.001**	5 (17)	9 (29)	0.28	4 (3.1)	9 (6.9)	0.15	20 (8.9)	24 (11)	0.47	16 (4.1)	43 (12)	**<0.001**
At home	2 (2.0)	2 (2.0)	0.95	3 (4.0)	2 (2.0)	0.66	10 (9.3)	6 (5.8)	0.33	18 (10)	11 (7.1)	0.30	3 (10)	4 (13)	0.76	4 (3.1)	2 (1.5)	0.41	15 (6.7)	12 (5.5)	0.60	25 (6.4)	15 (4.1)	0.15
In shopping	4 (4.0)	3 (4.0)	0.76	6 (7.0)	7 (8.0)	0.76	16 (15)	31 (30)	**0.010**	44 (25)	50 (32)	0.16	7 (24)	10 (32)	0.49	11 (8.4)	19 (15)	0.12	27 (12)	44 (20)	**0.020**	61 (16)	76 (21)	0.076*
Sneezing/ coughing etiquettes																								
Cough / sneeze into my elbow	4 (4.0)	9 (11)	0.12	11 (13)	18 (22)	0.14	26 (24)	32 (31)	0.29	53 (30)	65 (42)	**0.031**	23 (79)	27 (87)	0.42	79 (60)	86 (66)	0.33	53 (24)	68 (31)	0.076*	143 (37)	169 (46)	**0.011**
Cough / sneeze into my hand	58 (65)	56 (67)	0.84	58 (69)	60 (72)	0.65	44 (41)	34 (33)	0.20	60 (34)	55 (35)	0.85	7 (24)	9 (29)	0.67	85 (65)	82 (63)	0.76	109 (48)	99 (45)	0.49	203 (52)	197 (53)	0.71
Cough / sneeze into tissue paper	9 (10)	15 (18)	0.14	17 (20)	10 (12)	0.15	5 (4.7)	7 (6.7)	0.52	12 (6.9)	6 (3.8)	0.23	4 (14)	5 (16)	0.80	11 (8.4)	18 (14)	0.16	18 (8.0)	27 (12)	0.13	40 (10)	34 (9.2)	0.63

	Indonesia						Kenya						Zambia						Overall					
Indicators	**Urban**			**Rural**			**Urban**			**Rural**			**Urban**			**Rural**			**Urban**			**Rural**		
	Person with disability	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**
	N=89	**N=84**		**N=84**	**N=83**		**N=107**	**N=104**		**N=175**	**N=156**		**N=29**	**N=31**		**N=131**	**N=130**		**N=225**	**N=219**		**N=390**	**N=369**	
Use a face covering e.g. towels, piece of cloth etc	22 (25)	23 (27)	0.69	20 (24)	11 (13)	0.079*	34 (32)	66 (64)	**<0.001**	92 (53)	91 (58)	0.29	9 (31)	5 (16)	0.17	27 (21)	33 (25)	0.36	65 (29)	94 (43)	**0.002**	139 (36)	135 (37)	0.79
Do nothing	17 (19)	5 (6.0)	**0.009**	12 (14)	5 (6.0)	0.078*	20 (19)	3 (2.9)	**<0.001**	15 (8.6)	5 (3.2)	**0.041**	0 (0)	0 (0)		6 (4.6)	3 (2.3)	0.31	37 (16)	8 (3.7)	**<0.001**	33 (8.5)	13 (3.5)	**0.004**
Places of maintaining sneezing/ coughing etiquettes																								
In a crowed place	17 (19)	22 (26)	0.26	24 (29)	20 (24)	0.51	55 (51)	74 (71)	**0.003**	131 (75)	127 (81)	0.15	25 (86)	30 (97)	0.14	104 (79)	114 (88)	0.071*	97 (43)	126 (58)	**0.002**	259 (66)	261 (71)	0.20
If I feel sick	11 (12)	24 (29)	**0.008**	13 (15)	17 (20)	0.40	15 (14)	17 (16)	0.64	16 (9.1)	18 (12)	0.47	18 (62)	18 (58)	0.75	53 (41)	68 (52)	0.055*	44 (20)	59 (27)	0.065*	82 (21)	103 (28)	**0.027**
Whenever go outside	54 (61)	54 (64)	0.62	55 (65)	63 (76)	0.14	50 (47)	53 (51)	0.54	93 (53)	98 (63)	0.075*	16 (55)	20 (65)	0.46	46 (35)	48 (37)	0.76	120 (53)	127 (58)	0.32	194 (50)	209 (57)	0.057*
When visiting patient	1 (1.0)	0 (0)	0.33	1 (1.0)	0 (0)	0.32	4 (3.7)	4 (3.8)	0.97	6 (3.4)	3 (1.9)	0.40	8 (28)	11 (35)	0.51	27 (21)	33 (25)	0.36	13 (5.8)	15 (6.8)	0.64	34 (8.7)	36 (9.8)	0.62
When visiting older people	2 (2.0)	0 (0)	0.17	2 (2.0)	2 (2.0)	0.99	6 (5.6)	5 (4.8)	0.79	9 (5.1)	20 (13)	**0.014**	6 (21)	6 (19)	0.90	18 (14)	24 (19)	0.30	14 (6.2)	11 (5.0)	0.58	29 (7.4)	46 (13)	**0.020**
Only if I see other people following it	1 (1.0)	0 (0)	0.33	5 (6.0)	2 (2.0)	0.25	1 (0.9)	1 (1.0)	0.98	1 (0.6)	7 (4.5)	**0.021**	0 (0)	2 (6.0)	0.16	2 (1.5)	0 (0.0)	0.16	2 (0.9)	3 (1.4)	0.63	8 (2.1)	9 (2.4)	0.72
When going to work	4 (4.0)	4 (5.0)	0.93	1 (1.0)	3 (4.0)	0.31	5 (4.7)	6 (5.8)	0.72	8 (4.6)	17 (11)	**0.030**	4 (14)	7 (23)	0.38	6 (4.6)	9 (6.9)	0.42	13 (5.8)	17 (7.8)	0.40	15 (3.8)	29 (7.9)	**0.018**
At home	20 (22)	14 (17)	0.34	24 (29)	24 (29)	0.96	30 (28)	24 (23)	0.41	65 (37)	56 (36)	0.81	13 (45)	17 (55)	0.44	40 (31)	35 (27)	0.52	63 (28)	55 (25)	0.49	129 (33)	115 (31)	0.57
Avoiding touching nose, face with unwashed/ non-sanitized hands	53 (60)	59 (70)	0.14	53 (63)	62 (75)	0.11	78 (73)	83 (80)	0.24	134 (77)	139 (90)	**0.003**	25 (86)	29 (94)	0.34	93 (71)	93 (72)	0.92	156 (69)	171 (78)	**0.036**	280 (72)	294 (80)	**0.011**
Preventive measures follow after returning home																								
Wash hands with soap	71 (80)	77 (92)	**0.026**	72 (86)	79 (95)	**0.038**	76 (71)	81 (78)	0.25	146 (83)	139 (89)	0.14	24 (83)	26 (84)	0.91	102 (78)	113 (87)	0.055*	171 (76)	184 (84)	**0.035**	320 (82)	331 (90)	**0.003**
Wash hands without soap	6 (7.0)	8 (10)	0.50	3 (4.0)	2 (2.0)	0.66	17 (16)	19 (18)	0.65	25 (14)	19 (12)	0.57	10 (34)	7 (23)	0.31	37 (28)	31 (24)	0.42	33 (15)	34 (16)	0.80	65 (17)	52 (14)	0.33
Take shower with soap	47 (53)	48 (57)	0.57	38 (45)	40 (48)	0.70	11 (10)	17 (16)	0.19	13 (7.4)	28 (18)	**0.004**	5 (17)	5 (16)	0.91	12 (9.2)	22 (17)	0.062*	63 (28)	70 (32)	0.36	63 (16)	90 (24)	**0.005**

	Indonesia						Kenya						Zambia						Overall					
Indicators	**Urban**			**Rural**			**Urban**			**Rural**			**Urban**			**Rural**			**Urban**			**Rural**		
	Person with disability	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**
	N=89	**N=84**		**N=84**	**N=83**		**N=107**	**N=104**		**N=175**	**N=156**		**N=29**	**N=31**		**N=131**	**N=130**		**N=225**	**N=219**		**N=390**	**N=369**	
Take shower without soap	2 (2.0)	0 (0)	0.17	2 (2.0)	0 (0)	0.16	2 (1.9)	0 (0.0)	0.16	3 (1.7)	5 (3.2)	0.38	2 (7.0)	4 (13)	0.44	14 (11)	17 (13)	0.55	6 (2.7)	4 (1.8)	0.55	19 (4.9)	22 (6.0)	0.51
Disinfect hands with sanitizer	4 (4.0)	6 (7.0)	0.46	5 (6.0)	7 (8.0)	0.53	14 (13)	14 (14)	0.94	13 (7.4)	27 (17)	**0.006**	12 (41)	6 (19)	0.063*	18 (14)	30 (23)	0.052*	30 (13)	26 (12)	0.64	36 (9.2)	64 (17)	**<0.001**
Disinfect clothes and shoes	0 (0)	1 (1.0)	0.30	2 (2.0)	0 (0)	0.16	4 (3.7)	2 (1.9)	0.43	2 (1.1)	7 (4.5)	0.062*	1 (3.0)	2 (6.0)	0.59	4 (3.1)	8 (6.2)	0.23	5 (2.2)	5 (2.3)	0.97	8 (2.1)	15 (4.1)	0.11
Dispose of mask	23 (26)	38 (45)	**0.008**	56 (67)	61 (73)	0.34	25 (23)	31 (30)	0.29	36 (21)	51 (33)	**0.012**	6 (21)	11 (35)	0.20	16 (12)	22 (17)	0.28	54 (24)	80 (37)	0.004	108 (28)	134 (36)	**0.011**
Disinfect/wash mask	0 (0)	0 (0)		2 (2.0)	0 (0)	0.16	17 (16)	14 (14)	0.62	25 (14)	34 (22)	0.075*	4 (14)	6 (19)	0.56	23 (18)	25 (19)	0.73	21 (9.3)	20 (9.1)	0.94	50 (13)	59 (16)	0.21
Keep distance from the family members before washing properly	1 (1.0)	1 (1.0)	0.97	2 (2.0)	1 (1.0)	0.57	7 (6.5)	1 (1.0)	**0.034**	7 (4.0)	14 (9.0)	0.064*	2 (7.0)	6 (19)	0.16	9 (6.9)	22 (17)	**0.012**	10 (4.4)	8 (3.7)	0.67	18 (4.6)	37 (10)	**0.004**
Wash/ dispose accessories	1 (1.0)	0 (0)	0.33	2 (2.0)	0 (0)	0.16	1 (0.9)	1 (1.0)	0.98	1 (0.6)	10 (6.4)	**0.003**	1 (3.0)	2 (6.0)	0.59	8 (6.1)	11 (8.5)	0.46	3 (1.3)	3 (1.4)	0.97	11 (2.8)	21 (5.7)	**0.049**
Don't do anything	12 (13)	2 (2.0)	**0.007**	6 (7.0)	0 (0)	**0.013**	12 (11)	2 (1.9)	**0.007**	9 (5.1)	1 (0.6)	**0.017**	0 (0)	0 (0)		10 (7.6)	4 (3.1)	0.10	24 (11)	4 (1.8)	**<0.001**	25 (6.4)	5 (1.4)	**<0.001**
Practice of washing hands at the critical times																								
Before eating	85 (96)	81 (96)	0.76	80 (95)	82 (99)	0.18	90 (84)	96 (92)	0.066*	161 (92)	147 (94)	0.43	27 (93)	30 (97)	0.51	118 (90)	121 (93)	0.38	202 (90)	207 (95)	0.064*	359 (92)	350 (95)	0.12
Before touching face, mouth, nose, eyes	8 (9.0)	11 (13)	0.39	17 (20)	29 (35)	**0.033**	15 (14)	8 (7.7)	0.14	19 (11)	20 (13)	0.58	17 (59)	20 (65)	0.64	48 (37)	49 (38)	0.86	40 (18)	39 (18)	0.99	84 (22)	98 (27)	0.11
Before feeding	6 (7.0)	13 (15)	0.066*	24 (29)	20 (24)	0.51	9 (8.4)	18 (17)	0.053*	31 (18)	26 (17)	0.80	15 (52)	18 (58)	0.62	42 (32)	45 (35)	0.66	30 (13)	49 (23)	**0.013**	97 (25)	91 (25)	0.95
After defecation	58 (65)	57 (68)	0.71	46 (55)	44 (53)	0.82	46 (43)	52 (50)	0.31	97 (55)	98 (63)	0.17	27 (93)	27 (87)	0.44	116 (89)	120 (92)	0.30	131 (58)	136 (62)	0.40	259 (66)	262 (71)	0.17
After eating	78 (88)	79 (94)	0.15	65 (77)	75 (90)	**0.023**	56 (52)	63 (60.6)	0.23	76 (43)	68 (44)	0.98	18 (62)	30 (97)	**<0.001**	101 (77)	107 (82)	0.30	152 (68)	172 (79)	**0.009**	242 (62)	250 (68)	0.10
After feeding	9 (10)	19 (23)	**0.026**	27 (32)	22 (27)	0.42	1 (0.9)	14 (14)	**<0.001**	16 (9.1)	20 (13)	0.28	14 (48)	18 (58)	0.45	42 (32)	33 (25)	0.23	24 (11)	51 (23)	**<0.001**	85 (22)	75 (20)	0.62
After returning home	19 (21)	39 (46)	**<0.001**	50 (60)	55 (66)	0.37	57 (53)	65 (63)	**0.17**	90 (51)	112 (72)	**<0.001**	23 (79)	25 (81)	0.90	61 (47)	75 (58)	0.072*	99 (44)	129 (59)	**0.002**	201 (52)	242 (66)	**<0.001**
After taking care for others	1 (1.0)	3 (4.0)	0.28	6 (7.0)	9 (11)	0.40	4 (3.7)	6 (5.8)	0.49	11 (6.3)	19 (13)	0.062*	5 (17)	11 (35)	0.11	14 (11)	21 (16)	0.20	10 (4.4)	20 (9.1)	**0.049**	31 (7.9)	49 (13)	**0.017**
When visible dirt seen	7 (8.0)	9 (11)	0.52	19 (23)	35 (42)	**0.007**	19 (18)	22 (21)	0.53	41 (23.4)	50 (32)	0.079*	16 (55)	15 (48)	0.60	74 (57)	78 (60)	0.57	42 (19)	46 (21)	0.54	134 (34)	163 (44)	**0.006**
After sneezing/ coughing	3 (3.0)	6 (7.0)	0.26	8 (10)	19 (23)	**0.019**	4 (3.7)	7 (6.7)	0.33	6 (3.4)	15 (9.6)	**0.021**	13 (45)	14 (45)	0.98	44 (34)	50 (39)	0.41	20 (8.9)	27 (12)	0.24	58 (15)	84 (23)	**0.005**
Other time	1 (1.0)	1 (1.0)	0.97	0 (0)	1 (1.0)	0.31	8 (7.5)	6 (5.8)	0.62	4 (2.3)	6 (3.8)	0.41	0 (0)	0 (0)		2 (1.5)	4 (3.1)	0.40	9 (4.0)	7 (3.2)	0.65	6 (1.5)	11 (3.0)	0.18

