COVID-19 Behavioural Drivers and Patterns: A longitudinal assessment from the South Asia region

Findings from Afghanistan, India, Nepal and Pakistan

November 2021
Acknowledgments

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CHAPTER 1: INTRODUCTION

COVID-19 is a pandemic affecting billions of lives across the world. As of 5 November 2021, the World Health Organization (WHO) reported 248,467,363 confirmed cases, including 5,027,183 deaths globally while in South Asia there were 38,748,268 confirmed cases with 549,029 deaths. The pandemic has stressed health systems and disrupted essential health services. Since April 2021 countries across South Asia have experienced a new and deadly surge of COVID-19. The region, home to almost two billion people, accounted for half of all new, known infections globally. By early November 2021, there were 156,363 total confirmed cases in Afghanistan; 34,333,754 confirmed cases in India; 814,115 confirmed cases in Nepal; and 1,275,158 confirmed cases in Pakistan—the four countries covered in this report.

Despite global efforts to support the development and distribution of COVID-19 vaccines, levels of vaccination across most of South Asia remained very low when a second wave of the pandemic hit in April-May 2021. In almost all countries in the region (not including Bhutan, Maldives and India), fewer than one in ten people were vaccinated against COVID-19 before the end of May 2021 (receiving at least one dose of the vaccine). By early November 2021 this increased to around half of the population in India, approximately one third in Pakistan and Nepal, and less than 10% still in Afghanistan.

Effective management of the pandemic depends on communication about the pandemic; encouraging people to get vaccinated against the virus; improving people’s knowledge, attitudes, behaviours and practices about it; as well as the effective engagement of communities and local organizations, networks and influencers in emergency response. Social and behaviour change communication (SBCC) and community engagement (CE) are important strategies, in this regard, that cut across all social sectors and form a part of UNICEF’s objective for programming excellence at scale for children. In the humanitarian context, where UNICEF often plays a leading role, the organization’s work on risk communication and community engagement (RCCE) during an outbreak response is part of its global work on risk communication and community engagement (SBCC) and community engagement (CE) are important strategies, in this regard, that cut across all social sectors and form a part of UNICEF’s objective for programming excellence at scale for children. In the humanitarian context, where UNICEF often plays a leading role, the organization’s work on risk communication and community engagement (RCCE) during an outbreak response is part of its global accountability and recognized by partners as a unique value (RCCE) during an outbreak response is part of its global accountability and recognized by partners as a unique value (RCCE) during an outbreak response is part of its global accountability and recognized by partners as a unique value (RCCE) during an outbreak response is part of its global accountability and recognized by partners as a unique value (RCCE) during an outbreak response is part of its global accountability and recognized by partners as a unique value (RCCE) during an outbreak response is part of its global accountability and recognized by partners as a unique value (RCCE) during an outbreak response is part of its global accountability and recognized by partners as a unique value.

RCCE interventions can reinforce behaviours and engagement modalities as well as strengthen trust and social cohesion in the longer-term to help mitigate socio-economic impacts. However, a ‘one-size-fits-all’ approach to RCCE may not achieve the desired results. Lessons learned from the response to the Ebola outbreak in West Africa in 2014–2015 suggest that to be effective, RCCE strategies should prioritize the engagement of local communities, be evidence-based (making use of robust data on the knowledge, attitudes and practices (KAP) of specific communities), as well as how these practices evolve over time. While UNICEF continues to be considered a leader in RCCE, the organization suffers from a systemic lack of social and behavioural data and evidence that can be used to inform policy and programmes at the national and regional level. While practices around producing one-off knowledge, attitudes and practices (KAP) studies and surveys is common, at most they serve as an initial input or baseline for programmes, but do little to help understand the evolving nature of perceptions and behaviours which are so critical to achieving UNICEF’s goals.

The COVID-19 global pandemic (and its reliance on the adoption of individual and collective behaviours as a means to reduce transmission and take up vaccination) threw social and behavioural science into the limelight, demonstrating the urgent need to understand the people UNICEF was attempting to reach. As the COVID-19 pandemic evolved into a whole-of-society crisis with deep collateral impacts and slippage on gains across all social sectors, the need to understand the barriers and drivers of people’s perceptions, behaviours and coping strategies has continued to increase, calling for a longer-term strategy to fill the systemic gap on social and behaviour data and evidence, connecting this to decision-making and the improvement of programme implementation and monitoring.

In response to the need for social and behavioural data to inform RCCE approaches during COVID-19, the community rapid assessment (CRA) initiative was piloted and implemented by UNICEF in South Asia. Through a time-series approach (i.e., regular gathering of same/similar data over time) the CRAs aim to provide rapid and consistent data on citizen perceptions and behaviours; underlying drivers and barriers; vaccine acceptance; coping strategies and evolving needs during the COVID-19 pandemic. Furthermore, through the CRAs UNICEF aims to learn about the generation and use of rapidly-produced data to inform RCCE approaches during COVID-19, the community rapid assessment (CRA) initiative was piloted and implemented by UNICEF in South Asia. Through a time-series approach (i.e., regular gathering of same/similar data over time) the CRAs aim to provide rapid and consistent data on citizen perceptions and behaviours; underlying drivers and barriers; vaccine acceptance; coping strategies and evolving needs during the COVID-19 pandemic. Furthermore, through the CRAs UNICEF aims to learn about the generation and use of rapidly-produced...
citizen and community-sourced, time-series data for programming and evaluation; and strengthen internal (UNICEF) and external (government and partners) systems for the generation and use of social behavioural evidence in national humanitarian and development contexts. In South Asia, with support of UNICEF’s Regional Office of South Asia (ROSA), UNICEF Country Offices (COs) in Afghanistan, India, Nepal and Pakistan have been implementing CRAs. The CRA surveys are implemented in each country through multiple rounds of data collection according to different formats and timelines (see Table 1). The following report provides insights and trends on social behavioural drivers and barriers linked to COVID-19, as seen across four countries where the CRAs have been implemented: Afghanistan, India, Nepal and Pakistan.

Table 1: Overview of CRA implementation in different countries in South Asia

<table>
<thead>
<tr>
<th>Country</th>
<th>Timeline survey</th>
<th>Number of rounds</th>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>Apr. 2021 – Oct. 2021</td>
<td>3 rounds*</td>
<td>Standalone survey</td>
</tr>
<tr>
<td>Pakistan</td>
<td>Aug. 2020 – Mar. 2021</td>
<td>6 rounds</td>
<td>Standalone survey</td>
</tr>
</tbody>
</table>

* The India CRA will likely be expanded with an additional round and five additional states.
** The Child & Family Tracker has 6 rounds in total. The CRA questions were integrated from the third round.

This is the second and final CRA report – following the first (interim) report that was produced in March 2021. In addition to providing trends and discussing factors associated with COVID-19 preventive behaviours, risk perceptions and information and communication, this report provides findings on COVID-19 vaccine willingness across demographic groups in the countries of South Asia. With the roll out of vaccination in the region starting in January 2021, data collection on vaccine willingness and hesitancy was introduced in the CRA surveys in early 2021. The analysis of this early data is an important addition to this second report.

CHAPTER 2: METHODOLOGY

2.1 Conceptual framework

The CRA was designed around the UNICEF Behavioural Drivers Model (BDM). The BDM provides a reference framework of the multiple forces/determinants that affect people’s behaviours. Put another way, the BDM aims to help practitioners move beyond identifying what people are doing – the typical focus of a KAP study – to a deeper understanding of why people do what they do in a given context, in order to inform programme design.

Drawing upon this analytical framework, the CRA aims to identify and analyse some of the social and behavioural drivers as well as barriers related to COVID-19 (as outlined in the model) in order to better plan interventions that can influence them. The dimensions include: prevalence of protective behaviours and the barriers to adopting them; perceptions about risk; trust in institutions, community groups and information channels; coping strategies and emerging needs in relation to COVID-19; and willingness to be vaccinated, among others (see Figure 1). Demographic variables include: age, gender, rural/urban, and education, in order to test possible relationships between these variables and behaviours. The objective is to test and account for the multiple forces/determinants that affect people’s behaviours with access to information.

Figure 1: Rapid assessment components within the UNICEF Behavioural Drivers Model

2.2 Research questions

In order to examine behaviours and their drivers related to COVID-19 based on the CRA data, a series of research questions were formulated to guide the analysis. For this final report, the primary analysis, which draws on the time-series data collected through the CRA, is guided by the following questions:

1. What is the level of willingness to take the COVID-19 vaccine, if available in the different CRA countries? How does this differ by demographic characteristics of respondents and how and why is it changing over time? Are people’s willingness to take the COVID-19 vaccine affected by their level of trust?
2. How do behaviours (with emphasis on protective behaviours) differ by demographic characteristics of respondents and how and why are they changing over time? Are people’s behaviours in relation to COVID-19 affected by their level of trust?
3. What are the barriers to individuals and communities from practicing protective behaviours?
4. How does individual risk perception of COVID-19 infection differ across demographic characteristics of respondents and how is it changing over time? What relationship exists between risk perception and people’s COVID-related behaviours?
5. How is information received on COVID-19 related to risk perception and the practice of protective behaviours for COVID-19?
6. What is the level of intent to take the right actions on health care seeking (call public helpline on COVID-19, go

[Diagram: Rapid assessment components within the UNICEF Behavioural Drivers Model]
only the general population data was analysed for this report. During the CRA surveys, UNICEF experimented with new ways of remote, data-collection technologies; mainly involving the use of phones, interactive voice response (IVR) and online surveys. These technologies were embraced with the intention to:

i. Avoid contact with persons (especially during times when it is important to avoid the spread of COVID-19);
ii. Save resources (including: time, transport costs that would be involved in accessing respondents, avoid data entry costs); and
iii. Access a high volume of respondents (which IVR and online survey are ideally suited for).

IVR data collection technology used a recorded voice to ask survey questions by telephone as respondents entered their answers by pressing the buttons on the keypad of their touchtone telephone. For the online survey methodology respondents used computers or smart gadgets to log into the survey and respond to interview questions. The phone survey, on the other hand, involved data collection through administering a questionnaire to the respondent during a phone call, reading it on a computer. Table 2 presents the data collection modalities used in the four countries to reach specific target groups. In Afghanistan and Pakistan, the surveys were implemented by Viamo, a global social enterprise that specializes in mobile engagement and information and communication technology (ICT) for development. In India, data was collected by IPSOS; a market research company, while in Nepal, UNICEF partnered with the Sharecast Initiative, a not-for-profit media and research organization. The instruments and data collection technology used

## Table 2: Data collection modalities and survey target population per country

<table>
<thead>
<tr>
<th>Country</th>
<th>Data collection modality</th>
<th>Survey target population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>IVR survey</td>
<td>Population aged ≥ 20 years (mobile phone users)</td>
</tr>
<tr>
<td>India</td>
<td>Phone survey</td>
<td>• General Population aged ≥ 18 years (mobile phone users), and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Members of community platforms who have been part of capacity building interventions supported by UNICEF including self-help group (SHG) members, Panchayati Raj institutions (PRI) members and frontline workers (FLWs)</td>
</tr>
<tr>
<td>Nepal</td>
<td>Phone survey</td>
<td>Main caregiver of households having one child below the age of 18 (mobile phone users)</td>
</tr>
<tr>
<td>Pakistan</td>
<td>• Online survey</td>
<td>• Digitally-enabled population in urban areas aged ≥ 20 years who use smart phones and have data access</td>
</tr>
<tr>
<td></td>
<td>• IVR survey</td>
<td>• Population in peri-urban and rural areas ≥ 20 years who use basic phones and are not internet users</td>
</tr>
</tbody>
</table>
varied across the countries and somewhat across rounds, adopted based on the context and information needs of the country. The data collection tools were designed to include between 25 to 35 standard questions on the demographics of respondents, their COVID-19 drivers and barriers as well as COVID-19 vaccine hesitancy. The questions were drawn from well-established questionnaires but were further contextualized by UNICEF COs. The domains covered by the questionnaires included: demographic information of respondents; COVID-19 vaccine hesitancy; risk perception for COVID-19; community norms on COVID-19; prevention practices for COVID-19; health-seeking behaviour for COVID-19; information; communication and trust.