	Indonesia						Kenya						Zambia						Overall					
Indicators	**Urban**			**Rural**			**Urban**			**Rural**			**Urban**			**Rural**			**Urban**			**Rural**		
	Person with disability	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**
	N=89	**N=84**		**N=84**	**N=83**		**N=107**	**N=104**		**N=175**	**N=156**		**N=29**	**N=31**		**N=131**	**N=130**		**N=225**	**N=219**		**N=390**	**N=369**	
Handwashing materials			0.70			0.99			0.051*			0.11			0.62			0.61			0.075*			0.73
Water only	3 (3.0)	2 (2.0)		4 (5)	4 (5.0)		10 (9.3)	3 (2.9)		14 (8.0)	6 (3.8)		4 (14)	3 (10)		23 (18)	26 (20)		17 (7.6)	8 (3.7)		41 (11)	36 (9.8)	
Water with soap	86 (97)	82 (98)		80 (95)	79 (95)		97 (91)	101 (97)		161 (92)	150 (96)		25 (86)	28 (90)		108 (82)	104 (80)		208 (92)	211 (96)		349 (90)	333 (90)	
	N=9	N=0		N=8	N=0		N=29	N=3		N=65	N=12		N=6	N=1		N=12	N=0		N=44	N=4		N=85	N=12	
Cleaning/ disinfecting assistive devices	5 (56)			6 (75)			20 (69)	2 (67)	0.93	44 (68)	9 (75)	0.62	3 (50)	1 (100)	0.35	4 (33)			28 (64)	3 (75)	0.65	54 (64)	9 (75)	0.44
Frequency of cleaning assistive device	N=5	N=0		N=6	N=0		N=20	N=2		N=44	N=9		N=3	N=1		N=4	N=0		N=28	N=3		N=54	N=9	
Daily	3 (60)			1 (17)			7 (35)	2 (100)	0.67	15 (34)	6 (67)	0.23	2 (67)	1 (100)	0.50				12 (43)	3 (100)	0.62	16 (30)	6 (67)	0.22
Once in a week	1 (20)			3 (50)			2 (10)	0 (0)		11 (25)	0 (0)					2 (50)			3 (11)	0 (0)		16 (30)	0 (0)	
Twice in a week							4 (20)	0 (0)		4 (9.0)	0 (0)								4 (14)	0 (0)		4 (7.0)	0 (0)	
Thrice in a week							4 (20)	0 (0)		3 (7.0)	2 (22)		1 (33)	0 (0)		1 (25)			5 (18)	0 (0)		4 (7.0)	2 (22)	
weekly				1 (17)			1 (5.0)	0 (0)		5 (11)	1 (11)								1 (4.0)	0 (0)		6 (11)	1 (11)	
Once in two weeks	1 (20)			1 (17)			2 (10)	0 (0)											3 (11)	0 (0)		1 (2.0)	0 (0)	
Other (Please specify)										3 (7.0)	0 (0)											3 (6.0)	0 (0)	
Clean/ decontaminate surfaces																								
Whenever it's visibly dirty	59 (66)	69 (82)	**0.018**	53 (63)	55 (66)	0.67	53 (50)	59 (57)	0.29	96 (55)	113 (72)	**<0.001**	21 (72)	28 (90)	0.073*	106 (81)	117 (90)	**0.037**	133 (59)	156 (71)	**0.007**	255 (65)	285 (77)	**<0.001**
After coming back home	9 (10)	8 (10)	0.90	12 (14)	20 (24)	0.11	13 (12)	13 (13)	0.94	5 (2.9)	16 (10)	**0.006**	8 (28)	8 (26)	0.88	20 (15)	26 (20)	0.32	30 (13)	29 (13)	0.98	37 (9.5)	62 (17)	**0.003**
Whenever I think it could be contaminated	5 (6)	7 (8)	0.48	10 (12)	8 (10)	0.64	19 (18)	36 (35)	**0.005**	47 (27)	50 (32)	0.30	19 (66)	24 (77)	0.31	53 (41)	53 (41)	0.96	43 (19)	67 (31)	**0.005**	110 (28)	111 (30)	0.57
I don't decontaminate surfaces	24 (27)	10 (12)	**0.013**	24 (29)	17 (20)	0.22	37 (35)	17 (16)	**0.002**	47 (27)	22 (14)	**0.004**	1 (3.0)	2 (6.0)	0.59	21 (16)	13 (10)	0.15	62 (28)	29 (13)	**<0.001**	92 (24)	52 (14)	**<0.001**

Table 55: Explore the level of ability change in current hygiene practices/behavior by disability status

	Indonesia			Kenya			Zambia			Overall		
Indicators	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**
	N=173	**N=167**		**N=282**	**N=260**		**N=160**	**N=161**		**N=615**	**N=588**	
Change in maintaining sneezing/ coughing etiquettes												
Significantly increased	21 (12)	33 (20)	0.11	103 (37)	110 (42)	0.13	72 (45)	77 (48)	0.78	196 (32)	220 (37)	0.12
Somewhat increased	94 (54)	89 (53)		92 (33)	96 (37)		71 (44)	63 (39)		257 (42)	248 (42)	
Neither increased nor decreased	58 (34)	45 (27)		79 (28)	49 (19)		16 (10)	20 (12)		153 (25)	114 (19)	
Somewhat decreased				6 (2.1)	4 (1.5)		1 (0.6)	1 (0.6)		7 (1.1)	5 (0.9)	
Significantly decreased				2 (0.7)	1 (0.4)					2 (0.3)	1 (0.2)	
Change in ability to avoid touching nose, face with unwashed hands												
Significantly increased	19 (11)	31 (19)	0.19	91 (32)	101 (39)	**0.021**	79 (49)	83 (52)	0.93	189 (31)	215 (37)	**0.045**
Somewhat increased	86 (50)	80 (48)		100 (36)	108 (42)		48 (30)	46 (29)		234 (38)	234 (40)	
Neither increased nor decreased	67 (39)	55 (33)		85 (30)	48 (19)		33 (21)	32 (20)		185 (30)	135 (23)	
Somewhat decreased	0 (0.0)	1 (0.6)		5 (1.8)	2 (0.8)					5 (0.8)	3 (0.5)	
Significantly decreased	1 (0.6)	0 (0.0)		1 (0.4)	1 (0.4)					2 (0.3)	1 (0.2)	
Change in ability in washing hands at public places												
Significantly increased	26 (15)	40 (24)	0.062*	132 (47)	152 (59)	**0.004**	77 (48)	79 (49)	0.068*	235 (38)	271 (46)	**0.002**
Somewhat increased	98 (57)	91 (55)		99 (35)	85 (33)		61 (38)	70 (44)		258 (42)	246 (42)	
Neither increased nor decreased	46 (27)	36 (22)		46 (16)	18 (6.9)		22 (14)	10 (6.2)		114 (19)	64 (11)	
Somewhat decreased	3 (1.7)	0 (0.0)		4 (1.4)	2 (0.8)		0 (0.0)	2 (1.2)		4 (0.7)	4 (0.7)	
Significantly decreased				1 (0.4)	3 (1.2)					4 (0.7)	3 (0.5)	
Change in ability in washing hands at home												
Significantly increased	30 (17)	44 (26)	0.064*	133 (47)	151 (58)	**0.005**	77 (48)	82 (51)	0.68	240 (39)	277 (47)	**<0.001**
Somewhat increased	99 (57)	96 (58)		95 (34)	87 (34)		68 (43)	68 (42)		262 (43)	251 (43)	
Neither increased nor decreased	43 (25)	27 (16)		50 (18)	19 (7.3)		15 (9.4)	11 (6.8)		108 (18)	57 (9.7)	
Somewhat decreased	1 (0.6)	0 (0.0)		3 (1.1)	2 (0.8)					4 (0.7)	2 (0.3)	
Significantly decreased	-	-		1 (0.4)	1 (0.4)					1 (0.2)	1 (0.2)	

	Indonesia			Kenya			Zambia			Overall		
Indicators	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**
	N=173	**N=167**		**N=282**	**N=260**		**N=160**	**N=161**		**N=615**	**N=588**	
Change in ability in cleaning surfaces with cleaning agents												
Significantly increased	15 (8.7)	26 (16)	0.10	39 (14)	29 (11)	**0.003**	63 (39)	64 (40)	1.00	117 (19)	119 (20)	**0.005**
Somewhat increased	77 (45)	79 (47)		2 (0.7)	0 (0.0)		57 (36)	57 (35)		136 (22)	136 (23)	
Neither increased nor decreased	80 (46)	62 (37)		169 (60)	129 (50)		40 (25)	40 (25)		289 (47)	231 (39)	
Somewhat decreased	1 (0.6)	0 (0.0)		2 (0.7)	0 (0.0)					3 (0.5)	0 (0.0)	
Significantly decreased	-	-		70 (25)	102 (39)					70 (11)	102 (17)	
	N=17			N=94	N=15		N=18	N=1		N=129	N=16	
Change in ability in cleaning assistive device												
Significantly increased	2 (12)	-		36 (38)	5 (33)	0.56	4 (22)	1 (100)	0.23	42 (33)	6 (38)	0.59
Somewhat increased	9 (53)	-		25 (27)	6 (40)		4 (22)	0 (0)		38 (30)	6 (36)	
Neither increased nor decreased	6 (35)	-		33 (35)	4 (27)		10 (56)	0 (0)		49 (38)	4 (25)	

Table 56: Explore the level of ability change in current hygiene practices/behavior by ageing

	Indonesia			Kenya			Zambia			Overall		
Indicators	**Older**	**Younger**	**p-value**	**Older**	**Younger**	**p-value**	**Older**	**Younger**	**p-value**	**Older**	**Younger**	**p-value**
	N=162	**N=178**		**N=246**	**N=296**		**N=102**	**N=219**		**N=510**	**N=693**	
Change in maintaining sneezing/ coughing etiquettes												
Significantly increased	26 (16)	28 (16)	0.97	92 (37)	121 (41)	0.13	41 (40)	108 (49)	0.23	159 (31)	257 (37)	**0.024**
Somewhat increased	86 (53)	97 (55)		87 (35)	101 (34)		44 (43)	90 (41)		217 (43)	288 (42)	
Neither increased nor decreased	50 (31)	53 (30)		65 (26)	63 (21)		16 (16)	20 (9.1)		131 (26)	136 (20)	
Somewhat decreased				1 (0.4)	9 (3.0)		1 (1.0)	1 (0.5)		2 (0.4)	10 (1.4)	
Significantly decreased				1 (0.4)	2 (0.7)					1 (0.2)	2 (0.3)	
Change in ability to avoid touching nose, face with unwashed hands												
Significantly increased	21 (13)	29 (16)	0.54	81 (33)	111 (38)	0.32	52 (51)	110 (50)	0.28	154 (30)	250 (36)	0.30
Somewhat increased	82 (51)	84 (47)		103 (42)	105 (36)		25 (25)	69 (32)		210 (41)	258 (37)	

	Indonesia			Kenya			Zambia			Overall		
Indicators	**Older**	**Younger**	**p-value**	**Older**	**Younger**	**p-value**	**Older**	**Younger**	**p-value**	**Older**	**Younger**	**p-value**
	N=162	**N=178**		**N=246**	**N=296**		**N=102**	**N=219**		**N=510**	**N=693**	
Neither increased nor decreased	57 (35)	65 (37)		60 (24)	73 (25)		25 (25)	40 (18)		142 (28)	178 (26)	
Somewhat decreased	1 (0.6)	0 (0.0)		2 (0.8)	5 (1.7)					3 (0.6)	5 (0.7)	
Significantly decreased	1 (0.6)	0 (0.0)		0 (0.0)	2 (0.7)					1 (0.2)	2 (0.3)	
Change in ability in washing hands at public places												
Significantly increased	25 (15)	41 (23)	0.072*	126 (51)	158 (53)	0.51	51 (50)	105 (48)	0.46	202 (40)	304 (44)	0.099*
Somewhat increased	90 (56)	99 (56)		89 (36)	95 (32)		38 (37)	93 (43)		217 (43)	287 (41)	
Neither increased nor decreased	44 (27)	38 (21)		25 (10)	39 (13)		13 (13)	19 (8.7)		82 (16)	96 (14)	
Somewhat decreased				3 (1.2)	3 (1.0)		0 (0.0)	2 (0.9)		3 (0.6)	5 (0.7)	
Significantly decreased	3 (1.9)	0 (0.0)		3 (1.2)	1 (0.3)					6 (1.2)	1 (0.1)	
Change in ability in washing hands at home												
Significantly increased	32 (20)	42 (24)	0.56	122 (50)	162 (55)	0.21	50 (49)	109 (50)	0.74	204 (40)	313 (45)	0.50
Somewhat increased	93 (57)	102 (57)		95 (39)	87 (29)		42 (41)	94 (43)		230 (45)	283 (41)	
Neither increased nor decreased	36 (22)	34 (19)		26 (11)	43 (15)		10 (9.8)	16 (7.3)		72 (14)	93 (13)	
Somewhat decreased	1 (0.6)	0 (0.0)		2 (0.8)	3 (1.0)					3 (0.6)	3 (0.4)	
Significantly decreased				1 (0.4)	1 (0.3)					1 (0.2)	1 (0.1)	
Change in ability in cleaning surfaces with cleaning agents												
Significantly increased	21 (13)	20 (11)	0.50	39 (16)	29 (9.8)	**0.049**	42 (41)	85 (39)	0.070*	102 (20)	134 (19)	**0.037**
Somewhat increased	69 (43)	87 (49)		0 (0.0)	2 (0.7)		28 (28)	86 (39)		97 (19)	175 (25)	
Neither increased nor decreased	72 (44)	70 (39)		124 (50)	174 (59)		32 (31)	48 (22)		228 (45)	292 (42)	
Somewhat decreased	0 (0.0)	1 (0.6)		0 (0.0)	2 (0.7)					0 (0.0)	3 (0.4)	
Significantly decreased				83 (34)	89 (30)					83 (16)	89 (13)	
Change in ability in cleaning assistive device	N=12	N=5		N=70	N=39		N=8	N=11		N=90	N=55	
Significantly increased	2 (17)	0 (0.0)	0.62	24 (34)	17 (44)	0.63	0 (0.0)	5 (45)	0.080*	26 (29)	22 (40)	0.39
Somewhat increased	6 (50)	3 (60)		21 (30)	10 (26)		2 (25)	2 (18)		29 (32)	15 (27)	
Neither increased nor decreased	4 (33)	2 (40)		25 (36)	12 (31)		6 (75)	4 (36)		35 (39)	18 (33)	

Table 57: Distribution of socio-demographic factors with the change in ability of handwashing practices at household among person with and without disabilities

	Indonesia									Kenya											Zambia										Overall									
Indicators	**Person with Disability**					**Person without Disability**				**Person with Disability**						**Person without Disability**						**Person with Disability**						**Person without Disability**						**Person with Disability**						**Person without Disability**					
	Significantly increased	**Somewhat increased**	**Neither increased nor decreased**	**Somewhat decreased**	**p-value**	**Significantly increased**	**Somewhat increased**	**Neither increased nor decreased**	**p-value**	**Significantly increased**	**Somewhat increased**	**Neither increased nor decreased**	**Somewhat decreased**	**Significantly decreased**	**p-value**	**Significantly increased**	**Somewhat increased**	**Neither increased nor decreased**	**Somewhat decreased**	**Significantly decreased**	**p-value**	**Significantly increased**	**Somewhat increased**	**Neither increased nor decreased**	**p-value**	**Significantly increased**	**Somewhat increased**	**Neither increased nor decreased**	**p-value**	**Significantly increased**	**Somewhat increased**	**Neither increased nor decreased**	**Somewhat decreased**	**Significantly decreased**	**p-value**	**Significantly increased**	**Somewhat increased**	**Neither increased nor decreased**	**Somewhat decreased**	**Significantly decreased**	**p-value**
	N=30	**N=99**	**N=43**	**N=1**		**N=44**	**N=96**	**N=27**		**N=133**	**N=95**	**N=50**	**N=3**	**N=1**		**N=151**	**N=87**	**N=19**	**N=2**	**N=1**		**N=77**	**N=68**	**N=15**		**N=82**	**N=68**	**N=11**		**N=240**	**N=262**	**N=108**	**N=4**	**N=1**		**N=277**	**N=251**	**N=57**	**N=2**	**N=1**	
Types of region					0.54				0.11						<0.001						0.333				0.022				0.003						<0.001						0.744
Urban	14 (47)	49 (49)	25 (58)	1 (100)		18 (41)	55 (57)	11 (41)		45 (34)	27 (28)	32 (64)	3 (100)	0 (0.0)		63 (42)	29 (33)	10 (53)	1 (50)	1 (100)		20 (26)	9 (13)	0 (0)		24 (29)	7 (10)	0 (0)		79 (33)	85 (32)	57 (53)	4 (100)	0 (0.0)		105 (38)	91 (36)	21 (37)	1 (50)	1 (100)	
Rural	16 (53)	50 (51)	18 (42)	0 (0)		26 (59)	41 (43)	16 (59)		88 (66)	68 (72)	18 (36)	0 (0.0)	1 (100)		88 (58)	58 (67)	9 (47)	1 (50)	0 (0.0)		57 (74)	59 (87)	15 (100)		58 (71)	61 (90)	11 (100)		161 (67)	177 (68)	51 (47)	0 (0.0)	1 (100)		172 (62)	160 (64)	36 (63)	1 (50)	0 (0.0)	
Region					0.54				0.060						0.001						0.001				<0.001				<0.001						<0.001						<0.001
North Zakarta	14 (47)	49 (49)	25 (58)	1 (100)		18 (41)	57 (59)	11 (41)																						14 (5.8)	49 (18.7)	25 (23.1)	1 (25.0)	0 (0.0)		18 (6.5)	57 (22.7)	11 (19.3)	0 (0.0)	0 (0.0)	
North Bangdung	16 (53)	50 (51)	18 (42)	0 (0)		26 (59)	39 (41)	16 (59)																						16 (6.7)	50 (19.1)	18 (16.7)	0 (0.0)	0 (0.0)		26 (9.4)	39 (15.5)	16 (28.1)	0 (0.0)	0 (0.0)	
Monze																						20 (26)	28 (41)	5 (33)		23 (28)	28 (41)	3 (27)		20 (8.3)	28 (10.7)	5 (4.6)	0 (0.0)	0 (0.0)		23 (8.3)	28 (11.2)	3 (5.3)	0 (0.0)	0 (0.0)	
Samfya																						15 (19)	29 (43)	9 (60)		18 (22)	30 (44)	5 (45)		15 (6.3)	29 (11.1)	9 (8.3)	0 (0.0)	0 (0.0)		18 (6.5)	30 (12.0)	5 (8.8)	0 (0.0)	0 (0.0)	
Mwandi																						42 (55)	11 (16)	1 (7)		41 (50)	10 (15)	3 (27)		42 (17.5)	11 (4.2)	1 (0.9)	0 (0.0)	0 (0.0)		41 (14.8)	10 (4.0)	3 (5.3)	0 (0.0)	0 (0.0)	
Embu										45 (33.8)	27 (28.4)	11 (22.0)	0 (0.0)	1 (100.0)		32 (21.2)	28 (32.2)	5 (26.3)	0 (0.0)	0 (0.0)										45 (18.8)	27 (10.3)	11 (10.2)	0 (0.0)	1 (100.0)		32 (11.6)	28 (11.2)	5 (8.8)	0 (0.0)	0 (0.0)	
Homabay										45 (33.8)	21 (22.1)	7 (14.0)	0 (0.0)	0 (0.0)		60 (39.7)	19 (21.8)	2 (10.5)	0 (0.0)	0 (0.0)										45 (18.8)	21 (8.0)	7 (6.5)	0 (0.0)	0 (0.0)		60 (21.7)	19 (7.6)	2 (3.5)	0 (0.0)	0 (0.0)	
Kwale										14 (10.5)	28 (29.5)	20 (40.0)	2 (66.7)	0 (0.0)		17 (11.3)	23 (26.4)	6 (31.6)	0 (0.0)	1 (100.0)										14 (5.8)	28 (10.7)	20 (18.5)	2 (50.0)	0 (0.0)		17 (6.1)	23 (9.2)	6 (10.5)	0 (0.0)	1 (100.0)	
Taita Taveta										29 (21.8)	19 (20.0)	12 (24.0)	1 (33.3)	0 (0.0)		42 (27.8)	17 (19.5)	6 (31.6)	2 (100.0)	0 (0.0)										29 (12.1)	19 (7.3)	12 (11.1)	1 (25.0)	0 (0.0)		42 (15.2)	17 (6.8)	6 (10.5)	2 (100.0)	0 (0.0)	
Ethnicity					0.25				0.12						0.088						0.021				<0.001				0.002						<0.001						<0.001
Jawa	6 (20)	21 (21)	15 (35)	1 (100)		11 (25)	29 (30)	8 (30)																						6 (2.5)	21 (8.0)	15 (13.9)	1 (25.0)	0 (0.0)		11 (4.0)	29 (11.6)	8 (14.0)	0 (0.0)	0 (0.0)	
Sunda	19 (63)	56 (57)	19 (44)	0 (0)		28 (64)	41 (43)	17 (63)																						19 (7.9)	56 (21.4)	19 (17.6)	0 (0.0)	0 (0.0)		28 (10.1)	41 (16.3)	17 (29.8)	0 (0.0)	0 (0.0)	
Betawi	1 (3)	14 (14)	3 (7)	0 (0)		2 (5)	8 (8)	1 (4)																						1 (0.4)	14 (5.3)	3 (2.8)	0 (0.0)	0 (0.0)		2 (0.7)	8 (3.2)	1 (1.8)	0 (0.0)	0 (0.0)	
Bemba																						15 (19)	30 (44)	9 (60)		17 (21)	27 (40)	5 (45)		15 (6.3)	30 (11.5)	9 (8.3)	0 (0.0)	0 (0.0)		17 (6.1)	27 (10.8)	5 (8.8)	0 (0.0)	0 (0.0)	
Nyanja																						0 (0)	1 (1)	0 (0)		1 (1)	0 (0)	0 (0)		0 (0.0)	1 (0.4)	0 (0.0)	0 (0.0)	0 (0.0)		1 (0.4)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
Tonga																						19 (25)	26 (38)	5 (33)		18 (22)	26 (38)	3 (27)		19 (7.9)	26 (9.9)	5 (4.6)	0 (0.0)	0 (0.0)		18 (6.5)	26 (10.4)	3 (5.3)	0 (0.0)	0 (0.0)	
Lozi																						42 (55)	10 (15)	1 (7)		43 (52)	11 (16)	3 (27)		42 (17.5)	10 (3.8)	1 (0.9)	0 (0.0)	0 (0.0)		43 (15.5)	11 (4.4)	3 (5.3)	0 (0.0)	0 (0.0)	
Embu										41 (30.8)	25 (26.3)	11 (22.0)	0 (0.0)	1 (100.0)		30 (19.9)	24 (27.6)	4 (21.1)	0 (0.0)	0 (0.0)										41 (17.1)	25 (9.5)	11 (10.2)	0 (0.0)	1 (100.0)		30 (10.8)	24 (9.6)	4 (7.0)	0 (0.0)	0 (0.0)	
Luo										45 (33.8)	21 (22.1)	9 (18.0)	0 (0.0)	0 (0.0)		61 (40.4)	19 (21.8)	3 (15.8)	0 (0.0)	0 (0.0)										45 (18.8)	21 (8.0)	9 (8.3)	0 (0.0)	0 (0.0)		61 (22.0)	19 (7.6)	3 (5.3)	0 (0.0)	0 (0.0)	
Mijikenda										14 (10.5)	21 (22.1)	11 (22.0)	2 (66.7)	0 (0.0)		17 (11.3)	16 (18.4)	4 (21.1)	0 (0.0)	1 (100.0)										14 (5.8)	21 (8.0)	11 (10.2)	2 (50.0)	0 (0.0)		17 (6.1)	16 (6.4)	4 (7.0)	0 (0.0)	1 (100.0)	
Taita										22 (16.5)	17 (17.9)	10 (20.0)	1 (33.3)	0 (0.0)		35 (23.2)	19 (21.8)	4 (21.1)	1 (50.0)	0 (0.0)										22 (9.2)	17 (6.5)	10 (9.3)	1 (25.0)	0 (0.0)		35 (12.6)	19 (7.6)	4 (7.0)	1 (50.0)	0 (0.0)	