2.4 Sampling design and sample sizes

As indicated above, the overall survey design varied between the four countries: repeated cross-sectional surveys are implemented in Pakistan, India and Afghanistan, while a panel survey is used in Nepal. Within this overall survey design, sample strategies were developed that were feasible and efficient in terms of data collection through remote means and that fit the contextualized objectives of the survey in each country. In Afghanistan, Nepal and Pakistan, the sampling was designed to have national geographical coverage with sufficient state/provincial representation. In India, only 5 states were covered. See Table 3 for an overview of the sample design and realized sample sizes in each country.

In Afghanistan, respondents were initially randomly sampled from an existing database of 3-2-1 hotline users to which the survey implementing partner Viamo had access. However, because response rates were low, the sampling switched to random-digit dialing to be able to achieve a targeted sample size of 2,000 respondents. The sample size was determined to achieve a sample size of 400 respondents in each of the five regions of Afghanistan (based on a confidence level of 95 per cent and margin of error at 5 per cent). Sample quotas were established for equal regional and gender representation. Due to low response and completion rates, particularly among women in specific regions, the realized sample size of rounds one and two were only 1,936 and 1,945 respondents respectively; respondents from specific provinces and women were less represented than planned.

In India, two categories of respondents were sampled and included in the CRAs: general population and members of community platforms. The analysis in this report only represents the former. General population respondents were sampled from the general population aged 18 years or older using random digital dialing. A screening tool (comprising filters such as age>=18 years by state) was used to define the sampling frame of individuals from which a sample of 2,400 respondents were selected with 480 respondents for each of the five states and applying sampling quotas by gender and rural/urban residence.

In Nepal, CRA questions were integrated in the existing COVID-19 Child and Family Tracker (CFT) panel survey from round three onwards. The CFT survey applied multi-stage sampling. In the first stage, 250 wards were initially selected through grid-based, random sampling, applying distance and density optimization algorithms to ensure well-distributed geographical coverage across Nepal. In the second stage, households from a universe of 18,000 respondents with contact details (13,000 respondents drawn from the existing database of the survey implementing partner, Sharecast Initiative, and an additional 5,000 from UNICEF’s database), located in these wards or in proximate wards, were sampled. Households were randomly selected but only those who were identified in the baseline round as having one child below the age of 18 were retained as eligible for the survey. In total 7,500 households were selected from 1,837 wards in 640 municipalities in the first round of the CFT survey. Due to attrition, realized sample sizes were somewhat lower in rounds three to five.

In Pakistan, the sample was drawn from an existing database of mobile phone users of a major mobile phone operator (MNO) in Pakistan. A stratified, random-sampling strategy was adopted, wherein the strata were formed based on the geographical location of the provincial/administrative area and urban/rural area. Equal sample size targets were set per province/area to enable analysis at this subnational level, with a margin of error of 1 per cent and confidence interval of 95 per cent. This totaled an overall target sample size of 3,325. Urban stratification, which determined the use of the online data-collection modality, was based on the selection of main cities across provinces, including the capital territory. The survey was able to surpass the targeted sample size in each round.

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[8] 3-2-1 is a national, toll-free hotline where callers can access development information on a range of topics (health, agriculture, news, weather, etc.) with Roshan mobile network.
[9] Sample sizes were set at 665 units per provincial/area, except for Islamabad, Gilgit-Baltistan and Azad Jammu and Kashmir, for which the joint target sample size was set at 665 units.
While the sampling design achieved wide coverage across states/regions/provinces, the sampling did not achieve representativeness in terms of showing the same proportional distribution as the national or state population on key characteristics (e.g. gender, education). First, the sample represented users of mobile phones, which likely means that the most vulnerable are likely underrepresented. Second, certain groups were underrepresented (e.g. rural women). In the case of Nepal, this was mitigated by purposefully recruiting underrepresented groups (respondents from specific provinces and ethnic groups) into the survey. In the case of Afghanistan, India and Pakistan, weight models were applied ex post facto to ensure representativeness on key characteristics (see box below).

**Post-stratification for Afghanistan, India and Pakistan was carried out using a weight model that included raked variables on the population age, gender, rural/urban setting and education distributions using datasets below:**

- **India**: National Family Health Survey 2015-16 (NFHS-4), the fourth in the NFHS series, provides information on population, health and nutrition.

There were slight differences in the datasets and weights used by Viamo/Pakistan CO compared to those used for the regional analysis which could result in small differences in the estimates generated. Viamo/Pakistan CO used the homogenized dataset that has 3,125 (with post-stratification weights) while the region used the original dataset with 4,137 records (with raked weights).

### Table 3: Sample design and realized sample sizes

<table>
<thead>
<tr>
<th>Country</th>
<th>Sample frame</th>
<th>Sample design</th>
<th>Realized sample sizes per round</th>
</tr>
</thead>
</table>
| Afghanistan       | • Existing 321 Afghanistan database from Viamo  
|                   | • Random-digit dialling                                                      | Random sampling with regional and gender quotas                              | • R1: 1,936  
|                   |                                                                              |                                                                              | • R2: 1,945  
|                   |                                                                              |                                                                              | • R3: 2,041 |
| India (General population) | • Random-digit dialling                                                      | Random sampling with state, gender and rural/urban quotas                     | • R1: 2,400 |
| Nepal             | • All wards in Nepal  
|                   | • Existing databases from SharecaSt Initiative and UNICEF                    | Multi-stage random sampling:  
|                   |                                                                              | - Grid sampling to select wards  
|                   |                                                                              | - Random sampling of households located in selected wards or in proximate wards  
|                   |                                                                              | - Filtering on eligibility criteria (household with at least one child below age of 18 years)  
|                   |                                                                              | - Purposeful sampling to add underrepresented households                      | • R3: 6,631  
|                   |                                                                              |                                                                              | • R4: 6,591  
|                   |                                                                              |                                                                              | • R5: 6,384  
|                   |                                                                              |                                                                              | • R6: 6,313 |
| Pakistan          | • Existing database of one MNO                                                | Stratified random sampling:  
|                   |                                                                              | - Stratification by rural-urban (IVR vs online survey) and province  
|                   |                                                                              | - For urban sample, 13 cities were purposefully targeted                     | • R1: 4,137  
|                   |                                                                              |                                                                              | • R2: 3,577  
|                   |                                                                              |                                                                              | • R3: 3,488  
|                   |                                                                              |                                                                              | • R4: 3,749  
|                   |                                                                              |                                                                              | • R5: 3,954  
|                   |                                                                              |                                                                              | • R6: 3,527 |
2.5 Data analysis

The analysis focuses on examining trends, disaggregation and associations of data collected through the CRA surveys using tests of significance and techniques to assess statistical associations. The data source used in the analysis, including multiple rounds of CRA data, is detailed in Table 4.

<table>
<thead>
<tr>
<th>Country</th>
<th>Rounds included in analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>Round 1 (Apr. 2021)</td>
</tr>
</tbody>
</table>

The following types of analysis were conducted:

- **Descriptive analysis:** This involves simple and cross tabulations that are used to produce proportions to summarize outcomes disaggregated across the demographical variables (a) gender, (b) age, (c) urban/rural and (d) education. Confidence intervals and p-values are used to determine statistical significance in outcomes across different levels of respondents’ characteristics.

- **Factor analysis:** This analysis technique is used to reduce a large number of variables into fewer factors by extracting maximum common variance from all variables into a common score. This technique is used to generate a score from a set of common variables for further analysis. For instance, the CRAs have a number of categorical questions used to measure behaviour and practices, such as questions on handwashing, use of a mask and social distancing. Factor analysis is used to create a score that summarizes information from the three questions, and this is used to carry out inferential analysis.

- **Logistic regressions:** To measure associations between outcomes of interest, behavioural practice variables and a set of respondents’ characteristics (predictors/factors), logistic regression is used to generate odds ratios which are used to describe the likelihood of occurrence of an outcome in the exposed group in comparison to their unexposed counterparts. The factors included in the association analysis were determined using two steps. Initially, all variables that were deemed important to include in the analysis were cross-tabulated with the outcome (e.g. individual risk perception) variable. Those variables whose cross-tabulation with the outcome yielded a significance level below 20 per cent (p-value < 0.2) were included in the multivariable regression.

Outputs from the analysis are presented in simple graphs to provide information related to trends and comparisons across countries and CRA rounds. Furthermore, tables are provided as annexes for those interested in a more-detailed description of the information and data. To determine whether changes over time are statistically significant, p-values and confidence intervals were calculated and presented in the narrative on the graphs with accompanying detail provided in tables in the annexes. When reference is made to differences or changes between two values being statistically significant, a p-value less than 0.05 implies that the two values are significantly different while with confidence intervals, two values are considered significantly different if their confidence intervals (CI) do not overlap. For instance, if the CI of value one is fully above that of value two, then value one is significantly higher than value two and vice versa.

2.6 Learnings and limitations

One of the objectives of the CRA is to learn about the generation and use of rapidly produced citizen- and community-sourced, time-series data. Table 5 summarizes the strengths and limitations of the CRAs.
Table 5: Strengths and limitations/challenges of the CRA

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Limitations/challenges</th>
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<tbody>
<tr>
<td>• Short surveys in time series allows for timely, evidence-based iteration of interventions or strategies</td>
<td>• Short survey length (required for remote data collection) limits extent of investigation</td>
</tr>
<tr>
<td>• Quick adaptation of survey to country needs, especially in emergencies</td>
<td>• Variable and sometimes low-digital access and phone use across groups skews representativeness of population (e.g. gender representation, representation of most marginalized) and therefore limits generalizability and inclusiveness of findings</td>
</tr>
<tr>
<td>• Remote data collection with national and subnational coverage at reduced cost and time, compared to alternatives (versus in-person survey)</td>
<td>• Potential for rapid and low-cost data collection varies across countries depending on variable airtime rates and capacity of mobile network operators</td>
</tr>
<tr>
<td>• Implementation of similar approach and standardization of tools across countries facilitates rapid rollout, cross-country analysis and learning</td>
<td>• Limited aggregation and comparability at regional level due to heterogeneity of surveys</td>
</tr>
<tr>
<td>• Longitudinal data provides richer narrative of evolving situation and can better inform implementation of activities and course corrections</td>
<td>• Social desirability bias likely affected self-reported behaviour data</td>
</tr>
<tr>
<td>• CRA is based on the BDM conceptual framework, which guides questionnaire formulation and research questions for in-depth analysis</td>
<td>• Demand for adequate data analytical capacity across the organization when high frequency data generation</td>
</tr>
<tr>
<td>• Application of weights in models improved representativeness of the findings</td>
<td>• Rapid roll out and high survey frequency constrain time for robust revision of tools and analysis of the data</td>
</tr>
<tr>
<td>• Application of weights in models improved representativeness of the findings</td>
<td>• Need for well-established dissemination plan to inform a dynamic response</td>
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</table>
CHAPTER 3: DEMOGRAPHIC CHARACTERISTICS

This chapter presents information on the distributions of demographic characteristics of respondents that were interviewed in the CRAs of Afghanistan, India, Nepal and Pakistan. The distributions presented here are based on post-stratified analyses of the pooled dataset; consisting of all rounds covered, and they nearly mirror the population distributions of the respective countries. Detailed distributions and related confidence intervals for all four countries have been summarized and presented in this section of the report.