	Indonesia									Kenya										Zambia										Overall									
Indicators	**Person with Disability**					**Person without Disability**				**Person with Disability**						**Person without Disability**						**Person with Disability**				**Person without Disability**						**Person with Disability**					**Person without Disability**				
	Significantly increased	**Somewhat increased**	**Neither increased nor decreased**	**Somewhat decreased**	**p-value**	**Significantly increased**	**Somewhat increased**	**Neither increased nor decreased**	**p-value**	**Significantly increased**	**Somewhat increased**	**Neither increased nor decreased**	**Somewhat decreased**	**Significantly decreased**	**p-value**	**Significantly increased**	**Somewhat increased**	**Neither increased nor decreased**	**Somewhat decreased**	**Significantly decreased**	**p-value**	**Significantly increased**	**Somewhat increased**	**Neither increased nor decreased**	**p-value**	**Significantly increased**	**Somewhat increased**	**Neither increased nor decreased**	**p-value**	**Significantly increased**	**Somewhat increased**	**Neither increased nor decreased**	**Somewhat decreased**	**Significantly decreased**	**p-value**	**Significantly increased**	**Somewhat increased**	**Neither increased nor decreased**	**Somewhat decreased**	**Significantly decreased**	**p-value**
	N=30	**N=99**	**N=43**	**N=1**		**N=44**	**N=96**	**N=27**		**N=133**	**N=95**	**N=50**	**N=3**	**N=1**		**N=151**	**N=87**	**N=19**	**N=2**	**N=1**		**N=77**	**N=68**	**N=15**		**N=82**	**N=68**	**N=11**		**N=240**	**N=262**	**N=108**	**N=4**	**N=1**		**N=277**	**N=251**	**N=57**	**N=2**	**N=1**	
Others_Zambia																						1 (1)	1 (1)	0 (0)		3 (4)	4 (6)	0 (0)		1 (0.4)	1 (0.4)	0 (0.0)	0 (0.0)	0 (0.0)		3 (1.1)	4 (1.6)	0 (0.0)	0 (0.0)	0 (0.0)	
Others_Indonesia	4 (13)	8 (8)	6 (14)	0 (0)		3 (7)	18 (19)	1 (4)																						4 (1.7)	8 (3.1)	6 (5.6)	0 (0.0)	0 (0.0)		3 (1.1)	18 (7.2)	1 (1.8)	0 (0.0)	0 (0.0)	
Others_Kenya										11 (8.3)	11 (11.6)	9 (18.0)	0 (0.0)	0 (0.0)		8 (5.3)	9 (10.3)	4 (21.1)	1 (50.0)	0 (0.0)										11 (4.6)	11 (4.2)	9 (8.3)	0 (0.0)	0 (0.0)		8 (2.9)	9 (3.6)	4 (7.0)	1 (50.0)	0 (0.0)	
Sex					0.38				0.80						0.45						0.94				0.89				0.71						0.70					0.98
Male	9 (30)	38 (38)	19 (44)	1 (100)		16 (36)	40 (42)	10 (37)		53 (39.8)	36 (37.9)	26 (52.0)	1 (33.3)	0 (0.0)		64 (42.4)	36 (41.4)	8 (42.1)	1 (50.0)	0 (0.0)		27 (35)	23 (34)	5 (33)		32 (39)	22 (32)	5 (45)		89 (37.1)	97 (37.0)	50 (46.3)	2 (50.0)	0 (0.0)		112 (40.4)	98 (39.0)	23 (40.4)	1 (50.0)	0 (0.0)	
Female	21 (70)	61 (62)	24 (56)	0 (0)		28 (64)	56 (58)	17 (63)		80 (60.2)	59 (62.1)	24 (48.0)	2 (66.7)	1 (100.0)		87 (57.6)	51 (58.6)	11 (57.9)	1 (50.0)	1 (100.0)		49 (64)	45 (66)	10 (67)		49 (60)	46 (68)	6 (55)		150 (62.5)	165 (63.0)	58 (53.7)	2 (50.0)	1 (100.0)		164 (59.2)	153 (61.0)	34 (59.6)	1 (50.0)	1 (100.0)	
Other																						1 (1)	0 (0)	0 (0)		1 (1)	0 (0)	0 (0)		1 (0.4)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)		1 (0.4)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
Age					0.71				0.17						0.050						0.20				0.42				0.95						0.50					0.10
Older	16 (53)	51 (52)	20 (47)	1 (100)		16 (36)	42 (44)	16 (59)		63 (47.4)	52 (54.7)	17 (34.0)	0 (0.0)	1 (100.0)		59 (39.1)	43 (49.4)	9 (47.4)	2 (100.0)	0 (0.0)		24 (31)	20 (29)	7 (47)		26 (32)	22 (32)	3 (27)		103 (42.9)	123 (46.9)	44 (40.7)	1 (25.0)	1 (100.0)		101 (36.5)	107 (42.6)	28 (49.1)	2 (100.0)	0 (0.0)	
Younger	14 (47)	48 (48)	23 (53)	0 (0)		28 (64)	54 (56)	11 (41)		70 (52.6)	43 (45.3)	33 (66.0)	3 (100.0)	0 (0.0)		92 (60.9)	44 (50.6)	10 (52.6)	0 (0.0)	1 (100.0)		53 (69)	48 (71)	8 (53)		56 (68)	46 (68)	8 (73)		137 (57.1)	139 (53.1)	64 (59.3)	3 (75.0)	0 (0.0)		176 (63.5)	144 (57.4)	29 (50.9)	0 (0.0)	1 (100.0)	
Socio-economic status					0.29				0.064						0.10						0.004				0.10				0.022						0.028					0.002
1st quartile (poorest)	7 (23)	22 (22)	13 (30)	0 (0)		5 (11)	16 (17)	6 (22)		20 (15.0)	24 (25.3)	20 (40.0)	1 (33.3)	1 (100.0)		14 (9.3)	24 (27.6)	4 (21.1)	0 (0.0)	1 (100.0)		14 (18)	23 (34)	7 (47)		4 (5)	15 (22)	2 (18)		41 (17.1)	69 (26.3)	40 (37.0)	1 (25.0)	1 (100.0)		23 (8.3)	55 (21.9)	12 (21.1)	0 (0.0)	1 (100.0)	
2nd quartile	2 (7)	23 (23)	10 (23)	0 (0)		2 (5)	21 (22)	9 (33)		29 (21.8)	20 (21.1)	10 (20.0)	0 (0.0)	0 (0.0)		38 (25.2)	7 (8.0)	4 (21.1)	0 (0.0)	0 (0.0)		15 (19)	11 (16)	3 (20)		22 (27)	11 (16)	2 (18)		46 (19.2)	54 (20.6)	23 (21.3)	0 (0.0)	0 (0.0)		62 (22.4)	39 (15.5)	15 (26.3)	0 (0.0)	0 (0.0)	
3rd quartile	4 (13)	21 (21)	5 (12)	0 (0)		15 (34)	19 (20)	4 (15)		30 (22.6)	15 (15.8)	12 (24.0)	1 (33.3)	0 (0.0)		30 (19.9)	16 (18.4)	5 (26.3)	0 (0.0)	0 (0.0)		15 (19)	12 (18)	1 (7)		20 (24)	13 (19)	3 (27)		49 (20.4)	48 (18.3)	18 (16.7)	1 (25.0)	0 (0.0)		65 (23.5)	48 (19.1)	12 (21.1)	0 (0.0)	0 (0.0)	
4th quartile	9 (30)	15 (15)	8 (19)	1 (100)		12 (27)	20 (21)	4 (15)		29 (21.8)	19 (20.0)	5 (10.0)	1 (33.3)	0 (0.0)		30 (19.9)	23 (26.4)	0 (0.0)	1 (50.0)	0 (0.0)		12 (16)	14 (21)	3 (20)		13 (16)	19 (28)	3 (27)		50 (20.8)	48 (18.3)	16 (14.8)	2 (50.0)	0 (0.0)		55 (19.9)	62 (24.7)	7 (12.3)	1 (50.0)	0 (0.0)	
5th quartile (richest)	8 (27)	18 (18)	7 (16)	0 (0)		10 (23)	20 (21)	4 (15)		25 (18.8)	17 (17.9)	3 (6.0)	0 (0.0)	0 (0.0)		39 (25.8)	17 (19.5)	6 (31.6)	1 (50.0)	0 (0.0)		21 (27)	8 (12)	1 (7)		23 (28)	10 (15)	1 (9)		54 (22.5)	43 (16.4)	11 (10.2)	0 (0.0)	0 (0.0)		72 (26.0)	47 (18.7)	11 (19.3)	1 (50.0)	0 (0.0)	
Education					0.57				0.48						0.028						0.28				0.84				<0.001						0.029					0.022
No education	2 (7)	12 (12)	8 (19)	0 (0)		1 (2)	9 (9)	2 (7)		33 (24.8)	39 (41.1)	24 (48.0)	0 (0.0)	1 (100.0)		19 (12.6)	22 (25.3)	5 (26.3)	0 (0.0)	0 (0.0)		17 (22)	12 (18)	3 (20)		1 (1)	9 (13)	0 (0)		52 (21.7)	63 (24.0)	35 (32.4)	0 (0.0)	1 (100.0)		21 (7.6)	40 (15.9)	7 (12.3)	0 (0.0)	0 (0.0)	
Primary education	4 (13)	10 (10)	0 (0)	0 (0)		3 (7)	4 (4)	0 (0)		64 (48.1)	42 (44.2)	22 (44.0)	3 (100.0)	0 (0.0)		82 (54.3)	45 (51.7)	7 (36.8)	2 (100.0)	1 (100.0)		19 (25)	17 (25)	6 (40)		13 (16)	23 (34)	6 (55)		87 (36.3)	69 (26.3)	28 (25.9)	3 (75.0)	0 (0.0)		98 (35.4)	72 (28.7)	13 (22.8)	2 (100.0)	1 (100.0)	
Secondary education	22 (73)	72 (73)	33 (77)	1 (100)		36 (82)	73 (76)	24 (89)		25 (18.8)	12 (12.6)	3 (6.0)	0 (0.0)	0 (0.0)		39 (25.8)	15 (17.2)	7 (36.8)	0 (0.0)	0 (0.0)		39 (51)	38 (56)	6 (40)		59 (72)	36 (53)	5 (45)		86 (35.8)	122 (46.6)	42 (38.9)	1 (25.0)	0 (0.0)		134 (48.4)	124 (49.4)	36 (63.2)	0 (0.0)	0 (0.0)	
Higher education	2 (7)	5 (5)	2 (5)	0 (0)		4 (9)	10 (10)	1 (4)		11 (8.3)	2 (2.1)	1 (2.0)	0 (0.0)	0 (0.0)		11 (7.3)	5 (5.7)	0 (0.0)	0 (0.0)	0 (0.0)		2 (3)	1 (1)	0 (0)		9 (11)	0 (0)	0 (0)		15 (6.3)	8 (3.1)	3 (2.8)	0 (0.0)	0 (0.0)		24 (8.7)	15 (6.0)	1 (1.8)	0 (0.0)	0 (0.0)	
Employment status					0.57				0.29						<0.001						0.006				0.59				0.069						0.11					<0.001
Full time employment	2 (7)	4 (4)	0 (0)	0 (0)		6 (14)	14 (15)	1 (4)		2 (1.5)	0 (0.0)	0 (0.0)	1 (33.3)	0 (0.0)		2 (1.3)	4 (4.6)	0 (0.0)	0 (0.0)	0 (0.0)		2 (3)	0 (0)	0 (0)		8 (10)	2 (3)	1 (9)		6 (2.5)	4 (1.5)	0 (0.0)	1 (25.0)	0 (0.0)		16 (5.8)	20 (8.0)	2 (3.5)	0 (0.0)	0 (0.0)	
Part-time employment	2 (7)	4 (4)	4 (9)	0 (0)		4 (9)	5 (5)	3 (11)		5 (3.8)	7 (7.4)	3 (6.0)	0 (0.0)	0 (0.0)		18 (11.9)	4 (4.6)	0 (0.0)	0 (0.0)	0 (0.0)		1 (1)	2 (3)	0 (0)		3 (4)	1 (1)	0 (0)		8 (3.3)	13 (5.0)	7 (6.5)	0 (0.0)	0 (0.0)		25 (9.0)	10 (4.0)	3 (5.3)	0 (0.0)	0 (0.0)	

	Indonesia								Kenya										Zambia								Overall							
Indicators	**Person with Disability**					**Person without Disability**																												
	Significantly increased	**Somewhat increased**	**Neither increased nor decreased**	**Somewhat decreased**	**p-value**	**Significantly increased**	**Somewhat increased**	**Neither increased nor decreased**	**p-value**	**Significantly increased**	**Somewhat increased**	**Neither increased nor decreased**	**Somewhat decreased**	**Significantly decreased**	**p-value**	**Significantly increased**	**Somewhat increased**	**Neither increased nor decreased**	**Somewhat decreased**	**Significantly decreased**	**p-value**	**Significantly increased**	**Somewhat increased**	**Neither increased nor decreased**	**p-value**	**Significantly increased**	**Somewhat increased**	**Neither increased nor decreased**	**p-value**	**Significantly increased**	**Somewhat increased**	**Neither increased nor decreased**	**Somewhat decreased**	**Significantly decreased**	**p-value**
	N=30	**N=99**	**N=43**	**N=1**		**N=44**	**N=96**	**N=27**		**N=133**	**N=95**	**N=50**	**N=3**	**N=1**		**N=151**	**N=87**	**N=19**	**N=2**	**N=1**		**N=77**	**N=68**	**N=15**		**N=82**	**N=68**	**N=11**		**N=240**	**N=262**	**N=108**	**N=4**	**N=1**		**N=277**	**N=251**	**N=57**	**N=2**	**N=1**	
Self-employed	5 (17)	18 (18)	6 (14)	0 (0)		3 (7)	20 (21)	4 (15)		28 (21.1)	9 (9.5)	2 (4.0)	0 (0.0)	0 (0.0)		32 (21.2)	22 (25.3)	4 (21.1)	0 (0.0)	0 (0.0)		12 (16)	8 (12)	1 (7)		14 (17)	10 (15)	4 (36)		45 (18.8)	35 (13.4)	9 (8.3)	0 (0.0)	0 (0.0)		49 (17.7)	52 (20.7)	12 (21.1)	0 (0.0)	0 (0.0)	
Home-maker	15 (50)	39 (39)	16 (37)	0 (0)		24 (55)	37 (39)	12 (44)		6 (4.5)	10 (10.5)	2 (4.0)	0 (0.0)	0 (0.0)		9 (6.0)	11 (12.6)	0 (0.0)	0 (0.0)	0 (0.0)		4 (5)	3 (4)	0 (0)		2 (2)	11 (16)	1 (9)		25 (10.4)	52 (19.8)	18 (16.7)	0 (0.0)	0 (0.0)		35 (12.6)	59 (23.5)	13 (22.8)	0 (0.0)	0 (0.0)	
Student	2 (7)	6 (6)	3 (7)	0 (0)		2 (5)	9 (9)	2 (7)		11 (8.3)	8 (8.4)	8 (16.0)	0 (0.0)	0 (0.0)		17 (11.3)	8 (9.2)	1 (5.3)	0 (0.0)	1 (100.0)		3 (4)	6 (9)	1 (7)		6 (7)	11 (16)	1 (9)		16 (6.7)	20 (7.6)	12 (11.1)	0 (0.0)	0 (0.0)		25 (9.0)	28 (11.2)	4 (7.0)	0 (0.0)	1 (100.0)	
Retired	1 (3)	12 (12)	5 (12)	1 (100)		3 (7)	7 (7)	5 (19)		15 (11.3)	6 (6.3)	0 (0.0)	0 (0.0)	0 (0.0)		8 (5.3)	7 (8.0)	1 (5.3)	0 (0.0)	0 (0.0)		2 (3)	5 (7)	0 (0)		9 (11)	5 (7)	0 (0)		18 (7.5)	23 (8.8)	5 (4.6)	1 (25.0)	0 (0.0)		20 (7.2)	19 (7.6)	6 (10.5)	0 (0.0)	0 (0.0)	
Unemployed	3 (10)	16 (16)	9 (21)	0 (0)		2 (5)	4 (4)	0 (0)		51 (38.3)	44 (46.3)	27 (54.0)	2 (66.7)	1 (100.0)		61 (40.4)	30 (34.5)	13 (68.4)	1 (50.0)	0 (0.0)		52 (68)	42 (62)	12 (80)		36 (44)	28 (41)	4 (36)		106 (44.2)	102 (38.9)	48 (44.4)	2 (50.0)	1 (100.0)		99 (35.7)	62 (24.7)	17 (29.8)	1 (50.0)	0 (0.0)	
Pre-school/ not to school yet																						1 (1)	1 (1)	0 (0)						1 (0.4)	1 (0.4)	0 (0.0)	0 (0.0)	0 (0.0)							
Other										15 (11.3)	11 (11.6)	8 (16.0)	0 (0.0)	0 (0.0)		4 (2.6)	1 (1.1)	0 (0.0)	1 (50.0)	0 (0.0)		0 (0)	1 (1)	1 (7)		4 (5)	0 (0)	0 (0)		15 (6.3)	12 (4.6)	9 (8.3)	0 (0.0)	0 (0.0)		8 (2.9)	1 (0.4)	0 (0.0)	1 (50.0)	0 (0.0)	

Table 58: Changes to the targeted outcome variables among person with disabilities

Indicators	**Indonesia**			**Kenya**			**Zambia**			**Overall**		
	Intervention received	Intervention not received	p-value	Intervention received	Intervention not received	p-value	Intervention received	Intervention not received	p-value	Intervention received	Intervention not received	p-value
	N=136	N=37		N=192	N=90		N=127	N=33		N=455	N=160	
Change in ability in washing hands at home												
Significantly increased	27 (20)	3 (8.11)	**0.007**	99 (52)	34 (38)	**0.009**	69 (54)	8 (24)	**<0.001**	195 (43)	45 (28)	**<0.001**
Somewhat increased	82 (60)	17 (46)		65 (34)	30 (33)		51 (40)	17 (52)		198 (44)	64 (40)	
Neither increased nor decreased	26 (19)	17 (46)		24 (13)	26 (29)		7 (5.5)	8 (24)		57 (13)	51 (32)	
Somewhat decreased	1 (0.7)	0 (0.0)		3 (1.6)	0 (0)					4 (0.9)	0 (0)	
Significantly decreased				1 (0.5)	0 (0)					1 (0.2)	0 (0)	
	N=122	N=51		N=175	N=107		N=121	N=39		N=418	N=197	
Maintaining minimum of 3 feet social distancing	94 (77)	10 (20)	**<0.001**	109 (62)	23 (22)	**<0.001**	81 (67)	6 (15)	**<0.001**	284 (68)	39 (20)	**<0.001**
	N=149	N=24		N=208	N=74		N=141	N=19		N=498	N=117	
Using face mask at outside home	119 (80)	8 (33)	**<0.001**	175 (84)	30 (41)	**<0.001**	100 (71)	5 (26)	**<0.001**	394 (79)	43 (37)	**<0.001**

Table 59: Changes in mediator factors explaining ability change in washing hands at home among person with disabilities

Psychological Factors	**Indonesia**			**Kenya**			**Zambia**			**Overall**		
	Intervention received	Intervention not received	p-value	Intervention received	Intervention not received	p-value	Intervention received	Intervention not received	p-value	Intervention received	Intervention not received	p-value
	N=136	N=37		N=192	N=90		N=127	N=33		N=455	N=160	
Attitude												

Maintaining preventive measure is effective way	128 (94)	26 (70)	**<0.001**	190 (99)	69 (77)	**<0.001**	121 (95)	24 (73)	**<0.001**	439 (97)	119 (74)	**<0.001**
Strong habit to practice COVID behaviour	118 (87)	24 (65)	**0.002**	168 (87)	60 (67)	**<0.001**	109 (86)	22 (67)	**0.011**	395 (89)	106 (66)	**<0.001**
Want to keep others safe	87 (64)	7 (19)	**<0.001**	84 (44)	20 (22)	**<0.001**	58 (46)	12 (36)	0.43	229 (50)	39 (24)	**<0.001**
Perceived risk of COVID-19	17 (13)	1 (2.7)	0.13	179 (93)	62 (70)	**<0.001**	124 (98)	30 (91)	0.10*	320 (70)	93 (58)	**0.006**
Norms/ social influence												
To be respected in society	79 (58)	21 (57)	0.88	87 (45)	42 (47)	0.83	88 (69)	21 (64)	0.53	254 (56)	84 (53)	0.47
Self-regulation												
Challenging to maintain	22 (16)	7 (19)	0.80	54 (28)	27 (30)	0.78	40 (32)	11 (33)	0.84	116 (26)	45 (28)	0.53
Convenient to practice	119 (88)	28 (76)	0.074*	148 (77)	54 (60)	**0.003**	95 (75)	20 (61)	0.11	362 (80)	102 (64)	**<0.001**
Financially burdensome	12 (8.8)	6 (16)	0.22	73 (38)	26 (29)	0.14	50 (39)	12 (36)	0.84	135 (30)	44 (28)	0.69

Table 60: Changes in mediator factors explaining ability change in maintaining face mask between person with and without disabilities

	Indonesia			**Kenya**			**Zambia**			**Overall**		
Psychological Factors	Intervention received N=149	Intervention not received N=24	p-value	Intervention received N=208	Intervention not received N=74	p-value	Intervention received N=141	Intervention not received N=19	p-value	Intervention received N=498	Intervention not received N=117	p-value
Attitude												
Maintaining preventive measure is effective way	140 (94)	13 (54)	**<0.001**	203 (98)	56 (76)	**<0.001**	136 (97)	12 (63)	**<0.001**	479 (96)	81 (69)	**<0.001**
Unhygienic not to maintain	134 (90)	13 (54)	**<0.001**	186 (89)	49 (66)	**<0.001**	125 (89)	11 (58)	**<0.001**	445 (89)	73 (62)	**<0.001**
Strong habit to practice covid behaviour	124 (83)	12 (50)	**<0.001**	174 (84)	43 (58)	**<0.001**	97 (69)	8 (42)	**0.021**	395 (79)	63 (54)	**<0.001**
Want to keep others safe	88 (59)	1 (4.2)	**<0.001**	71 (34)	13 (18)	**0.008**	53 (38)	4 (21)	0.21	212 (43)	18 (15)	**<0.001**
Perceived risk of COVID-19	11 (7.4)	0 (0.0)	0.17	192 (92)	50 (68)	**<0.001**	122 (87)	10 (53)	**0.001**	325 (65)	60 (51)	**0.005**
Norms/ social influence												
To be accepted in community	105 (71)	13 (54)	0.11	92 (44)	33 (45)	0.957	96 (68)	10 (53)	0.181	293 (59)	56 (48)	**0.031**
Other people maintain it	119 (80)	14 (58)	**0.034**	95 (46)	29 (39)	0.34	109 (77)	11 (58)	0.089*	323 (65)	54 (46)	**<0.001**
Self-regulation												
Challenging to remember	44 (30)	10 (42)	0.23	93 (45)	31 (42)	0.67	64 (45)	7 (37)	0.48	201 (40)	48 (41)	0.90
Feel safe, confident, comfortable	132 (89)	13 (54)	**<0.001**	165 (79)	42 (57)	**<0.001**	113 (80)	9 (47)	**0.002**	410 (82)	64 (55)	**<0.001**
Financially burdensome	16 (11)	1 (4.2)	0.47	71 (34)	24 (32)	0.89	51 (36)	3 (16)	0.12	138 (28)	28 (24)	0.49
Visual/ audio reminder act as cue	121 (81)	7 (29)	**<0.001**	113 (54)	33 (45)	0.18	101 (72)	6 (32)	**0.001**	335 (67)	46 (39)	**<0.001**

Table 61: Effects of intervention on ability change in washing hands at home via changes in psychosocial factors (mediators) among person with disabilities

Psychological Factors	**Indonesia**				**Kenya**				**Zambia**				**Overall**			
	indirect effect				indirect effect				indirect effect				indirect effect			
	path a	path b	(a*b)	95% CI	path a	path b	(a*b)	95% CI	path a	path b	(a*b)	95% CI	path a	path b	(a*b)	95% CI
Attitude																
Washing hand is an effective way to reduce risk of COVID-19	**0.238**	-0.632	**-0.15**	(-0.299 to -0.047)	**0.22**	-0.545	**-0.122**	(-0.216 to -0.042)	0.23	**-0.333**	-0.075	(-0.353 to -0.011)	**0.22**	-0.47	**-0.105**	(-0.17 to -0.05)
Strong habit to practice COVID behaviour	**0.219**	-0.631	**-0.14**	(-0.269 to -0.046)	**0.21**	-0.323	**-0.067**	(-0.172 to -0.025)	0.19	**-0.348**	**-0.067**	(-0.221 to -0.013)	**0.21**	-0.39	**-0.079**	(-0.13 to -0.04)
Want to keep others safe	**0.45**	-0.142	-0.06	(-0.161 to 0.025)	**0.22**	-0.409	**-0.088**	(-0.160 to -0.042)	-	-	-		**0.26**	-0.36	**-0.94**	(-0.14 to -0.05)
Perceived risk of COVID-19	-	-	-	-	**0.24**	-0.439	**-0.107**	(-0.209 to -0.036)	0.07	-0.057	-0.004	(-0.029 to 0.063)	**0.12**	-0.44	**-0.054**	(-0.10 to -0.02)
Self-regulation																
Convenient to practice	0.118	0.191	0.02	(-0.01 to 0.12)	-	-	-		-	-	-		**0.16**	0.01	0.002	(-0.02 to 0.03)

Table 62: Effects of intervention on wearing mask practice changes in psychosocial factors (mediators) among person with disabilities

Psychological Factors	Indonesia				Kenya				Zambia				Overall			
	indirect effect				indirect effect				indirect effect				indirect effect			
	path a	path b	(a*b)	95% CI	path a	path b	(a*b)	95% CI	path a	path b	(a*b)	95% CI	path a	path b	(a*b)	95% CI
Attitude																
Wearing mask is an effective way to reduc COVID-19 risk	**0.397**	0.4	0.159*	(0.02 to 0.36)	**0.22**	0.35	**0.077**	(0.015 to 0.153)	**0.33**	0.11	0.036	(-0.104 to 0.183)	**0.269**	0.358	**0.097**	(0.05 to 0.15)
Unhygienic not to wash the reusable mask	**0.357**	-0.049	-0.017	(-0.10 to 0.07)	**0.23**	0.07	0.017	(-0.025 to 0.064)	**0.31**	0.36	0.109*	(0.029 to 0.260)	**0.269**	0.125	**0.034**	(-0.001 to 0.08)
Strong habit of wearing mask	**0.332**	0.185	0.061	(-0.006 to 0.208)	**0.26**	-0.04	-0.011	(-0.054 to 0.016)	**0.27**	0.05	0.014	(-0.025 to 0.082)	**0.254**	0.089	0.023	(0 to 0.05)
Want to keep others safe	**0.549**	-0.076	-0.042	(-0.116 to 0.019)	**0.17**	-0.02	-0.002	(-0.022 to 0.012)					**0.272**	-0.012	-0.003	(-0.025 to 0.014)
Perceived risk of COVID-19	**0.074**	0.041	0.003	(-0.015 to 0.017)	**0.25**	0.07	0.017	(-0.022 to 0.075)	**0.34**	0.09	0.034	(-0.031 to 0.143)	**0.139**	0.004	0.0006	(-0.01 to 0.01)
Norms/ social influence																
To be accepted in community	0.163	-0.03	-0.005	(-0.061 to 0.029)									**0.109**	-0.066	-0.007	(-0.025 to 0)
Other people maintain it	**0.215**	-0.043	0.009	(-0.031 to 0.085)					0.19	0.01	0.001	(-0.038 to 0.047)	**0.187**	0.0008	0.0001	(-0.02 to 0.018)
Self-regulation																
Feel safe, confident, comfortable	**0.344**	0.057	0.019	(-0.063 to 0.139)	**0.23**	0.06	0.014	(-0.013 to 0.051)	**0.33**	0.14	0.046	(-0.002 to 0.170)	**0.276**	0.113	**0.03**	(0.007 to 0.063)
Visual/ audio reminder act as cue	**0.52**	0.131	0.068	(-0.017 to 0.192)					**0.4**	-0.006	-0.002	(-0.073 to 0.053)	**0.279**	-0.044	-0.012	(0.107 to 0.221)