The age distribution of respondents, recorded in completed years, was aggregated for all CRAs, from the four countries. For instance, for Afghanistan, 30 per cent of respondents were aged 20 to 24 years, 19 per cent aged 25 to 29 years, 21 per cent aged 30 to 39 years, 13 per cent aged 40 to 49 years and 17 per cent aged 50 years and above. The age distributions for all countries are summarized in Figure 2 below. The Afghanistan sample includes relatively younger respondents, while the Pakistan sample has relatively older respondents.

Figure 2: Age distribution by country participating in the CRA

By gender, the distribution was nearly the same across all countries: with males at 53 per cent in Afghanistan, 51 per cent in both India and Nepal and 52 per cent in Pakistan. Females represented 47 per cent in Afghanistan, 49 per cent in both India and Nepal and 48 per cent in Pakistan (see Figure 3).

Figure 3: Gender distribution by country participating in the CRA

[10] The India CRA distribution only represents general population data.
Data on the education of respondents was collected by asking and recording the highest education level attained by the respondents. As shown below, respondents who never attended school represented 55 per cent in Afghanistan, 33 per cent in India, 23 per cent in Nepal and 22 per cent in Pakistan. Those with tertiary education represented 17 per cent in both Afghanistan and Nepal, 12 per cent in India and 25 per cent in Pakistan. Other distributions of education levels attained are presented in Figure 4.

**Figure 4: Highest education level attained by country in CRA**

Each of the four countries defined its residential setting differently which depended on the country context. Afghanistan had 68 per cent of respondents from rural areas and 32 per cent from urban areas; India had 77 per cent of respondents from rural areas and 23 per cent from urban areas; Nepal had 41 per cent of respondents from a rural municipality, 46 per cent from a municipality and 13 per cent from a sub/metropolitan city; and Pakistan had 63 per cent from rural areas and 37 per cent from urban areas (see Figure 5 below).

**Figure 5: Residential setting by country in CRA**

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[11] Rural-urban categorization was asked in different ways in the four countries. In both Afghanistan and India, respondents were asked to self-categorize their rural-urban residence by answering whether they lived in a village or city/town. In Nepal, respondents were asked the name of the municipality they lived in. The municipality was subsequently categorized according to the official local-level structuring of municipalities by the Government of Nepal (based on population but also other criteria such as available infrastructure) into the following categories: metropolitan (min. 300,000 population), sub/metropolitan (min. 150,000), municipality (min. 17,000 to 60,000 population depending on geographical area) and rural municipality (min. 13,000 to 40,000 population depending on geographical area). See Ministry of Federal Affairs & General Administration, Nepal. In the case of Pakistan, the rural-urban variable was determined based on information from the mobile network operator, with whom the mobile phone number was registered.
CHAPTER 4: COVID-19 VACCINE WILLINGNESS

Prevalence of vaccine willingness

Vaccine willingness was measured as those respondents who were willing to get vaccinated if a COVID-19 vaccine was available. In Afghanistan, in both rounds in early 2021 (February and March 2021) 57 per cent reported that they would take the vaccine without any concern. In India’s one round done in April 2021, 80 per cent of unvaccinated respondents were willing to take vaccine (in the five states covered by the survey). For Nepal, vaccine willingness stood at around 90 per cent in December 2020 and in January 2021. In Pakistan, it ranged from between 64 per cent and 68 per cent between December 2020 and March 2021. In sum, vaccine willingness varied across countries with lower willingness in Pakistan and Afghanistan. Also, in countries for which trend data is available (Afghanistan, Nepal and Pakistan) vaccine willingness remained more or less at similar levels across months. It should be noted though that in these countries the surveys took place before the second surge of COVID-19 infections. In India the survey was conducted in April, during the second wave, which may have influenced vaccine willingness.

Reasons against COVID-19 vaccine

Reasons against taking the COVID-19 vaccine were only measured in two countries; in April 2021 in India and in two surveys in Pakistan (in January and March 2021). In the five survey states in India, the most cited reasons for not being able to get the vaccine amongst those willing to take it were: the vaccine being available too late, ineligibility due to age limits, lack of a nearby vaccination centre, and limited knowledge of the registration system for the vaccine. Similarly, respondents from Pakistan cited limitations including a lack of knowledge of the registration system, a lack of money to get the vaccine and the vaccine being available too late. It should be noted that in India the survey was conducted in April 2021 when the second surge of COVID-19 cases was taking place. This likely explains the fear of the vaccine becoming available too late.

Among respondents who were not willing to get the vaccine, the most common reason in both countries was a fear of side effects (India: 37 per cent and Pakistan: 37 per cent). Other reasons included: a fear that the vaccine was ineffective (India: 15 per cent and Pakistan: 10 per cent), a desire to get ‘natural immunity’ (India: 9 per cent and Pakistan 17 per cent), and a certain proportion wanted to first ‘wait and see how things unfold’ (India: 5 per cent and Pakistan: 30 per cent).

Associations

- In regressions for the four countries, a significant association between vaccine willingness and the respondents’ education level was observed in Afghanistan, India and Nepal. In the case of Afghanistan and India, respondents with tertiary education were respectively 48 and 66 per cent more likely to report willingness to get a COVID-19 vaccine compared to their counterparts without any education at all. No significant association existed for lower levels of education. In the case of Nepal, the association was the reverse: respondents with higher levels of education were less likely to report vaccine willingness.

- Respondents’ residence (urban versus rural) and age (50 years and above versus below 50 years) were not significantly associated with vaccine willingness across the four countries, except in Nepal where urban residents were significantly less likely to be willing to take the vaccine compared to rural residents.

- Female respondents in India, Nepal and Pakistan were approximately 25 per cent less likely to report willingness to get the COVID-19 vaccine compared to males. These associations were significant in India and Nepal but not in Pakistan. A significant association was not observed in the case of Afghanistan.

- In India and Pakistan where information was collected on trust in government information provided about the vaccine and respondents’ trust in the government’s effectiveness in vaccine provision, strong significant positive associations with the respondents’ vaccine willingness were observed. In both countries respondents who trusted the effectiveness of government efforts to provide the COVID-19 vaccine were more than three times more likely to report willingness to get a COVID-19 vaccine compared to their counterparts who did not trust the government efforts. Furthermore, respondents who trusted the information from the government about the vaccine were approximately five times and two times more likely to report vaccine willingness in India and Pakistan respectively.

- In several countries, the regression analysis also indicated significant associations between vaccine willingness and protective behaviours reportedly practiced by or observed by the respondents. The direction of these associations (positive or negative) varied across the countries.
Effective management and control of the COVID-19 pandemic greatly depends on a population's willingness to take the COVID-19 vaccine. In response to the need to understand the levels of vaccine willingness and the factors that drive it among the population, UNICEF added several questions into the CRAs starting in December in Nepal and Pakistan. The vaccination questions were subsequently added to the Afghanistan CRA in February 2021 and in the first round of the India CRA in April 2021.\[12\]

For all countries, willingness to get the COVID-19 vaccine was ascertained by asking respondents whether they would choose to get vaccinated if a vaccine was available. In India, Nepal and Pakistan the possible responses were ‘yes’, ‘no’ and ‘not sure’. In Afghanistan different responses were used including: ‘will take it without concern’, ‘will seek advice from doctor, family, friends or community leaders since doubts about its effects, composition, etc.’ and ‘will not take it at all since don’t trust it’. In this section, the extent to which respondents from Afghanistan, India, Nepal and Pakistan expressed willingness to take the COVID-19 vaccine, if available, is presented.

### 4.1 Prevalence and patterns of vaccine willingness

COVID-19 vaccine willingness amongst respondents varied between countries over time (see Figure 6). In the one round done in the five surveyed states in India in April 2021, 7 per cent of respondents were already vaccinated and 80 per cent of the unvaccinated were willing to get the vaccine, if it was available. In Pakistan, vaccine willingness ranged from 64 per cent to 69 per cent over the three months covered by the analysis. In Nepal, willingness remained more or less the same ranging from 90 per cent in January 2021 to 91 per cent in February.\[13\]

![Figure 6: Trends in willingness to get COVID-19 vaccine if available (India, Nepal and Pakistan)](Figure 6)

In Afghanistan, 57 per cent of respondents were willing to take the vaccine without any concern when it was available (see Figure 7). Around 10 per cent of respondents were not willing to take the vaccine, while around two-thirds indicated that they would need to seek advice because of doubts. The willingness and hesitancy prevalence did not significantly change between February and March 2021.

\[12\] Vaccination itself started in India and Nepal in January 2021 and in February in Pakistan and Afghanistan.

\[13\] The changes over time are not statistically significant. See Table 6 in the annex for confidence intervals to test statistical significance.
Differences in willingness to get a COVID-19 vaccine by gender were generally not large and not statistically significant in the four countries (see Figure 8). Amongst the unvaccinated in India, 82 per cent of males were willing to get the vaccine compared to 78 per cent of females. Moreover, 10 per cent of females reported that they were already vaccinated compared to 5 per cent of males. In Pakistan, vaccine willingness was similarly somewhat higher amongst male respondents compared to female respondents but again this difference was not statistically significant. Similarly, in Nepal and Afghanistan gender differences were minor.

[14] See Table 6 in the annex for confidence intervals to test statistical significance.

[15] The difference between male and female willingness to get vaccinated was not statistically significant for each of the three data points.
By residential setting, data from Afghanistan (urban 59 per cent, rural 56 per cent) and India (80 per cent in urban and rural) showed no significant difference in the willingness to get a COVID-19 vaccine (see Figure 9). A similar proportion in India’s rural and urban (7 per cent) respondents were already vaccinated in April 2021. Similarly, in Pakistan, only small differences in willingness to get a vaccine were seen between urban and rural residents, although vaccine willingness amongst rural respondents fluctuated slightly more over time (ranging from 63 per cent to 70 per cent) compared to their urban counterparts (ranging between 64 per cent and 67 per cent). In Nepal, relatively wider variations between rural and urban respondents were seen over time. While in December 2020, willingness did not differ strongly across locations, vaccine willingness amongst metropolitan city residents dropped significantly from 88 per cent in December to 82 per cent in January 2021. Amongst rural and municipal residents, on the other hand, vaccine willingness further increased to above 90 per cent.

By age group (see Figure 10), differences between older respondents (50 years and above) and younger respondents (below 50 years) were again small across the four countries and not statistically significant. In Pakistan, older respondents consistently had a higher willingness to get the vaccine than their younger counterparts across all time periods and fluctuated slightly more (ranging between 73 per cent in January 2021 and 66 per cent in March 2021 – see Figure 10). Importantly, 18 per cent of India’s respondents aged 50 and above years were already vaccinated compared to only 5 per cent below 50 years in April 2021.

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Figure 9: Trends in willingness to get COVID-19 vaccine, by rural/urban residence (Afghanistan, India, Nepal and Pakistan)*

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[16] See Table 6 in the annex for confidence intervals to test statistical significance.

[17] *P*-value: 0.002

[18] See Table 6 in the annex for confidence intervals to test statistical significance.
4.2 Reasons for not taking up the COVID-19 vaccine

Respondents were asked about potential impediments to getting a COVID-19 vaccine, even when they wanted to do so. In addition, they were asked about reasons why they would not take the vaccine even when it was available to them. These questions were only asked in two countries (the former in Pakistan in March 2021 and in India in April 2021; the latter in Pakistan in January and March 2021 as well as in India in April 2021).

In the five survey states in India, the majority of respondents did not see an issue with getting vaccinated or could not point to any reason why they could not get vaccinated if they wanted to. Amongst those respondents who could identify a reason and were willing to take the vaccine, the reasons most frequently mentioned for not being able to get the vaccine were fear that the vaccine would be available too late, followed by ineligibility due to an age-limit criteria, the lack of a vaccination centre nearby, and limited knowledge of the registration system. It should be noted that the India survey was conducted in April 2021 when the second surge of COVID-19 cases was taking place. This likely explains the fear of the vaccine becoming available too late. Similarly, from the March 2021 survey, respondents from Pakistan described limitations about the knowledge of the registration system, a shortage of money to get the vaccine and a fear that the vaccine would be available too late (see Figure 11).

Amongst respondents who were not willing to get the vaccine, the most common reason in both countries was the concern about side effects (India: 37 per cent and Pakistan: [14] See Table 6 in the annex for confidence intervals to test statistical significance. [15] The difference between male and female willingness to get vaccinated was not statistically significant for each of the three data points.
37 per cent). In the Pakistan pooled data of January and March 2021 a substantial percentage of respondents (30 per cent) expressed a general hesitancy (a ‘wait and see’ approach) without prioritizing a specific reason. This reason was less frequently mentioned amongst respondents in India. Other reasons relatively frequently mentioned were: fear that the vaccine was ineffective (India: 15 per cent and Pakistan: 10 per cent) and the desire to get natural immunity (India: 9 per cent and Pakistan 17 per cent). The distribution of other reasons can be seen in Figure 12 below.

4.3 Factors associated with COVID-19 vaccine willingness

The study pooled survey data from Afghanistan (February and March 2021 rounds), Nepal (December 2020 and January...
2021 rounds), Pakistan (December 2020, January and March 2021 rounds) and India (April 2021) to analyse the association between willingness to get a COVID-19 vaccine and various factors (including age group, gender, residence setting, education level, practice of protective behaviour against COVID-19, weekly exposure to information on COVID-19, trust in government response against COVID-19, individual risk perception and trust in the effectiveness of government efforts to provide the COVID-19 vaccine). The factors included in the association analysis were determined using two steps. Initially all variables that were deemed important to include in the analysis were cross-tabulated with the outcome variable (willingness). Those variables whose cross-tabulation with the outcome yielded a significance level below 20 per cent (p-value<0.2) were included in the multivariable regression. The results for the four countries are presented in this section. The statistical analysis of association was done through logistical regression and the estimation of odds ratios, which provide a measure of the likelihood that different characteristics of respondents (factors) are associated with respondents’ willingness to get a COVID-19 vaccine. The regression analysis supports the estimation of the association of a factor with willingness to get a COVID-19 vaccine while controlling for the other factors included in the regression. The statistical significance of an odds ratio is determined by the positioning of its confidence interval (defined as a possible range of values for the odds ratio) relative to a value of one (see the red line in Figure 13 below). If the confidence interval includes one (the red line), this indicates no association between the factor and willingness to get a COVID-19 vaccine, while a confidence interval fully below or fully above one (which does not cross the red line), indicates statistical significance; indicating a respectively lower or higher likelihood that respondents with a certain characteristic (e.g. being female) compared to its reference value (e.g. being male) are more willing to get a COVID-19 vaccine. 

Figures 13 to 16 present the odds ratios and their corresponding confidence intervals graphically for the different factors (on the Y-axis) for Afghanistan, India, Nepal and Pakistan.

In Afghanistan, willingness to get a COVID-19 vaccine was statistically significantly associated with the attainment of tertiary education level, handwashing to prevent COVID-19 infection and the perception that community members wear

[19] In Afghanistan the degree of willingness was given in three answer options (‘will take it without any concern’, ‘will seek advice since in doubt’ and ‘will not take it at all’). For the association analysis, those who responded that they will take it without any concern were considered as the positive outcome.

[20] Note that the odds ratio is a measure of association. It does not imply any causal direction of the association.
Respondents with a tertiary education were 48 per cent [OR: 1.48] more likely to report willingness to get a COVID-19 vaccine compared to their counterparts with no education at all (see Figure 13). Also, respondents who washed hands regularly to avoid COVID-19 infection were 75 per cent [OR: 1.75] more likely to be willing to get a COVID-19 vaccine compared to those who did not wash their hands regularly to avoid COVID-19 infection. Respondents who perceived that ‘a lot of people’ or nearly everyone in their community was wearing masks were 43 per cent [OR: 1.43] more likely to report willingness to get a COVID-19 vaccine compared to those who reported that ‘only some community members’ or less wore a mask.21

No statistically significant association existed between age, gender, rural/urban setting, individual risk perception and perception that community members kept social distance to avoid COVID-19 infection with willingness to get a COVID-19 vaccine (see Figure 13). Analysis of data from India showed that the willingness to get a COVID-19 vaccine was significantly associated with gender, education and, notably, several factors related to trust in government action and information (specifically

**Figure 13:** Factors associated with willingness to get a COVID-19 vaccine (Afghanistan)

[21] Variables were collected using a five-point Likert scale: ‘nearly everyone or everyone’, ‘a lot of people’, ‘some people’, ‘a small number of people’ and ‘barely anyone or no one’. A binary variable was created out of this with ‘nearly everyone or everyone’ and ‘a lot of people’ as the positive outcomes.
confidence in the effectiveness of government efforts to provide the vaccine and trust in information provided by the government about the COVID-19 vaccine (see Figure 14). Female respondents were 24 per cent [OR: 0.76] less likely to report a willingness to get a COVID-19 vaccine compared to their male counterparts. Similar to the findings in Afghanistan, respondents with a tertiary education level were 66 per cent [OR: 1.66] more likely to report a willingness to get a COVID-19 vaccine compared to their counterparts with no formal education. Respondents who believed that government efforts to provide the vaccine were effective were more than three times [OR: 3.56] more likely to report willingness to get a COVID-19 vaccine compared to their counterparts who thought the government was not effective or were not sure. Also, respondents who trusted government information about the COVID-19 vaccine were five times [OR: 4.92] more likely to report a willingness to get a COVID-19 vaccine compared to their counterparts who did not trust the government information about the COVID-19 vaccine. In summary, the analysis indicates a strong association between respondents’ willingness to get vaccinated and trust in government effectiveness with regards to vaccination and the information provided about the vaccine.

Data from Nepal showed that a willingness to get a COVID-19 vaccine was significantly associated with gender, rural/urban setting, education and the reported regular practice of some preventive behaviours such as handwashing and physical distancing to prevent COVID-19 infection (see Figure 15). Female respondents were 22 per cent [OR: 0.78] less likely to report a willingness to get a COVID-19 vaccine compared to their male counterparts. Compared to the disaggregated analysis presented in Figure 8, the association between vaccine willingness and gender becomes significant when controlling for other variables. Also, confirming the disaggregated analysis presented in Figure 9, respondents from a municipality were 35 per cent [OR: 0.65] less likely and those from metropolitan city were 61 per cent [OR: 0.39] less likely to report a willingness to get a COVID-19 vaccine, compared to their counterparts from rural areas. Also, respondents who reported keeping a two metres’ distance to avoid COVID-19 infection were 18 per cent [OR: 1.18] more likely to report a willingness to get a COVID-19 vaccine compared to their counterparts who did not report keeping a two metres’ distance to avoid COVID-19 infection.

For Pakistan, the analysis showed that individual risk perception for COVID-19 infection, trust in the information

Figure 14: Factors associated with willingness to get a COVID-19 vaccine (India)
provided by the government on the COVID-19 vaccine and trust in the effectiveness of government efforts to provide the COVID-19 vaccine and the practice of mask wearing to avoid COVID-19 infection were significantly associated with a willingness to get a COVID-19 vaccine. Respondents who perceived themselves at risk of a COVID-19 infection were nearly twice [OR: 1.93] more likely to report a willingness to get a COVID-19 vaccine compared to their counterparts who did not perceive themselves at risk of COVID-19 infection. Respondents who trusted the effectiveness of government efforts to provide the COVID-19 vaccine were three times [OR: 3.12] more likely to report a willingness to get a COVID-19 vaccine compared to their counterparts who did not trust government efforts. Also, respondents who trusted the government’s information about the COVID-19 vaccine were nearly twice [OR: 1.94] as likely to report a willingness to get a COVID-19 vaccine compared to their counterparts who did not trust government information. Respondents who reported often wearing a mask to avoid COVID-19 infection were nearly three times [OR: 2.75] more likely to report a willingness to get a COVID-19 vaccine compared to their counterparts who did not wear a mask often.

Figure 15: Factors associated with willingness to get a COVID-19 vaccine (Nepal)

Figure 16: Factors associated with willingness to get a COVID-19 vaccine (Pakistan)
CHAPTER 5: RISK PERCEPTION OF COVID-19

Key findings

Individual risk perception

This was measured for those respondents who thought they were at risk of COVID-19 infection. In Pakistan and Nepal, for which the longest trend data was available, risk perception decreased between mid-2020 and early 2021: in Nepal from 48 per cent in August 2020 to 28 per cent in January 2021 and in Pakistan from 59 per cent in August 2020 to 41 per cent in March 2021. In Afghanistan, a stable minority of around 40 per cent of respondents thought they were at risk of COVID-19 infection during December 2020 and March 2021. Finally, in the five states covered by the CRAs in India, only 22 per cent of respondents perceived being at risk of COVID-19 in April 2021, although with variation across states likely related to surge of the second wave in April 2021.

Associations

- The regression analysis for India showed that respondents aged 50 years and above were 42 per cent less likely to report individual risk perception for COVID-19 infection. This contrasted with the analysis in Pakistan where respondents aged 50 years and above were 26 per cent more likely to report individual risk perception for COVID-19 infection compared to those below 50 years of age. Notably, the regressions for Afghanistan and Nepal did not show any significant differences in individual risk perception for COVID-19 infection by age group.
- Across all four countries, female respondents were more likely to report individual risk perception for COVID-19 infection, although only in India was this association statistically significant. Specifically, in India, female respondents were 36 per cent more likely to report individual risk perception for COVID-19 infection compared to their male counterparts.
- Urban/rural comparisons showed that urban respondents in Afghanistan and Nepal were significantly more likely to report individual risk perception for COVID-19 infection compared to their rural counterparts. In Afghanistan, urban respondents were 31 per cent more likely to report this. Nepal’s municipal residents were 11 per cent more likely to report individual risk perception for COVID-19 infection while sub/metropolitan city residents were 34 per cent more likely to report this compared to their rural counterparts.
- Lastly, in Pakistan, respondents who reported receiving information on COVID-19 ‘all of the time’ were significantly more likely to report individual risk perception for COVID-19 infection (25 per cent more) compared to their counterparts who reported never receiving information. Similarly in India, respondents who received ‘a lot’ or moderate information were 50 per cent more likely to report individual risk perception for COVID-19 infection compared to those who received little or no information. This emphasized the importance of relaying information on COVID-19 regularly. Notably, no statistical significance was seen in Afghanistan amongst those who received ‘a lot’ or moderate information compared to those who received little or no information.