Table 63: Access to handwashing facilities at household by disability status

Indicators	Indonesia			Kenya			Zambia			Overall		
	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value	Person with disability	Person without Disability	p-value
	N=173	N=167		N=282	N=260		N=160	N=161		N=615	N=588	
Handwashing place												
Toilet inside the household	107 (62)	121 (73)	0.20	6 (2.1)	8 (3.1)	**0.011**	3 (1.9)	2 (1.2)	0.74	116 (19)	131 (22)	0.21
Kitchen inside the household	53 (31)	40 (24)		12 (4.3)	22 (8.5)		6 (3.8)	2 (1.2)		71 (12)	64 (11)	
Basin inside the household	3 (1.7)	2 (1.2)		93 (33)	72 (28)		44 (28)	40 (25)		140 (23)	114 (19)	
Beside the tubewell/tap/ water source in the yard	3 (1.7)	2 (1.2)		92 (33)	64 (25)		13 (8.1)	14 (8.7)		108 (18)	80 (14)	
Customized bucket/ mug	6 (3.5)	1 (0.6)		55 (20)	79 (30)		74 (46)	78 (48)		135 (22)	158 (27)	
Open water bodies (e.g. river, pond, spring)				1 (0.4)	0 (0.0)					1 (0.2)	0 (0.0)	
School/ College/ Madrasha	1 (0.6)	0 (0.0)		1 (0.4)	2 (0.8)		0 (0.0)	1 (0.6)		2 (0.3)	3 (0.5)	
No handwashing station just a designated place	0 (0.0)	1 (0.6)		19 (6.7)	13 (5.0)		8 (5.0)	12 (7.5)		27 (4.4)	26 (4.4)	
Others (Please specify)				3 (1.1)	0 (0.0)		12 (7.5)	12 (7.5)		15 (2.4)	12 (2.0)	
Distance from household												
within 5m	156 (90)	157 (94)	0.30	148 (53)	141 (54)	0.38	113 (71)	109 (68)	0.82	417 (68)	407 (69)	0.71
6-10m	8 (4.6)	3 (1.8)		84 (30)	84 (32)		23 (14)	24 (15)		115 (19)	111 (19)	
>10m	9 (5.2)	7 (4.2)		50 (18)	35 (14)		24 (15)	28 (17)		83 (14)	70 (12)	
Availability of water facility	157 (91)	150 (90)	0.77	144 (58)	142 (60)	0.72	125 (78)	107 (67)	**0.024**	426 (73)	399 (71)	0.31
Availability of cleaning agents	135 (78)	140 (84)	0.17	86 (35)	99 (42)	0.12	64 (40)	50 (31)	0.10	285 (49)	289 (51)	0.48
Entry path components												
Smooth flat surface	134 (78)	139 (83)	0.18	187 (76)	159 (67)	**0.036**	139 (90)	138 (92)	0.48	460 (80)	436 (79)	0.59
Uneven flat surface	40 (23)	28 (17)	0.17	32 (13)	37 (16)	0.44	8 (5.2)	10 (6.7)	0.63	80 (14)	75 (14)	0.86
Stairs	12 (6.9)	6 (3.6)	0.17	4 (1.6)	4 (1.7)	0.95	10 (6.5)	4 (2.7)	0.11	26 (4.5)	14 (2.5)	0.070*
Surface is not slippery	104 (60)	105 (63)	0.60	101 (41)	90 (38)	0.51	67 (42)	64 (42)	1.00	272 (47)	259 (47)	0.89
Ramp for wheelchair access	1 (0.6)	0 (0.0)	1.00	4 (1.6)	4 (1.7)	1.00	2 (1.3)	0 (0.0)	0.50	7 (1.2)	4 (0.7)	0.55
Ramp is not steep	1 (0.6)	1 (0.6)	1.00	0 (0.0)	0 (0.0)	-	1 (0.6)	1 (0.7)	1.00	2 (0.3)	2 (0.4)	1.00
Adequate space for wheel chair accommodation	1 (0.6)	1 (0.6)	1.00	24 (9.7)	24 (10)	0.88	38 (24)	36 (24)	1.00	63 (11)	61 (11)	1.00
No barrier for wheel chair entry	5 (2.9)	5 (3.0)	1.00	18 (7.3)	22 (9.3)	0.51	43 (28)	36 (24)	0.51	66 (12)	63 (11)	1.00
Available components at handwashing station												

Handwashing area is not slippery	121 (70)	139 (83)	**0.004**	189 (77)	182 (77)	0.94	105 (67)	112 (71)	0.49	415 (72)	433 (77)	0.053*
Surface around the handwashing area is flat	108 (62)	110 (66)	0.51	86 (35)	84 (35)	0.89	50 (31)	44 (28)	0.46	244 (42)	238 (42)	0.96
Surface around the handwashing area is bumpy	26 (15)	14 (8.4)	0.057*	14 (5.7)	5 (2.1)	**0.044**	10 (6.4)	11 (7.0)	0.84	50 (8.7)	30 (5.3)	**0.027**
Handwashing area is visibly clean	61 (35)	73 (44)	0.11	100 (41)	85 (36)	0.30	64 (40)	61 (38)	0.73	225 (39)	219 (39)	0.99
Sitting arrangement available during handwashing	8 (4.6)	4 (2.4)	0.38	1 (0.4)	0 (0.0)	1.00	4 (2.6)	2 (1.3)	0.45	13 (2.3)	6 (1.1)	0.16
Adequate space for wheel chair accommodation	3 (1.7)	4 (2.4)	0.72	7 (2.8)	8 (3.4)	0.80	27 (17)	22 (14)	0.44	37 (6.4)	34 (6.0)	0.81
Availability of multiple taps and basin facility	14 (8.1)	14 (8.4)	1.00	7 (2.8)	6 (2.5)	1.00	9 (5.6)	6 (3.8)	0.60	30 (5.2)	26 (4.6)	0.68
Availability of water	157 (91)	150 (90)	0.77	144 (58)	142 (60)	0.72	125 (78)	107 (67)	**0.024**	426 (73)	399 (71)	0.31
Water is available in such area that wheel chair user or children can easily access	8 (4.6)	3 (1.8)	0.22	7 (2.8)	11 (4.6)	0.34	17 (11)	17 (11)	1.00	32 (5.6)	31 (5.5)	1.00
Availability of handwashing agent	135 (78)	140 (84)	0.17	86 (35)	99 (42)	0.12	64 (40)	50 (31)	0.10	285 (49)	289 (51)	0.48
Handwashing agent is available is such area that wheel chair user or children can easily access	5 (2.9)	1 (0.6)	0.22	3 (1.2)	6 (2.5)	0.33	10 (6.4)	6 (3.8)	0.32	18 (3.1)	13 (2.3)	0.47
Types of water sources												
Hand pump Tube well	76 (44)	79 (47)	0.53	17 (6.9)	23 (9.7)	0.26	63 (39)	52 (33)	0.20	156 (27)	154 (27)	0.88
Water bucket	68 (39)	65 (39)	0.94	160 (65)	160 (68)	0.53	111 (69)	107 (67)	0.63	339 (58)	332 (59)	0.89
Regular tap	148 (86)	149 (89)	0.31	72 (29)	53 (22)	0.088*	25 (16)	30 (19)	0.49	245 (43)	232 (41)	0.67
Elbow or forearm operated tap	4 (2.3)	7 (4.2)	0.37	0 (0.0)	3 (1.3)	0.12	0 (0.0)	0 (0.0)	-	4 (0.7)	10 (1.8)	0.11
Foot operated tap	1 (0.6)	0 (0.0)	1.00	6 (2.4)	6 (2.5)	1.00	0 (0.0)	1 (0.6)	1.00	7 (1.2)	7 (1.2)	1.00
Water dispenser tap (lever or push button)	1 (0.6)	0 (0.0)	1.00	2 (0.8)	1 (0.4)	1.00	1 (0.6)	0 (0.0)	0.50	4 (0.7)	1 (0.2)	0.37
Time delay self-closing tap	1 (0.6)	1 (0.6)	1.00	0 (0.0)	0 (0.0)	-	0 (0.0)	0 (0.0)	-	1 (0.2)	1 (0.2)	1.00
Tap with automated sensor	0 (0.0)	1 (0.6)	0.49	0 (0.0)	0 (0.0)	-	1 (0.6)	1 (0.6)	1.00	1 (0.2)	2 (0.4)	0.62
Butterfly tap (ball valve)	2 (1.2)	0 (0.0)	0.50	0 (0.0)	0 (0.0)	-	0 (0.0)	0 (0.0)	-	2 (0.3)	0 (0.0)	0.50

Table 64: Access to handwashing facilities at household by ageing

Indicators	**Indonesia**			**Kenya**			**Zambia**			**Overall**		
	Older N=162	Younger N=178	p-value	Older N=246	Younger N=296	p-value	Older N=102	Younger N=219	p-value	Older N=510	Younger N=693	p-value
Handwashing place												
Toilet inside the household	106 (65)	122 (69)	0.82	4 (1.6)	10 (3.4)	**<0.001**	1 (1.0)	4 (1.8)	0.050*	111 (22)	136 (20)	**<0.001**
Kitchen inside the household	46 (28)	47 (26)		16 (6.5)	18 (6.1)		1 (1.0)	7 (3.2)		63 (12)	72 (10)	
Basin inside the household	3 (1.9)	2 (1.1)		67 (27)	98 (33)		29 (28)	55 (25)		99 (19)	155 (22)	
Beside the tubewell/tap/ water source in the yard	2 (1.2)	3 (1.7)		96 (39)	60 (20)		4 (3.9)	23 (11)		102 (20)	86 (12)	
Customized bucket/ mug	3 (1.9)	4 (2.2)		49 (20)	85 (29)		59 (58)	93 (43)		111 (22)	182 (26)	
Open water bodies (e.g. river, pond, spring)	-	-		0 (0.0)	1 (0.3)		-	-		0 (0.0)	1 (0.1)	
School/ College/ Madrasha	1 (0.6)	0 (0.0)		2 (0.8)	1 (0.3)		0 (0.0)	1 (0.5)		3 (0.6)	2 (0.3)	
No handwashing station just a designated place	1 (0.6)	0 (0.0)		11 (4.5)	21 (7.1)		5 (4.9)	15 (6.8)		17 (3.3)	36 (5.2)	
Others (Please specify)	-	-		1 (0.4)	2 (0.7)		3 (2.9)	21 (9.6)		4 (0.8)	23 (3.3)	
Distance from household												
within 5m	148 (91)	165 (93)	0.37	127 (52)	162 (55)	0.56	69 (68)	153 (70)	0.71	344 (68)	480 (69)	0.78
6-10m	4 (2.5)	7 (3.9)		82 (33)	86 (29)		14 (14)	33 (15)		100 (20)	126 (18)	
>10m	10 (6.2)	6 (3.4)		37 (15)	48 (16)		19 (19)	33 (15)		66 (13)	87 (13)	
Availability of water facility	151 (93)	156 (88)	0.083*	132 (60)	154 (59)	0.79	62 (61)	170 (78)	**0.002**	345 (71)	480 (73)	0.59
Availability of cleaning agents	133 (82)	142 (80)	0.59	84 (38)	101 (38)	0.93	19 (19)	95 (43)	**<0.001**	236 (49)	338 (51)	0.41
Entry path components												
Smooth flat surface	133 (82)	140 (79)	0.42	163 (74)	183 (70)	0.31	85 (88)	192 (92)	0.19	381 (79)	515 (79)	0.99
Uneven flat surface	29 (18)	39 (22)	0.42	36 (16)	33 (13)	0.24	4 (4.1)	14 (6.7)	0.44	69 (14)	86 (13)	0.60
Stairs	8 (4.9)	10 (5.6)	0.78	5 (2.3)	3 (1.1)	0.33	2 (2.1)	12 (5.8)	0.15	15 (3.1)	25 (3.9)	0.51
Surface is not slippery	99 (61)	110 (62)	0.90	98 (44)	93 (35)	**0.044**	39 (39)	92 (43)	0.51	236 (49)	295 (45)	0.21
Ramp for wheelchair access	1 (0.6)	0 (0.0)	0.48	5 (2.3)	3 (1.1)	0.48	0 (0.0)	2 (1.0)	1.00	6 (1.3)	5 (0.8)	0.54

Ramp is not steep	1 (0.6)	1 (0.6)	1.00	0 (0.0)	0 (0.0)	-	1 (1.0)	1 (0.5)	0.54	2 (0.4)	2 (0.3)	1.00
Adequate space for wheel chair accommodation	0 (0.0)	2 (1.1)	0.50	25 (11)	23 (8.7)	0.36	27 (27)	47 (22)	0.32	52 (11)	72 (11)	0.92
No barrier for wheel chair entry	4 (2.5)	6 (3.4)	0.75	22 (10)	18 (6.8)	0.25	25 (26)	54 (26)	1.00	51 (11)	78 (12)	0.51
Available components at handwashing station												
Handwashing area is not slippery	116 (72)	144 (81)	**0.044**	165 (75)	206 (78)	0.34	74 (75)	143 (67)	0.14	355 (74)	493 (75)	0.57
Surface around the handwashing area is flat	104 (64)	114 (64)	0.98	89 (40)	81 (31)	**0.030**	30 (30)	64 (29)	0.93	223 (46)	259 (39)	**0.021**
Surface around the handwashing area is bumpy	19 (12)	21 (12)	0.98	13 (5.9)	6 (2.3)	**0.042**	6 (6.1)	15 (7.0)	0.76	38 (7.9)	42 (6.4)	0.33
Handwashing area is visibly clean	72 (44)	62 (35)	0.070*	91 (41)	94 (36)	0.22	30 (30)	95 (43)	**0.020**	193 (40)	251 (38)	0.53
Sitting arrangement available during handwashing	5 (3.1)	7 (3.9)	0.77	0 (0.0)	1 (0.4)	1.00	0 (0.0)	6 (2.8)	0.18	5 (1.0)	14 (2.1)	0.17
Adequate space for wheel chair accommodation	4 (2.5)	3 (1.7)	0.71	5 (2.3)	10 (3.8)	0.43	13 (13)	36 (17)	0.50	22 (4.6)	49 (7.5)	**0.048**
Availability of multiple taps and basin facility	21 (13)	7 (3.9)	**0.003**	9 (4.1)	4 (1.5)	0.097*	2 (2.0)	13 (5.9)	0.16	32 (6.6)	24 (3.6)	**0.026**
Availability of water	151 (93)	156 (88)	0.083*	132 (60)	154 (59)	0.79	62 (61)	170 (78)	**0.002**	345 (71)	480 (73)	0.59
Water is available in such area that wheel chair user or children can easily access	9 (5.6)	2 (1.1)	**0.029**	7 (3.2)	11 (4.2)	0.63	10 (10)	24 (11)	0.85	26 (5.4)	37 (5.6)	0.90
Availability of handwashing agent	133 (82)	142 (80)	0.59	84 (38)	101 (38)	0.93	19 (19)	95 (43)	**<0.001**	236 (49)	338 (51)	0.41
Handwashing agent is available is such area that wheel chair user or children can easily access	3 (1.9)	3 (1.7)	1.00	5 (2.3)	4 (1.5)	0.74	3 (3.0)	13 (6.0)	0.41	11 (2.3)	20 (3.0)	0.47
Types of water sources												
Hand pump Tube well	60 (37)	95 (53)	**0.003**	21 (9.5)	19 (7.2)	0.36	44 (44)	71 (32)	0.053*	125 (26)	185 (28)	0.41
Water bucket	59 (36)	74 (42)	0.33	131 (59)	189 (72)	**0.004**	64 (63)	154 (70)	0.21	254 (53)	417 (63)	**<0.001**
Regular tap	149 (92)	148 (83)	**0.014**	68 (31)	57 (22)	**0.023**	11 (11)	44 (21)	**0.043**	228 (47)	249 (38)	**0.002**
Elbow or forearm operated tap	4 (2.5)	7 (3.9)	0.55	2 (0.9)	1 (0.4)	0.59	0 (0.0)	0 (0.0)	-	6 (1.2)	8 (1.2)	1.00
Foot operated tap	1 (0.6)	0 (0.0)	0.48	8 (3.6)	4 (1.5)	0.15	0 (0.0)	1 (0.5)	1.00	9 (1.9)	5 (0.8)	0.11
Water dispenser tap (lever or push button)	1 (0.6)	0 (0.0)	0.48	2 (0.9)	1 (0.4)	0.59	0 (0.0)	1 (0.5)	1.00	3 (0.6)	2 (0.3)	0.66
Time delay self-closing tap	0 (0.0)	2 (1.1)	0.50	0 (0.0)	0 (0.0)	-	0 (0.0)	0 (0.0)	-	0 (0.0)	2 (0.3)	0.51
Tap with automated sensor	0 (0.0)	1 (0.6)	1.00	0 (0.0)	0 (0.0)	-	1 (1.0)	1 (0.5)	0.53	1 (0.2)	2 (0.3)	1.00
Butterfly tap (ball valve)	1 (0.6)	1 (0.6)	1.00	0 (0.0)	0 (0.0)	-	0 (0.0)	0 (0.0)	-	1 (0.2)	1 (0.2)	1.00