Risk perception refers to an individual’s perception of the possibility that ‘something bad might happen’ as a result of an action or change. Risk perception influences risk behaviour: people with lower risk perception tend to adopt riskier behaviours or are less likely to practice preventive behaviours, while those with high-risk perception tend to adopt preventive behaviours. In other words, individual risk perception can determine one’s behaviour. It often affects individuals’ willingness and motivation to take preventative action, regardless of how critical it is to comply with policy recommendations as directed by public health authorities. In this section, the extent to which respondents from Afghanistan, India, Nepal and Pakistan perceive COVID-19 to be risky is presented. Individual risk perception was collected by asking respondents whether they thought they were at risk of COVID-19 infection.

5.1 Individual risk perception of COVID-19

Risk perception amongst respondents in relation to COVID-19 varied between countries and reduced over time (see Figure 17). In Pakistan and Nepal for which the longest trend data was available, risk perception showed a statistically-significant decrease between mid-2020 and early 2021. In Nepal, risk perception decreased around 20 per cent between August 2020 and January 2021, while in

[23] See Table 7 in the annex for confidence intervals and p-values to test statistical significance.
Pakistan it decreased from 59 per cent in August 2020 to 41 per cent in March 2021. In Afghanistan, a stable minority of around 40 per cent of respondents thought they were at risk of COVID-19 infection during December 2020 and March 2021. Finally, in the five states covered by the CRAs in India, only 22 per cent of respondents perceived being at risk of COVID-19 by April 2021, which is considerably lower than in the other countries. However, risk perception varied substantially between the Indian states. It was substantially higher in the northern states of Bihar and Utter Pradesh (a bit below 30 per cent), which may have been influenced by the rapid rise in COVID-19 cases in these states during the second wave and increased media coverage.

Differences in risk perception by gender were generally not large in India, Nepal and Pakistan and were not statistically significant (see Figure 18). Trends in individual risk perception for men and women paralleled each other in Nepal and Pakistan. On the contrary, in Afghanistan, differences in risk perception by gender were sizeable in December 2020 (males: 38 per cent; females: 44 per cent). They grew larger by February 2021 (males: 36 per cent; females: 50 per cent). However, by March 2021, risk perception had converged to about 40 per cent for both males and females.
By residential setting, data from all countries showed some variations in risk perception between rural and urban dwellers over time (see Figure 19). In both Afghanistan and Nepal risk perception was higher amongst urban residents compared to rural residents. In both of these countries risk perceptions amongst urban residents increased at a certain moment, while in rural areas/municipalities risk perception mostly decreased over time. For example, in Nepal risk perception sharply dropped at the end of 2020 by 10 percentage points amongst respondents from rural municipalities and 13 percentage points amongst those from municipalities, while it remained relatively high at 48 per cent amongst respondents from (sub)metropolitan areas until December 2020 after which it also dropped.

In contrast, in the survey done in India in April 2021 individual risk perception was higher amongst rural respondents compared to urban respondents. Similarly, in Pakistan, risk perception was initially higher in rural areas (61 per cent) in August 2020 in comparison to urban areas (55 per cent). However, the difference in risk perception between urban and rural areas fluctuated substantially over time, with sharper fluctuations of risk perception amongst urban respondents. In March 2021, risk perception had dropped to 38 per cent of rural respondents, while remaining at nearly 50 per cent amongst urban respondents.

Figure 19: Trends in individual risk perception for COVID-19, by rural/urban residence (Afghanistan, India, Nepal and Pakistan)
By age group, data from the four countries showed some variations in risk perception of being infected with COVID-19 over time (see Figure 20), but no clear pattern across countries can be discerned. In India’s survey done in April 2021, individual risk perception was lower amongst the older respondents (aged 50 years and above) compared to younger counterparts. Only 15 per cent of respondents aged 50 years and above thought they were at risk of being infected with COVID-19 versus 23 per cent of those aged 18 to 50. In Afghanistan, risk perception remained more or less stable at around 40 per cent for those aged 20 to 50 between December 2020 and March 2021. It varied for older respondents, fluctuating between 36 per cent in December 2020 and 46 per cent in February 2021.

In Nepal, only limited differences in risk perception by age group were seen over time. In both age groups risk perception reduced substantially over time. The reduction of risk perception was somewhat more pronounced amongst older respondents, dropping from 50 per cent in August 2020 to 34 per cent by the end of 2020 and to 27 per cent in January 2021. On the contrary, in Pakistan, the risk perception remained consistently higher amongst those aged 50 years and above compared to those aged between 20 and 49 years. The difference in risk perception between respondents aged 50 years and above and those aged 20 to 49 years was statistically significant with the exception of October 2020 and January 2021.

Figure 20: Trends in individual risk perception for COVID-19, by age group (Afghanistan, India, Nepal and Pakistan)
5.2 Factors associated with individual risk perception of COVID-19

The study analysed the association between risk perception and various factors (including age group, gender, residence setting, education level, and availability of COVID-19 information). Results for all four countries are presented in this section. The analysis is based on pooled data collected for Afghanistan (December 2020, February and March 2021), Nepal (August, October, December 2020 and January 2021), Pakistan (August, September, October, December 2020, January and March 2021) and India (April 2021).

The statistical analysis of association is done through logistical regression and the estimation of odds ratios, which provides a measure of the likelihood that different characteristics of respondents (factors) are associated with respondents perceiving themselves at risk of being infected with COVID-19. The regression analysis supports the estimation of the association of a factor with individual risk perception while controlling for the other factors included in the regression. The statistical significance of an odds ratio is determined by the positioning of its confidence interval (defined as a possible range of values for the odds ratio) relative to a value of one (red line on graphs below). If the confidence interval includes the red line, this indicates no association between the factor and the risk perception, while a confidence interval fully below or fully above one (which does not cross the red line), indicates statistical significance; indicating respectively less or more likelihood that respondents with a certain characteristic (e.g. being female) compared to its reference value (e.g. being male) perceive themselves at risk of COVID-19 infection.

Figures 21 to 24 present the odds ratios and their corresponding confidence intervals graphically for the different factors (on the Y-axis) for Afghanistan, India, Nepal and Pakistan.

In Afghanistan, risk perception for COVID-19 infection was statistically significantly associated with residence (urban/rural). Urban respondents were 31 per cent [OR: 1.31] more likely to think that they were at risk of being infected with COVID-19 compared to their rural counterparts (see Figure 21). There was no statistically significant association between individual risk perception with either gender, education, source of COVID-19 information or frequency of exposure to COVID-19 information.

Figure 21: Factors associated with individual risk perception for COVID-19 infection (Afghanistan)
In India, risk perception for COVID-19 infection was statistically significantly associated with age group, gender, weekly exposure to COVID-19 information, and the quality of information received. Older respondents (50 years and above) were 42 per cent [OR: 0.58] less likely to think that they were at risk of being infected with COVID-19 compared to their counterparts aged 20 to 49 years (see Figure 22). Also, female respondents were 36 per cent [OR: 1.36] more likely to think that they were at risk of being infected with COVID-19 compared to their male counterparts. Similarly, respondents who were exposed to 'a lot' or moderate information on COVID-19 were 50 per cent [OR: 1.50] more likely to think that they were at risk of being infected with COVID-19 compared to their counterparts who did not receive any or little information on COVID-19. Also, those who reported that the information received on COVID-19 was clear and actionable were 41 per cent [OR: 1.41] more likely to think that they were at risk of being infected with COVID-19 compared to their counterparts who reported that the information they received on COVID-19 was not clear and actionable.

Figure 22: Factors associated with individual risk perception for COVID-19 infection (India)
In Nepal, residence and education were significantly associated with individual risk perception of being infected with COVID-19. Residents in more urban areas were more likely to perceive themselves at risk compared to those from rural areas. More specifically, respondents residing in a municipality or sub/municipal city were respectively 11 per cent [OR: 1.11] and 34 per cent [OR: 1.34] more likely to think that they were at risk of being infected with COVID-19 compared to those who resided in rural municipalities (see Figure 23). Respondents who attained intermediate education were 41 per cent [OR: 1.41] more likely to think that they were at risk of being infected with COVID-19 compared to their counterparts with no formal education while those who attained post-secondary education were 47 per cent [OR: 1.47] more likely to think so.

Figure 23: Factors associated with individual risk perception for COVID-19 infection (Nepal)

Lastly, in Pakistan, age group, education and receiving COVID-19 information ‘all the time’ were significantly associated with individual risk perception of being infected with COVID-19. Respondents aged 50 and above years were 26 per cent [OR: 1.26] more likely to think that they were at risk of being infected with COVID-19 compared to their counterparts aged 20 to 49 years (see Figure 24).

Also, respondents who attained matric education were 36 per cent [OR: 0.64] less likely to think that they were at risk of being infected with COVID-19 compared to their counterparts with no formal education. Those who attained intermediate education were 31 per cent [OR: 0.69] less likely to think that they were at risk of being infected with COVID-19 compared to their counterparts with no formal education while those who attained post-secondary education were 42 per cent [OR: 0.58] more likely to think that they were at risk of being infected with COVID-19 compared to their counterparts with no formal education. Furthermore, respondents who reported receiving COVID-19 information ‘all the time’ were 25 per cent [OR: 1.30] more likely to think that they were at risk of being infected with COVID-19 compared to their counterparts who ‘never receive’ information on COVID-19.

Figure 24: Factors associated with individual risk perception for COVID-19 infection (Pakistan)
CHAPTER 6: INFORMATION, COMMUNICATION AND TRUST

Key findings

Information on COVID-19 and trust

- In Afghanistan, TV and radio were the most common (30 per cent) and trusted (24 per cent) sources on COVID-19. Next was social media (which was the main source for 18 per cent and most trusted by 14 per cent) and health workers and health facilities (which was the main source for 16 per cent and most trusted by 12 per cent). A large proportion of respondents indicated having low exposure to regular information about COVID-19, as around 75 per cent reported reading or hearing nothing or little about COVID-19 in the previous week (February to March data). This did not significantly vary by the gender, age group or rural/urban residence of the respondent.

- In India, the source of information on COVID-19 was collected using a multiple-choice question. Overall, 80 per cent of respondents cited TV as their source of information on COVID-19, a lower proportion (56 per cent) cited it as their most trusted source. This was followed by social media (55 per cent as source and 13 per cent as the most trusted source) and print media (38 per cent and 9 per cent, respectively). In contrast to Afghanistan, 63 per cent of respondents indicated hearing or reading ‘a lot’ or a moderate amount about COVID-19 over the previous week (April 2021 data), which may have been influenced by the media attention given to COVID-19 during the second wave of infections. Furthermore, respondents in India were asked to cite community groups they trusted to take actions that benefited them. Family groups (20 per cent), Self-help groups (SHGs) (16 per cents) and local government (15 per cent) were the most cited groups. When asked directly about perceptions of the government response to COVID-19, 79 per cent of respondents indicated that they thought what the government was doing to protect them from getting infected with COVID-19 was effective; 85 per cent trusted the information provided by the government about COVID-19; and 81 per cent trusted the information provided by the government about the COVID-19 vaccine.

- In Nepal, information on the most-trusted source of information on COVID-19 was collected in December 2020 and January 2021. The radio (44 per cent) and TV (28 per cent) were the most trusted sources of information cited by respondents about COVID-19. This was followed by social media (11 per cent), health workers (6 per cent), family members (5 per cent), WHO/UNICEF (2 per cent) and print media (2 per cent). Furthermore, in Nepal’s CRA of January 2021, information on knowledge of where to go if one needs information on COVID-19 was collected and this knowledge was nearly universal at 96 per cent without much difference across gender, age group and rural/urban residence.

- In Pakistan, aggregated data collected between August and October 2020 showed that the most trusted source of information was TV and radio (47 per cent) followed by social media (23 per cent), family and friends (8 per cent) and health care workers/facilities (8 per cent). In the same period, 50 per cent of respondents indicated learning about COVID-19 often or all the time (August to September), which reduced over time to 45 per cent in October. Subsequently data was collected on whether respondents believed they received enough information on COVID-19. Overall, about 61 per cent reported that they received enough information, 29 per cent reported that they did not receive enough information while 11 per cent were ‘not sure’. In contrast to the other countries, the frequency of receiving COVID-19 information varied substantially between groups (more urban and older respondents indicated learning frequently about COVID-19 or having received enough information). Furthermore, 73 per cent of respondents trusted information provided by the government about COVID-19, while 56 per cent thought that what the government was doing was effective against COVID-19 and 74 per cent trusted in information provided by the government about the COVID-19 vaccine.
Clear, consistent and transparent information and communication is a crucial factor in any effective humanitarian response, particularly when it is related to a public health emergency. The various uncertainties and dynamic nature of how the COVID-19 pandemic evolved opened vast space for rumours, misinformation and disinformation leading to what many dubbed as an ‘infodemic’. This can only be resolved or abated with clear, correct information effectively communicated by a trusted authority.

The target population must be able to easily find and access the most important, necessary and up-to-date information on trusted communication channels in an easy and efficient manner. Reliable information rooted in evidence is one of the cornerstones of any effective risk communications response.

In this study respondents were asked about their most common and trusted sources of information on COVID-19 and reasons why they trusted these sources. Furthermore, for some countries, the CRAs examined the frequency of COVID-19 information received and trust in the COVID-19 response by government and other actors.

6.1 Common and trusted sources of information on COVID-19

In Afghanistan, information on the main and most trusted source of information on COVID-19 is provided in Figure 25 from pooled data collected in December 2020, February and March 2021. TV and radio were most frequently reported as the main (30 per cent) and most trusted (24 per cent) sources followed by social media (main source for 18 per cent and most trusted by 14 per cent). Health workers and health facilities were cited by 16 per cent of respondents as their main source and 12 per cent as their most trusted source with family and friends being cited by 12 per cent and 14 per cent respectively. Notably, although WHO/UNICEF was not mentioned as a source of COVID-19 information, it was indicated as most trusted information source by 11 per cent of respondents. See Figure 25 for other distributions.

Figure 25: Main and most trusted sources of information on COVID-19 (Afghanistan, Dec. 2020, Feb. 2021, Mar. 2021)
In India, amongst the five study states, data on the source of information on COVID-19 was collected using a multiple-choice question. Shown in Figure 26, while 77 per cent of respondents cited TV as their source of information on COVID-19, a lower proportion (56 per cent) cited it as their most trusted source. This was followed by social media that was cited by 42 per cent as source and 13 per cent as their most trusted source while print media was cited by 36 per cent and 9 per cent, respectively. For other distributions of sources of information see Figure 26.

**Figure 26: Common and most trusted sources of information on COVID-19 (India)**

Furthermore, respondents in India were asked to cite community groups they trusted the most to take actions that benefit them (see Figure 27). Family was trusted the most (20 per cent), followed by Self-help groups (SHGs) (16 per cent) and local government (15 per cent). Notably, a considerable proportion of respondents (37 per cent) indicated trusting none of these. When asked directly about the government response to COVID-19, 79 per cent of respondents indicated that they thought what government was doing to protect them from getting infected with COVID-19 was effective; 85 per cent trusted the information provided by the government about COVID-19; and 81 per cent trusted the information provided by the government about the COVID-19 vaccine (see Figure 28).

**Figure 27: Most trusted community groups to undertake beneficial actions (India)**
In Nepal, information on the most-trusted source of information on COVID-19 was collected in December 2020 and January 2021. The radio (44 per cent) and TV (28 per cent) were the most trusted sources of information reported by respondents about COVID-19. This was followed by social media (11 per cent), health workers (6 per cent), family members (5 per cent), WHO/UNICEF (2 per cent) and print media (2 per cent) (see Figure 29).

Furthermore, in Nepal’s CRA of January 2021, respondents were asked if they knew where to get more information on COVID-19 if needed. Notably, this knowledge was nearly universal at 96 per cent (see Figure 30). Furthermore, disaggregating this knowledge by gender (male: 96 per cent; female: 96 per cent), age group (18 to 49 years: 96 per cent; 50 years and above: 96 per cent) and setting (rural: 97 per cent; municipality: 95 per cent; sub/metropolitan city: 98 per cent) did not show any differences across the different categories; hence results have not been graphed.
In the Nepal CRA of August 2020, information on the most trusted local groups to support local-level response to COVID-19 was collected. As shown in Figure 31, mothers’ and women’s groups were the most-trusted platform across the country. Also, trust in local government was relatively high. Notably, respondents reporting ‘no trust in anyone’ was also relatively high at 20 per cent.

**Figure 31: Most-trusted local groups to support local level response to COVID-19 (Nepal)**

Pakistan collected information on the main and most trusted sources of information on COVID-19 in all six rounds (August, September, October, December 2020, January and March 2021). Data analysis was done by aggregating all six rounds of data. Results indicated that the most common source of information was TV and radio (43 per cent) followed by social media (29 per cent), family and friends (5 per cent) and print media (5 per cent). Similar trends were observed when assessing the most trusted sources of information in the country (see Figure 32).

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[26] In the first five rounds (August 2020 to January 2021), data was collected with TV and radio combined under one code. In March 2021, TV was separated from radio and collected under different codes. During analysis, for uniformity with earlier rounds, TV and radio were recoded into one code for the questions regarding main and trusted sources of information.
In the final Pakistan CRA round in March 2021 respondents were asked whether they trusted information provided by the government about COVID-19 and the COVID-19 vaccine. A large majority indicated that they trusted the information: 73 per cent and 74 per cent respectively (see Figure 33). Differences by gender, age group and urban/rural residence were overall minor, particularly with regards to trust in the information provided about the COVID-19 vaccine. Only on the topic of trust in government information about COVID-19 in general, older respondents (aged 50 years and above) and urban respondents expressed a higher level of trust: 78 per cent of older respondents trusted government information about COVID-19 (versus 72 per cent of respondents aged between 20 and 49 years of age), while 79 per cent of urban respondents expressed trust (versus 70 per cent of rural respondents). In addition, respondents were asked about their perspective about the effectiveness of what government was doing against COVID-19. A little bit over half of respondents (56 per cent) thought what government was doing was effective.
6.2 Reason for trusting information on COVID-19 source

Respondents from India, Nepal and Pakistan were asked for reasons why they trusted the cited source of information on COVID-19 information. In Afghanistan this question was not asked. In the Nepal and Pakistan surveys this question was only asked during the initial CRA rounds; this data was already reported in the interim report and will only be referenced in the narrative below.  

In India when asked the main reason for trusting the indicated source of COVID-19 information, 45 per cent of respondents indicated that the source provided information that was clear and based on facts; 29 per cent mentioned that they always trusted the source; and 10 per cent mentioned that their family and friends trusted the source (see Figure 34). The Nepal and Pakistan surveys provided similar findings. The clarity and factual presentation of information, as well as credibility of the information source, stood out as the main reasons for trusting a source of information.

6.3 Frequency of information on COVID-19

A question on the amount of information received (‘heard or read’) about COVID-19 during a regular week was asked in Afghanistan’s two rounds (February and March 2021) and India’s one round (April 2021). A question about the frequency of receiving information on COVID-19 during a regular week was asked in Pakistan’s first three CRA rounds (August, September and October 2020).28 The responses in Afghanistan and India included ‘a lot’, ‘moderate amount’, ‘little’ and ‘nothing’. In Pakistan, they included ‘never’, ‘sometimes’, ‘often’ and ‘all the time’. During the last three CRA rounds in Pakistan, respondents were asked whether they received enough information about COVID-19 in the past week.

In Afghanistan, data for the two rounds was analysed and summarized in Figure 35 while for India, data for one round is presented in Figure 36. Reported exposure to COVID-19 information was relatively low in Afghanistan in early 2021: in both February as well as March 2021 76 per cent of respondents indicated hearing or reading nothing or a little about COVID-19 in the past week. On the contrary, in the five survey states in India, 35 per cent of respondents reported receiving ‘a lot’ of information, 27 per cent reported receiving a moderate amount, 18 per cent reported receiving ‘a little’ while 16 per cent reported receiving nothing.

As shown in Figure 37, in Pakistan, the proportion that never learned about COVID-19 during a regular week remained unchanged (at 22 per cent to 23 per cent for all the three first rounds during August to October 2020). The proportion of respondents who indicated being exposed frequently to COVID-19 information reduced over time: while in August 2020, 52 per cent of respondents reported learning about COVID-19 ‘all the time’ or often, this proportion decreased to 45 per cent in October 2020.

[28] The survey asked how often respondents learned about COVID-19 during a regular week.
Figure 38 presents the pooled data across two rounds of Afghanistan, one round of India and three rounds of Pakistan by setting. In Afghanistan and India there was no clear differences between the frequency of urban and rural respondents’ exposure to COVID-19 information. In Afghanistan, this percentage equaled 23 per cent (‘a lot’ and a moderate amount) in rural areas and 25 per cent in urban areas. In India, it was 62 per cent in rural areas and 61 per cent in urban areas. As shown in Figure 38, in Pakistan, rural respondents learned about COVID-19 less regularly than their counterparts from urban areas. While approximately 60 per cent of respondents from urban areas frequently (‘all the time’ and often) received information, this was the case for only around 40 per cent of respondents from rural areas. It should be noted that the Pakistan data dates from much earlier in the pandemic compared to the Afghanistan and India survey data, so cross-country comparison is difficult.
In addition, for Afghanistan and India, there was not a wide difference between age groups regarding the frequency of receiving information on COVID-19. On the contrary, in Pakistan, a sizeable difference was seen as younger respondents reported learning about COVID-19 less compared to their older counterparts (see Figure 39). By gender, differences in exposure to information on COVID-19 between male and female respondents were overall small in all three countries (see Figure 40).
6.4 Receiving enough information on COVID-19

Furthermore, Pakistan’s surveys (completed in December 2020 and January 2021) collected data on whether respondents believed they received enough information on COVID-19 in the week preceding the survey. In the December 2020 survey, 61 per cent reported that they had received enough information, 29 per cent reported they did not receive enough information while 11 per cent reported they were ‘not sure’. Notably, the same distributions were seen in the January 2021 survey.

Shown in Figure 42, disaggregation of the data confirms the differences in access to information between rural and urban residents as well as older and younger respondents (as see Figure 38 and Figure 39 above). Around 70 per cent of urban respondents in December 2020 and January 2021 reported having received enough information about COVID-19 compared with around 55 per cent of rural respondents. Similarly, around 70 per cent of respondents aged 50 years and above received enough information compared to 57 per cent of respondents aged 20 to 49 years. Differences were less pronounced between male and female respondents, with relatively more males indicating that they had received enough information about COVID-19.