Table 65: Access to assistive devices among different types of disabilities (country specific)

	Indonesia									Kenya									Zambia								
Indicators	**Vision**	**Hearing**	**Mobility**	**Communicat**	**Rememberin**	**Self-care**	**Anxiety**	**Depression**	**Total**	**Vision**	**Hearing**	**Mobility**	**Communicat**	**Rememberin**	**Self-care**	**Anxiety**	**Depression**	**Total**	**Vision**	**Hearing**	**Mobility**	**Communicat**	**Rememberin**	**Self-care**	**Anxiety**	**Depression**	**Total**
	N=46	N=35	N=77	N=36	N=48	N=18	N=32	N=7	N=173	N=65	N=39	N=164	N=46	N=63	N=71	N=46	N=36	N=282	N=49	N=38	N=66	N=28	N=49	N=31	N=9	N=11	N=160
Currently use assistive equipment	4 (9)	5 (14)	17 (22)	5 (14)	3 (6)	5 (28)	4 (13)	1 (14)	17 (10)	23 (35)	16 (41)	72 (44)	9 (19)	12 (19)	31 (44)	13 (28)	9 (25)	94 (33)	4 (8)	1 (2.6)	15 (23)	1 (3.6)	1 (2.0)	5 (16)	1 (11)	0 (0)	18 (11)
Types of assistive devices	N=4	N=5	N=17	N=5	N=3	N=5	N=4	N=1	N=17	N=23	N=16	N=72	N=9	N=12	N=31	N=13	N=9	N=94	N=4	N=1	N=15	N=1	N=1	N=5	N=1		N=19
White Cane	0 (0)	0 (0)	1 (6)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (6)																		
Wheelchair	1 (25)	2 (40)	3 (18)	3 (60)	2 (67)	3 (60)	1 (25)	0 (0)	3 (18)	0 (0)	3 (19)	7 (10)	3 (33)	4 (33)	6 (19)	0 (0)	1 (11)	7 (7)	0 (0)	0 (0)	8 (53)	1 (100)	0 (0)	3 (60)	0 (0)		8 (42)
Crutch/Elbow Crutch/Stick/ Walker	2 (50)	3 (60)	11 (65)	2 (40)	1 (33)	2 (40)	2 (50)	0 (0)	11 (65)	9 (39)	12 (75)	59 (82)	5 (56)	5 (42)	23 (74)	5 (38)	3 (33)	65 (69)	2 (50)	1 (100)	5 (33)	0 (0)	1 (100)	2 (40)	1 (100)		7 (37)
Communication aids										0 (0)	0 (0)	0 (0)	1 (11)	1 (8)	1 (3)	0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)		1 (5)
Hearing aid device										0 (0)	3 (19)	2 (3)	0 (0)	1 (8)	1 (3)	1 (8)	1 (11)	3 (3)									
Eye wear	1 (25)	0 (0)	2 (12)	0 (0)	0 (0)	0 (0)	1 (25)	1 (100)	2 (12)	14 (61)	1 (6)	7 (10)	0 (0)	2 (17)	2 (6)	8 (62)	5 (56)	21 (22)	2 (50)	0 (0)	1 (7)	0 (0)	0 (0)	0 (0)	0 (0)		2 (11)
Prosthetic devices										0 (0)	0 (0)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (1)									

Types of disabilities are Non-mutually exclusive binary variables: subjects may have more than one significant functional limitation.

Table 66: Experience with hygiene products among people with disabilities vs without disabilities

	Indonesia			Kenya			Zambia			Overall		
Indicators	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**
	N=104	**N=101**		**N=47**	**N=49**		**N=27**	**N=22**		**N=178**	**N=172**	
Use the hygiene products	99 (95)	100 (99)	0.10	41 (87)	48 (98)	**0.04**	26 (96)	22 (100)	0.36	166 (93)	170 (99)	**0.008**

	Indonesia			Kenya			Zambia			Overall		
Indicators	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**	**Person with disability**	**Person without Disability**	**p-value**
	N=104	**N=101**		**N=47**	**N=49**		**N=27**	**N=22**		**N=178**	**N=172**	
Level of satisfaction	N=103	N=101		N=44	N=47		N=25	N=22		N=172	N=170	
Very satisfied	18 (17)	23 (23)	0.57	11 (25)	20 (43)	0.12	8 (32)	10 (45)	0.47	37 (22)	53 (31)	0.065*
Satisfied	80 (78)	76 (75)		26 (59)	22 (47)		13 (52)	11 (50)		119 (69)	109 (64)	
Neutral	3 (2.9)	1 (0.9)		3 (6.8)	5 (11)		2 (8.0)	1 (4.6)		8 (4.7)	7 (4.1)	
Dissatisfied	2 (1.9)	1 (0.9)		3 (6.8)	0 (0)		2 (8.0)	0 (0)		7 (4.1)	1 (0.6)	
Very dissatisfied	-	-		1 (2.3)	0 (0)		-	-		1 (0.6)	0 (0)	

Table 67: Experience with hygiene products among older vs younger people

	Indonesia			Kenya			Zambia			Overall		
Indicators	**Older**	**Younger**	**p-value**	**Older**	**Younger**	**p-value**	**Older**	**Younger**	**p-value**	**Older**	**Younger**	**p-value**
	N=103	**N=102**		**N=33**	**N=63**		**N=11**	**N=38**		**N=147**	**N=203**	
Use the hygiene products	101 (98)	98 (96)	0.40	32 (97)	57 (90)	0.25	11 (100)	37 (97)	0.59	144 (98)	192 (95)	0.11
Level of satisfaction	N=103	N=101		N=31	N=60		N=10	N=37		N=144	N=198	
Very satisfied	23 (22)	18 (18)	0.20	7 (23)	24 (40)	0.19	5 (50)	13 (35)	0.61	35 (24)	55 (28)	0.07
Satisfied	79 (77)	77 (76)		20 (65)	28 (47)		5 (50)	19 (51)		104 (72)	124 (63)	
Neutral	1 (1.0)	3 (2.9)		4 (13)	4 (6.7)		0 (0)	3 (8.1)		5 (3.5)	10 (5.1)	
Dissatisfied	0 (0)	3 (2.9)		0 (0)	3 (5.0)		0 (0)	2 (5.4)		0 (0)	8 (4.0)	
Very dissatisfied	-	-		0 (0)	1 (1.7)		-	-		0 (0)	1 (0.5)	

Annex 6: Key informant interview guideline

Evaluation of the Hygiene and Behaviour Change Coalition for COVID-19 prevention: the inclusion of people with disabilities, older people, and older adults with disabilities

Key Informant Interview (KII) Guideline
HBCC Evaluation Studies in Kenya, Indonesia, and Zambia

Key Informant Interview (KII) Guideline for the below Participants:
- Senior Level Staff of AMREF/PSI/SCF/WaterAid
- Frontline Intervention Delivery Staff of AMREF/PSI/SCF/WaterAid
- Policy-level authority (Government Staff)
- Representative from DPOs
- Healthcare Providers
- Teachers (Indonesia only)

KII initiation guideline

Instruction for using the guide:
These questions should be used to guide discussion, but do not have to be used in the sequence listed below. The interviewer should follow up on any additional issues that may arise and seem important concerning the issues. The questions are written in full so that they are open, not leading, and cover all the issues we need to explore. However, you can change the wording so that it's more conversational, but make sure you cover the content and stay neutral in your wording (i.e. try not to lead the participant). We all have our own unconscious biases and assumptions, and we need to ensure that these aren't reflected in our questions.
Objectives:
- To document the efforts of the intervention delivering partners to include people with disability, older people, and their caregivers in HBCC behavior change interventions during COVID-19, and the appropriateness/feasibility of those interventions
- To understand the level of benefits of the interventions for people with disability, older people, and their caregivers
- To identify the strengths and limitations of existing interventions (including how they are implemented) for the people with disability, older people, and their caregivers

Inclusion criteria:
National level policymakers from the government; senior staff/managers from an organization who operated the HBCC program; other stakeholders; representatives from DPOs; frontline intervention delivery staff ; health care providers; and the teachers involved with the HBCC program.
Materials needed:
Information and consent sheet, voice recorder, spare batteries, notebook, and pen.
Introduction: Good morning/afternoon/evening, and thank you for your time. I am..... (Interviewer's name) from..... (Interviewer's institution).
[Please readout and explain the information sheet and consent form]
*Seek consent; if granted, turn on the voice recorder and proceed.
Read the following statement: "We approached you for this interview since your experiences will help us understand the issues that people with disabilities, older people, and their caregivers faced during COVID 19. We want to understand these to help develop inclusive hygiene and behavior change interventions for person with disabilities, older people, and their caregivers. We will ensure confidentiality

and anonymity of the information you will provide. You are free to decline to answer any of the questions or stop the interview at any time. Do you have any questions from the information and consent form about the research?"
Demographic information for all participants

Participant's ID (generated by study team)
Interview Date and time
Interview method (online/offline)
(If offline) Interview location
Interviewer
Participant's name
Gender
Age
Participant's country name
Participant's organization name
Participant's current professional position
Participant's e-mail/skype ID/Cell number

Interview guide for Senior level staff implementing HBCC programs

Section 1: Introductory questions
1. Tell me about your specific area of work and how long have you been working in this sector?
a. What are your primary responsibilities in your current role?
b. How has your organization been involved with the COVID-19 Hygiene and Behavior Change Coalition (HBCC) program?
c. Does your organization implement the projects themselves, or work with local partners to implement the work?
Section 2: Program Design and Implementation
2. What is your perception about the risks that people with disability and older people face in relation to COVID 19?
3. We know that your programme focused on disability, ageing and their caregivers [select group depending on grantee's focus], Why? Probe into:
a. Why did you focus on these groups?
b. If some groups are not targeted, explore why?
4. Can you give me an overview of the activities you have done in relation to these target groups? Probe into:
a. Gathering (disaggregated) data with these groups to inform program design
b. If you considered caregivers, different functional limitation groups, genders, ages?
c. If you developed specific hygiene behaviour change communications for them (considering the differences) and how these communications were delivered?
d. If you considered the accessibility of infrastructure? How?
e. If you considered the accessibility of information? How?
f. How you reached people who can't leave the home?
g. How you protected these groups against harm, including monitoring potential backlash?
5. How did you try and ensure these target groups participated in the programme? Tell me about that. Probe into:
a. At what stage did target groups participate (design, implementation, monitoring)
b. How you worked to ensure target group's participation
c. What resulted from that participation
d. What did you find beneficial about the process?
e. What did you find challenging about the process?
6. Did you engage with Disabled People's Organizations (DPOs), and Older people's Organizations? If so, how and what were your experiences of this?

a. What activities did you carry out with them?
b. What worked well, less well and why?
c. How would you build on these strengths or address the weaknesses in the future?
7. In your view, how effectively do you think your interventions included people with disability, older people, and their caregivers [select target group depending on the grantee's focus]?
8. What did the organisation (AMREF/PSI, WaterAid, SCF) find worked less well for the target group? Probe into:
a. Why and what they learnt from that?
9. How long do you think the benefits of the interventions will last for the people with disability, older people, and their caregivers? What factors will affect this?
10. In your experience, what factors should be considered for designing similar programs that are inclusive of older adults and people with disabilities in a future pandemic? Probe into:
a. Access to hygiene facilities
b. Targeting specific hygiene behaviours
c. Mitigating risks and strategies
d. Developing process indicators, or outcome measures for inclusion

Section 3: Training of the frontline staff
11. Do you think you or your staff need training on disability and ageing?
12. Has your organization provided training to frontline staff on specific hygiene-related requirements of people with disability, older adults and caregivers? [Frontline staff are those who were involved in COVID 19 related intervention delivery directly with the target population].
13. Has your organization provided training to frontline staff on how to communicate with these groups? Across question 12 and 13, probe into:
a. Topics covered
b. Support in communicating with people across different functional limitation types (visual, hearing, physical, intellectual/cognitive) and ages
c. Where did the organisation get the evidence for the training content?
d. What was the benefit of training?
e. Were people with disability, or DPOs involved in the training design and delivery, and if so, how?
f. How was the training delivered?
g. What materials or resources were used for training? [obtain copies if available]?
h. What change did you want to see as a result of the training??