Figure 41: Per cent respondents who believe they received enough information on COVID-19 in the week (Pakistan)

Figure 42: Per cent respondents who believe they received enough information on COVID-19 in the week, by gender, age group and setting (Pakistan)
CHAPTER 7: PROTECTIVE BEHAVIOUR AGAINST COVID-19

Key findings

Protective behaviour for COVID-19

This study looked at the following protective behaviours against COVID-19: handwashing, wearing a mask and keeping two metres of distance while in public (physical distancing). Practicing these behaviours was defined as those who reported doing so ‘all the time’ or ‘most of the time’. In Pakistan (rounds four, five and six), these two options were combined into one option ‘very often’ which was taken to represent practicing the behaviour. Data was predominantly based on self reported, individual behaviour. In the Afghanistan and India CRAs, data on mask wearing and physical distancing was based on what the respondents observed amongst people in their community.

• In Afghanistan, the reported uptake of preventive practices increased significantly from the end of 2020 to early 2021. Handwashing increased from 65 per cent in December 2020 to 85 per cent in March 2021. Community-observed physical distancing increased from 36 per cent in December 2020 to 53 per cent in February 2021 but reduced to 46 per cent in March 2021. Similarly, community-observed wearing of a mask increased from 39 per cent in December 2020 to 46 per cent in February 2021 but reduced to 42 per cent in March 2021.

• In the five survey states in India (April 2021), the proportion of respondents that reported practicing handwashing was 65 per cent. Asked about the extent to which people in their community were wearing a mask and keeping at least two metres of distance, the proportion of respondents who indicated that these practices were widespread in their communities (i.e. ‘everyone/nearly everyone’ or ‘a lot of people’) were 68 per cent and 42 per cent, respectively.

• In Nepal, handwashing decreased from 92 per cent in August 2020 to 60 per cent in January 2021; mask wearing decreased from 77 per cent in August 2020 to 55 per cent in January 2021; and keeping two metres of distance decreased significantly from 53 per cent in August 2020 to 39 per cent in January 2021.

• In Pakistan, similarly to Nepal, there was a decreasing trend in the proportion of respondents who reported regularly practising the three protective behaviours. Handwashing decreased from 87 per cent in August 2020 to 66 per cent in March 2021; mask wearing decreased from 79 per cent in August 2020 to 69 per cent in March 2021; and keeping two metres of distance decreased from 80 per cent in August 2020 to 53 per cent in March 2021.

Barriers to protective behaviours against COVID-19

In Afghanistan, Nepal and Pakistan, a lack of infrastructure and the fear that practicing protective behaviours would affect employment and relationships were indicated as the main reasons keeping respondents from practicing the protective measures. In the case of the India CRA, the main reason mentioned was that some of the measures were ‘difficult’ to practice followed by a lack of the necessary infrastructure.

Intention to seek health care upon onset of COVID-19 symptoms

In Afghanistan, the proportion of respondents intending to seek health care services upon the onset of COVID-19 symptoms increased to more than half (between December 2020 and March 2021). However, the proportion intending to treat themselves using home remedies was still high (28 per cent) by March 2021. Similarly, in India (April 2021) and Nepal (August and December 2020) the majority of respondents reported that they would actively seek support from a health service by going to a clinic or hospital or getting tested for COVID-19. In Pakistan, information from three time points (December 2020, January 2021 and March 2021) indicated that only a minority would practice active health seeking behaviour (such as get tested, go to a clinic or hospital or call a helpline) and this changed little over time.
Associations

The study analysed the associations between the individually self-reported practice of protective behaviours and some potential influencing factors. Overall, the associations varied considerably across the countries, which emphasizes the importance of context to understand intended behaviours. However, some factors showed a significant association with preventive behaviours across countries.

- Women were more likely to report the practice of protective behaviour against COVID-19 infection compared to their male counterparts in India and Pakistan. The opposite association was seen in Nepal. In Afghanistan there was no significant association identified.
- The respondents’ area of residence (rural or urban) was a significant influencing factor in three countries. Urban respondents in India and Nepal were more likely to report the practice of protective behaviour against COVID-19 infection compared to their rural counterparts. On the contrary, in Pakistan urban respondents were less likely to report practicing protective behaviours compared to their rural counterparts.
- The attainment of higher education in Nepal was positively associated with the practice of protective behaviour against COVID-19 infection while the opposite was true in Pakistan.
- In Afghanistan, Nepal and Pakistan respondents who perceived themselves at risk of COVID-19 infection were more likely to indicate using protective behaviour against COVID-19 compared to those who did not perceive themselves at risk of COVID-19 infection.
- In India, respondents who trusted local health care providers to take care of them and their families were more likely to report practicing handwashing to avoid COVID-19 infection. Also, receiving regular information on COVID-19 weekly was significantly associated to the practice of COVID-19 protective behaviour in India and Pakistan.
- The socio-economic situation of respondents also played a role: in Afghanistan, respondents who reported reducing food consumption in the previous week due to COVID-19 were significantly less likely to report practicing handwashing. In India, respondents who had reported confidence in being able to provide for their families during the COVID-19 pandemic were around two times more likely to report practicing handwashing. Similarly, in Nepal, respondents with higher incomes were more likely to report practicing protective behaviours.

According to WHO, COVID-19 spreads primarily from person to person via droplets released when people infected with the Coronavirus cough or sneeze. The Coronavirus can also spread from person to person when one gets in close contact with someone who is infected. Several protective behaviours against COVID-19 are recommended. Those investigated by the WHO Western Pacific Region, ‘COVID-19 transmission and protective measures’, WHO, Manila, Philippines, accessed 20 February 2021.<https://www.who.int/westernpacific/}

[30] The following questions were asked: ‘in the past week/over the past 30 days, how often have you [reference to specific behaviour]’. The answer options were: ‘all the time’, ‘most of the time’, ‘sometimes’, ‘rarely’ and ‘never’.

[31] The following questions were asked: ‘in the past week/over the past 30 days, how often have you [reference to specific behaviour]’. The answer options were: ‘very often’, ‘sometimes’ and ‘rarely’.

[32] The following questions were asked: ‘in the past week, to what extent are people in your community/in public place [reference to specific behaviour]’. The answer options were: ‘mostly everyone or everyone’, ‘a lot of people’, ‘some people’, ‘a small number of people’, ‘barely anyone’ or ‘no one’.
As indicated in the chapter on methodology, behaviours were self-reported, which likely has been subject to a degree of social desirability bias, and therefore may measure a mix of intent to perform behaviour (and a recognition of socially-desirable behaviour) and actual behaviour. In the case of Afghanistan and India, the publicly-observable behaviours were asked indirectly based on observed community behaviour to counter the potential social desirability bias. Therefore, the prevalence estimates of the preventive behaviours in absolute terms should be interpreted with caution.

7.1 Trends in protective behaviour against COVID-19

The trends in protective behaviours are assessed separately for India versus Afghanistan, Nepal, and Pakistan due to the fact that data from only one data collection round was available in the case of India and the questions were asked in a different way, as discussed above.

In India, the proportion of respondents that reported practicing handwashing ‘all the time’ or ‘most of time’ to prevent COVID-19 infection was 65 per cent. When asked to what extent people in their community were wearing a mask and keeping at least two metres of distance, the proportion of respondents who indicated that these practices were widespread in their communities (i.e. ‘everyone/nearly everyone’ or ‘a lot of people’) were 68 per cent and 42 per cent, respectively (see Figure 43).

In Afghanistan, the reported uptake of preventive practices increased significantly from the end of 2020 to early 2021. The proportion of respondents washing hands regularly increased from 65 per cent in December 2020 to 85 per cent in March 2021. Also, between December 2020 and February 2021 an increasing percentage of respondents reported observing physical distancing and the wearing of masks in their communities, although it slightly reduced again by March 2021. By March 2021, 42 per cent and 46 per cent of respondents respectively indicated that people in their community were wearing masks and physically distancing regularly (i.e. all the time or most of the time).33

In Nepal and Pakistan, there was a decreasing trend in the proportion of respondents who practice the three protective behaviours ‘all the time’ and ‘most of the time’. In Nepal, handwashing decreased significantly from 92 per cent in August 2020 to 60 per cent in January 2021; mask wearing decreased significantly from 77 per cent in August 2020 to 55 per cent in January 2021; and keeping two metres of distance decreased significantly from 53 per cent in August 2020 to 39 per cent in January 2021. Similarly in Pakistan, handwashing decreased significantly from 87 per cent in August 2020 to 66 per cent in March 2021; mask wearing decreased significantly from 79 per cent in August 2020 to 69 per cent in March 2021; and keeping two metres of distance decreased significantly from 80 per cent in August 2020 to 53 per cent in March 2021 (see Figure 43).34

Figure 43: Per cent respondents who believe they received enough information on COVID-19 in the week, by gender, age group and setting (Pakistan)

Note: In all countries, handwashing, mask wearing and physical distancing behaviour refers to self-reported individual practice. Regarding community mask wearing and community physical distancing, respondents were asked to what extent they observed these practices amongst people in their community.

[33] See Table 8 in the annex for confidence intervals and p-values to test statistical significance.
[34] See Table 8 in the annex for confidence intervals and p-values to test statistical significance.
By gender, in both Afghanistan and India, female respondents reported a higher practice of handwashing behaviour compared to males (see Figure 44). In the one survey in five Indian states (April 2021), individual handwashing was reported by 72 per cent of females and 58 per cent of males. In Afghanistan, handwashing was consistently reported higher amongst females than males across all three surveys, though the differences were small and statistically not significant.

**Figure 44: Trends in practice of handwashing against COVID-19, by gender (Afghanistan and India)**

By age group, in Afghanistan, younger respondents consistently reported a higher practice of handwashing behaviour across the three survey rounds compared to their counterparts aged 50 and above years (see Figure 45). However, the difference remained small except in February 2021. In India, the difference was not significant (65 per cent and 64 per cent for those aged 18 to 49 years and 50 and above years, respectively).

**Figure 45: Trends in practice of handwashing against COVID-19, by age group (Afghanistan and India)**

By residential setting, from the one survey done in India, urban respondents (70 per cent) reported a higher practice of handwashing behaviour compared to their rural (63 per cent) counterparts (see Figure 46). In Afghanistan, handwashing was higher amongst rural respondents (72 per cent) compared to urban (63 per cent) respondents in December 2020. This reversed, however, and by February 2021, urban residents (79 per cent) practiced handwashing significantly more than their rural counterparts (70 per cent). This then increased further and converged, for both urban and rural residents, to about 85 per cent (see Figure 46).

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[35] Across all three survey rounds, the differences were only statistically significant in February 2021.
To understand the practice of protective behaviours in Nepal and Pakistan by selected demographic characteristics, an index combining all three behaviours across the three rounds was created. Figures 47, 48 and 49 visualize how the index changed over time for respondents with different demographic characteristics (by gender, rural/urban residence and age).

Male and female respondents reported practicing protective behaviours in different ways across Nepal and Pakistan, although the magnitude of this difference was not large. In Nepal, in August 2020 the index was 7 percentage points higher for men compared to women, while it was almost the same in Pakistan. Over time, the difference between men and women narrowed in Nepal, while it expanded in Pakistan, with men reportedly practicing less protective behaviour than women in October 2020.