Section 4: Recommendations
14. What would you and/or your organisation do in future in relation to participation, or working with DPOs, training frontline workers, or anything we have discussed today and why?
15. Beyond what you have told me, is there anything else you would like to add?

Interview Guide for frontline intervention delivery staff
Section 1: Introductory questions
1. Tell me about your current role and how long have you been working in this sector? [Probe on years of experience working with people with disabilities and older people, if any]
a. What are your primary responsibilities in your current role?
b. How have you /your organization been involved with the COVID 19 Hygiene and Behaviour Change Coalition (HBCC) program with [AMREF/PSI, WaterAid, SCF]?
Section 2: Inclusiveness in activities
2. What is your perception about the risks that people with disability and older people face in relation to COVID 19?
3. Can you give me an overview of the activities you have done in relation to disability, ageing and caregivers? Probe into:
a. Gathering (disaggregated) data with these groups to inform program design
b. If you considered caregivers, different functional limitation groups, genders and ages
c. If you developed specific hygiene behaviour change communications for them and how these were delivered
d. If you considered the accessibility of infrastructure? How?
e. If you considered the accessibility of information? How?
f. How you reached people who can't leave the home?

g. How you protected these groups against harm, including monitoring potential backlash?

4. Can you describe your interaction with people with disability, older people, and their caregivers?
Probe into
a. How easy/hard was it for these target group to understand the intervention content?
b. If the project was repeated, how would you build on the successes and address the weaknesses?
c. Did people with disability, older people, and caregivers face any difficulties in practising COVID-19 prevention measures that were promoted in your intervention? How would you address these challenges better if the project was repeated?
5. How did you try and ensure these target groups participated in the programme? Tell me about that. Probe into:
a. At what stage they participated (design, implementation, monitoring)
b. How they worked to ensure their participation
c. What resulted from that participation
d. What did you find beneficial about the process and what was challenging about it?
6. In your view, how effectively do you think your interventions included people with disability, older people, and their caregivers?
7. What did the organisation (AMREF/PSI, WaterAid, SCF) find worked less well for the target group? Probe into:
a. Why and what they learnt from that?
8. How long do you think the benefits of the interventions will last for the people with disability, older people, and their caregivers over time? What factors affect their lasting?
9. Did you engage with Disabled Peoples organizations or older people's organization? If so, what activities did you carry out with them?
a. What worked well, less well and why?
b. How would you build on the strengths or address the weaknesses in the future?
10. In your experience, what factors should be considered for designing similar hygiene programs that are inclusive of older adults and people with disabilities in a future pandemic? Probe into:
a. Access to hygiene facilities
b. Targeting specific hygiene behaviours
c. Mitigating risks and strategies
d. Developing process indicators, or outcome measures for inclusion

Section 3: Training of the frontline staff
11. Have you received training on specific hygiene-related requirements of people with disability, older adults and caregivers?
12. Have you received training or support on how to communicate with these groups? Across question 11 and 12, probe into
a. Topics covered
b. Support in communicating with people across different functional limitation types (visual, hearing, physical, intellectual/cognitive) and ages
c. Who delivered that training? Were people with disability, DPOs involved, and if so - how?
d. What did you think was useful? What was less useful? How would you build on the positives and address weaknesses?
e. What materials or resources were used for training? [obtain copies if available]

Section 4: Recommendations
13. Beyond what you have already suggested, do you have any other points that similar orgainsations should consider when attempting to deliver WASH interventions in future pandemics?
14. Is there anything else you would like to add or tell me about?

Guideline for Policy Level Authority (Government Staff)
Section 1: Introductory questions
1. Tell me about your specific area of work and how long have you been working in this sector?
a. What are your primary responsibilities in your current role?

Section 2: Policy/Program Design and Inclusiveness

2. Did you or your department focus on hygiene promotion in your COVID-19 response?
a. What efforts did your department take in the COVID-19 response to ensure the general public practiced good hygiene?
b. Why did you include hygiene in your COVID-19 response?
3. How did you design your COVID-19 hygiene promotion response? Probe into:
a. Who was involved (e.g NGOs, Private sector, DPOs) in the planning and design of your COVID-19 response program?
b. What do you think worked well? What worked less well and why?
4. What is your perception about the risks that people with disability, older people, and their caregivers face in relation to COVID 19?
5. Can you tell me how these groups were (or were not) considered in your public WASH services and public health awareness programs during COVID-19? Probe into:
a. Why were these groups included?
b. If people with disability, older adults or caregivers are not targeted, explore why?
6. How did you prioritise in your resource allocation across the COVID-19 hygiene efforts? Probe into:
a. What stakeholders received funds and resources?
b. How was disability and ageing considered within these allocations?
7. [If focused on disability, ageing and their caregivers] Can you give me an overview of the activities you have done in relation to people with disability, older adults and caregivers? Probe into:
a. Did you / your department gather (disaggregated) data with these groups to inform program design?
b. Did you / your department develop specific hygiene behaviour change messages for caregivers, different functional limitation groups, genders, ages
c. How were these behaviour change messages communicated?
d. If you considered the accessibility of infrastructure? How?
e. If you considered the accessibility of information? How?
f. How you reached people who can't leave the home?
g. How you protected these groups against harm, including monitoring potential backlash?
8. [If focused on disability, ageing and their caregivers] How did you try and ensure these target groups participated in the programme? Tell me about that. Probe into:
a. At what stage did they participate (design, implementation, monitoring)
b. How did you / your department work to ensure their participation
c. What was the result of that participation
d. What worked well? What worked less well and why?
9. Did you work with Disabled Persons Organisations or Organisations of Older Persons in your COVID-19 response? Please tell me about that. Probe into:
a. If so, how? If not, what is the reason for not including them?
b. What activities did the DPO/OOP do?
c. Did you provide funding for the DPO/OOPs? What did that cover?
d. What worked well? What worked less well and why?
10. How did you monitor the progress of your COVID-19 response program? Probe into:
a. Who was responsible for monitoring the progress?
b. Was data on disability and ageing gathered? What data was gathered? What data collection tools did you use?
c. What did you learn from the data?
d. How did you / your department apply that learning in their work?
11. In your view, how effectively do you think your interventions included people with disability, older people, and their caregivers? Probe into:
a. What do you think worked less well? Why?
12. How long do you think the benefits of the interventions will last for the people with disability, older people, and their caregivers over time? What factors affect their lasting?
13. In your experience, what factors should be considered for designing similar programs that are inclusive of older adults and people with disabilities in a future pandemic? Probe into:
a. Access to hygiene facilities
b. Targeting specific hygiene behaviours
c. Mitigating risks and strategies
d. Developing process indicators, or outcome measures for inclusion

14. Beyond what you have told me, is there anything else you would like to add or tell me about?

Guideline for Representatives from DPOs

Section 1: Introductory questions

1. Tell me about your current role and how long have you been working in this sector? [Probe on years of experience working with people with disabilities, if any]

a. What are your primary responsibilities in your current role?

2. What is the main focus of your organization?

Probe into:

a. Who do you work with

b. Who do you represent (functional limitation types, genders, ages)?

c. What do you do on WASH?

d. What are their different revenue streams for WASH?

e. Do you get any funding to cover your core costs / overhead costs? Who provides that funding?

Section 2: Policy/Program Design and Inclusiveness

3. What is your perception about the risks that people with disability face in relation to COVID 19? Probe into:

a. What is needed to ensure these groups can access to hygiene facilities

4. Do you think that the COVID-19 WASH-related guidance from governments (e.g. handwashing with soap and water) appropriately considered people with disability, and caregivers?

a. (If yes) How? Probe into if attention is given to people with disability and caregivers

b. (If no) What are the key gaps?

c. (If no) How do you think this could be improved?

5. In your country, how much involvement do Disabled Peoples Organizations have in policy-level decision-making? Probe into:

a. What is the nature of that involvement?

b. How have you been involved policy discussions during COVID-19?

c. Has your involvement changed during COVID-19? Tell me about your experiences

6. How was your organization involved in implementing COVID-19 WASH related responses?

a. What did you do?

b. Who did you work with?

c. What do you think worked well?

d. What do you think did not work too well and why?

e. How did your organization engage individuals with disabilities and their care givers in the process?

7. How long do you think the benefits of the interventions will last for the people with disability, and their caregivers over time? What factors affect their lasting?

Section 3: Recommendations

8. In your experience, what factors should be considered for designing similar programs that are inclusive of people with disabilities in a future pandemic? Probe into: involvement of DPOs, people with disabilities, caregivers, outreach, guidance for implementers

9. Beyond what you have told me, is there anything else you would like to add?

Guideline for Healthcare Providers

Section 1: Introductory questions
1. How long have you been working in healthcare? (Probe: what is your specific area of work?)
2. What are your primary responsibilities in your current role at this health care facility?
a. Were your roles and responsibilities different before and during COVID? How so?
b. What work have you been doing for (AMREF/PSI, WaterAid, SCF)?
c. What health care services did you provide for people with disabilityand/older people with or for (AMREF/PSI, WaterAid, SCF)?
d. What do you believe might be the challenges facing people with disability, older people, and their care givers in COVID-19?
Section 2: Program Design and Inclusiveness
3. What community initiatives/structures were in place to ensure that people with disability and older people were reached in COVID-19 response?
4. Do you think people with disability or older adults were able to access the information delivered through the COVID-19 program as well as everyone else? Please explain
5. Can you tell me about the knowledge and abilities of healthcare workers to support people with disabilities and older adults in COVID-19 responses
6. Were any people with disability or older people involved in designing and implementing COVID-19 related activities? Probe into:
a. What did they do?
b. What did it lead to?
c. Did it help?
7. Did your workplace (Health Care Facility) receive any infastructure (e.g. water points, handwashing facilities), information (e.g. accessible toilets/signage for people with disability and older people) through your collaboration with (AMREF/PSI, WaterAid, SCF)? [Can you please show these to me?]
a. How accessible are the facilities and information for people with disability and older people?
8. Are there any COVID-19 related behaviour change messages specifically for people with disability, older adults and caregivers? Probe into:
a. What are those messages?
b. How where those messages transferred and by whom?
9. What do you think could be done to improve the involvement of people with disability, older people and their caregivers in any future programs?

Section 3: Training
10. Have you received training on specific hygiene-related requirements of people with disability, older adults and caregivers?
11. Have you received training or support on how to communicate with these groups? Across question 10 and 11, probe into
a. Topics covered
b. Support in communicating with people across different functional limitation types (visual, hearing, physical, intellectual/cognitive) and ages
c. Who delivered that training? Were people with disability, DPOs involved?
d. What did you think was useful? What was less useful? How would you build on the positives and address weaknesses?
e. What materials or resources were used for training? [obtain copies if available]
12. What would be your suggestion to improve the training/guidelines that you received?

Section 4: Recommendations
13. Beyond what you have already said, what are the factors that should be considered for designing the people with disability and older people inclusive programs in any future emergencies like COVID 19?
14. Is there anything else you'd like to add, or tell me about?

Guideline for Teachers (Indonesia only)
Section 1: Introductory questions
1. How long have you been working in this sector? (Probe: what is your specific area of work?)
2. How many students do you have in your school? How many of them are children with disabilities (if any)?
3. What steps do you, or your school take to make the school environment more inclusive to them?
Section 2: Program Design and Inclusiveness
4. What is your perception about the risks that Children with disabilities face in relation to COVID 19?

5. Do you think all of Children with disabilities requirements were addressed in the COVID-19 related programs? Please tell me about that. Probe into:
a. Any differences in approaches for different functional limitation types
6. Were people with disability involved in designing and implementing COVID-19 related activities? Probe into:
a. How people with disability were involved
b. What they thought about the quality of this involvement
7. Do you/your school get any type of intervention (educational materials or WASH facilities) through the collaboration with (AMREF/PSI, WaterAid, SCF)?
a. (If yes) What types of educational materials did your school receive? What format are these in? How were these demonstrated/communicated to the teachers?
b. (If yes) Were these materials for teachers or students? If they were for students, do you think these were accessible for children with disabilities?
c. (If yes) Did your school receive accessible WASH infrastructure for children with disabilities? How were they designed? Were children with disabilities involved (probe into different functional limitation types)? Did children with disabilities use them? If not, why not?
d. (If yes) Did the program provide hygiene products (e.g. soap or cleaning products) or specific hygiene items to address the needs of students with disabilities (e.g. menstrual hygiene materials for the female students with a disability)? Where they used? If not, why?
8. Have any of the students with disabilities given you any feedback on these WASH interventions? Probe into:
a. What did they say?
b. What do you think are the benefits of these efforts?
9. Do you/your school face any challenges while the interventions were delivered? Probe into
a. What were the main challenges?
b. How you /your institution mitigated these challenges?
c. Was there anything you found useful/helpful? Tell me about those.

Section 3: Training
15. Have you received training / guidance on specific hygiene-related requirements of children with disabilities?
16. Have you received training or support on how to communicate with children with disabilities? Across question 15 and 16, probe into
a. Topics covered
b. Support in communicating with people across different functional limitation types (visual, hearing, physical, intellectual/cognitive) and ages
c. Who delivered that training? Were people with disability, DPOs involved?
d. What did you think was useful? What was less useful? How would you build on the positives and address weaknesses?
e. What materials or resources were used for training? [obtain copies if available]
10. Can you think of any way to improve the training/guidelines that you received?

Section 4: Recommendations
11. According to your experience, what are the factors that should be considered for designing the people with disability and older people inclusive programs in any future disease-related local/global emergencies like COVID 19?
12. Beyond what you have told me, is there anything else you would like to add?