In both countries, the uptake of protective behaviours started higher in urban areas when compared to rural areas. While this difference remained over time in Nepal, it shifted after October 2020 in Pakistan. Differences in the practice of protective behaviours were limited for respondents of different ages.
Figure 47: Trends in the index on practice of the three protective behaviours against COVID-19, by gender (Nepal and Pakistan)

Figure 48: Trends in the index on practice of the three protective behaviours against COVID-19, by setting (Nepal and Pakistan)

Figure 49: Trends in the index on practice of the three protective behaviours against COVID-19, by age (Nepal and Pakistan)
7.2 Barriers to protective behaviours against COVID-19

Respondents were asked about the main reasons that kept them from practicing protective measures against COVID-19 with the aim to reveal the reasoning behind this. The surveys inquired about socio-economic barriers (i.e. measures that would put jobs or relationships at risk), environmental/material barriers (i.e. a lack of infrastructure, such as running water or washrooms), certain beliefs (i.e. beliefs that measures do not work, the virus is not real, that faith or religion protect against infection) and social influence (i.e. not liking how it makes a person look, people mock when practicing preventive measures). In Afghanistan this information was collected by all three CRAs (December 2020, February 2021 and March 2021), in India by one survey (April 2021), in Nepal by two CRAs (December 2020 and January 2021), and in Pakistan the data was collected across the first three rounds (August, September and October 2020).

In Afghanistan, Nepal and Pakistan, a lack of infrastructure and the fear that practicing protective behaviours (including staying at home as much as possible) would affect employment and relationships were indicated as the main reasons preventing respondents from practicing the protective measures (see Figures 50, 51, 52 and 53). In the case of India, the main reason mentioned was that some of the measures were difficult to practice followed by a lack of the necessary infrastructure (see Figure 51). Socio-economic barriers were mentioned less although the answer option ‘measures are difficult to practice’ could refer to socio-economic difficulties. Certain beliefs (i.e. the belief that religion/faith would protect them against COVID-19 infection, beliefs that the protective measures do not work or the virus not being real) and social influence were highlighted by only a minority of respondents. However, in Pakistan these reasons became more important over time, while socio-economic barriers remained important but reduced in importance over time.

**Figure 50:** Barriers to protective behaviour against COVID-19 (Afghanistan)

![Figure 50: Barriers to protective behaviour against COVID-19 (Afghanistan)](image)

**Figure 51:** Barriers to protective behaviour against COVID-19 (India)

![Figure 51: Barriers to protective behaviour against COVID-19 (India)](image)
The barriers against practicing protective behaviour, based on pooled data for Afghanistan (December 2020, February and March 2021), India (April 2021), Nepal (December 2020 and January 2021) and Pakistan (August, September and October 2020), have been disaggregated by gender, age group and rural/urban residence and presented in the annex (see Figures 63 to 74 in Annex). Disaggregation by gender did not show large differences in barriers, but age group and rural/urban residence did. By age group, the largest disparities were shown in the socio-economic barriers. This was evident in all four countries with people below 50 years being more worried that practicing the protective behaviour would put their employment and relationships at risk (e.g. Afghanistan: 35 per cent for those younger than 50 years versus 31 per cent for those aged 50 years and above; Nepal: 73 per cent for those younger than 50 years versus 65 per cent for those aged 50 years and above; Pakistan: 51 per cent for those younger than 50 years versus 47 per cent for those 50 years and above). Similarly, a higher proportion of those younger than 50 years of age reported that some of the measures were hard to implement. Furthermore, in Afghanistan and Nepal, a significantly higher proportion of older respondents (aged 50 years and above) identified beliefs regarding faith and religion providing protection and the virus not being real, respectively, as the main reasons keeping them from practicing protective behaviours.

In Afghanistan and Pakistan, the barriers to practicing protective behaviour against COVID-19 were collected in three surveys each, making it possible to show some trends in the top barriers. The top two reported barriers were broken down along the rural/urban residence of the
respondents (see Figure 54). The most common reason for the non-practice of protective behaviour against COVID-19 was that ‘Protective behaviour against COVID-19 put their employment at risk’, followed by a ‘lack of infrastructure (e.g. water, washrooms and overcrowding) to implement these measures’. In Afghanistan, the proportion that mentioned that the preventive measures put their jobs/employment at risk increased from 32 per cent in urban residents and 30 per cent in rural residents in December 2020 and converged to 38 per cent in March 2021. In Pakistan in August 2020, 66 per cent of rural residents and 40 per cent of urban residents reported that protective behaviour against COVID-19 put their job at risk. This percentage reduced amongst rural residents and increased amongst urban residents to 45 per cent in October 2020. In both countries, increases were seen amongst respondents that reported that they were limited by a lack of infrastructure (e.g. water, washrooms and overcrowding) to implement protective measures (see Figure 54).

Figure 54: Trends in main barriers against COVID-19 behaviour, by rural/urban residence (Afghanistan, Pakistan)
7.3 Factors associated with protective behaviour against COVID-19

To further examine the relationships between the practice of protective behaviours at an individual level, handwashing was used as the outcome variable for Afghanistan and India because mask wearing and physical distancing were based on what was observed in the community. For Nepal and Pakistan, however, the combined index variable was used as the outcome. These were compared with some potential influencing factors — in particular respondents’ social demographic characteristics, risk perceptions and exposure to information — and a regression analysis was undertaken, separately, per each of the four countries. Similar to Sections 4.3 and 5.2 of this report, logistical regression models were run to estimate odds ratios (OR) and analyse the association between a reported uptake of protective behaviours against COVID-19 and respondent characteristics. The odds ratios provide a measure of the likelihood that different characteristics of respondents are associated with respondents’ practice of protective behaviour against COVID-19. An odds ratio of one indicates no association, while an odds ratio below or above one, if statistically significant, indicates respectively a lesser or greater likelihood that respondents with a certain characteristic (e.g. being female) compared to its reference value (e.g. being male) practice protective behaviour against COVID-19. If the 95 per cent confidence interval included around the value of the odds ratio includes one, no statistically-significant association is found. When the confidence intervals are below or above one, the factor value is respectively negatively or positively associated with the practice of a protective behaviour against COVID-19. Results for Afghanistan, India, Nepal and Pakistan’s models are summarized in Figures 55, 56, 57 and 58 below.

When examining the factors associated with protective behaviours — in particular handwashing — in Afghanistan only two factors were found to be statistically significant: individual risk perception for COVID-19 and reduction in food consumption in the previous week due to COVID-19 (see Figure 55). Individuals who perceived themselves at risk of COVID-19 infection were 44 per cent [OR: 1.44] more likely to report practicing handwashing to avoid COVID-19 infection compared to their counterparts who did not perceive themselves at risk of COVID-19 infection. On the contrary, respondents who reduced their food consumption in the past week due to fear of the COVID-19 pandemic challenges were 36 per cent less likely to report practicing handwashing to avoid COVID-19 infection compared to their counterparts who did not reduce food consumption, which indicates an association between the socio-economic situation of the respondents and an uptake of (or the intent to take up) protective practices.

Figure 55: Factors associated with handwashing to avoid COVID-19 infection (Afghanistan)
In the five survey states in India several factors were found to be significantly associated with the practice of handwashing to avoid COVID-19 infection. These included gender, residential setting, hearing/reading ‘a lot’ or a moderate amount about COVID-19 and the confidence to provide for the family during the COVID-19 pandemic. Specifically, female respondents were 79 per cent [OR: 1.79] more likely to report practicing handwashing to avoid COVID-19 infection compared to their male counterparts. Urban respondents were 42 per cent [OR: 1.42] more likely to report practicing handwashing to avoid COVID-19 infection compared to their rural counterparts. Also, respondents whose weekly exposure to messages on COVID-19 was ‘a lot’ or a moderate amount were 74 per cent [OR: 1.74] more likely to report practicing handwashing to avoid COVID-19 infection compared to their counterparts who received little information or were not exposed at all to weekly messages on COVID-19. Respondents who reported confidence to provide for their families during the COVID-19 pandemic were two times [OR: 2.05] more likely to report practicing handwashing to avoid COVID-19 infection compared to their counterparts who reported not feeling confident in providing for their families during the COVID-19 pandemic (see Figure 56). This, similar to the Afghanistan survey, suggests an association between the socio-economic situation of the respondent and preventive practices. Finally, respondents who trusted in local health care providers to take care of them and their families were 43 per cent [OR: 1.43] more likely to report practicing handwashing to avoid COVID-19 infection compared to their counterparts who did not trust local health care providers to take care of them and their families.

In Nepal, an index variable on the practice of the three protective behaviours against COVID-19 was generated. From this analysis, several factors were found to be significantly associated with the practice of protective behaviours against COVID-19 infection. These included gender, age group, residential setting, education, risk perception for COVID-19 infection and level of income. Specifically, female respondents were 11 per cent [OR: 0.89] less likely to report practicing protective behaviours against COVID-19 infection compared to their male counterparts. Also, respondents from municipality areas were 30 per cent [OR: 1.30] more likely to report practicing protective behaviour against COVID-19 infection compared to their rural counterparts. Those from the metropolitan city were more than two times [OR: 2.10] more likely to report practicing protective behaviours against COVID-19 infection compared to their rural counterparts.

Assessed by education level attained, higher levels of education predicted a practice of protective behaviour against COVID-19. Specifically, respondents with matric education level, intermediate education and post-secondary education were respectively 19 per cent [OR: 1.19], 29 per cent [OR: 1.29] and 37 per cent [OR: 1.37] more likely to report practicing protective behaviour against COVID-19 infection compared to their counterparts with no formal education.
Furthermore, respondents who perceived themselves at risk of COVID-19 infection were 26 per cent [OR: 1.26] more likely to report practicing protective behaviours against COVID-19 infection compared to their counterparts who did not perceive themselves to be at risk of COVID-19 infection. By income, respondents with household income levels above 20,001 NRP were 46 per cent [OR: 1.46] more likely to report practicing protective behaviours against COVID-19 infection compared to their counterparts with no income (see Figure 57).

**Figure 57: Factors associated with the index on practice of three protective behaviours to avoid COVID-19 infection (Nepal)**

When examining the factors associated with protective behaviours in Pakistan a different picture arose in comparison to Nepal (see Figure 58). In Pakistan, females were 22 per cent [OR: 1.22] more likely to report using protective behaviours compared to their male counterparts. Urban residents were significantly less likely (16 per cent) to indicate practicing protective behaviours for COVID-19 compared to their rural counterparts. Those who attained higher education levels were also significantly less likely to indicate practicing protective behaviour for COVID-19 compared to their counterparts with no formal education.

The analysis also examined the association between protective practices, information and trust. As presented in Figure 58, respondents who indicated learning about COVID-19 information ‘all the time’ were 53 per cent [OR: 1.53] more likely to report using protective behaviours compared to their counterparts who ‘never’ learned about COVID-19. This confirms an expected positive association between practicing protective behaviours (or its intent) and high frequency exposure to COVID-19 information. However, the data indicated that respondents who sometimes or often learned about COVID-19 were as likely to practice protective behaviours as those who indicated never learning about it, which suggests that regular exposure to COVID-19 information may not be sufficient for the uptake of protective behaviours. Furthermore, those who received COVID-19 information via TV and radio were 32 per cent [OR: 1.32] more likely to indicate using protective behaviour against COVID-19 compared to their counterparts who received information through interpersonal channels. Lastly, those who perceived themselves at risk of COVID-19 infection were 32 per cent [OR: 1.32] more likely to indicate using protective behaviours against COVID-19 compared to their counterparts who did not perceive themselves at risk of COVID-19 infection.
7.4 Intended actions to take upon onset of COVID-19 symptoms

Respondents were asked about the first or main action they intended to take if they believed they had COVID-19 symptoms with the aim to examine individuals’ intended health-seeking behaviour. Answers included ‘do nothing’, ‘call public helpline on COVID-19’, ‘go to a clinic or hospital’, ‘treat it myself (home remedies)’, ‘go to see a religious leader or a traditional healer’, ‘try to get tested’, and ‘isolate myself at home’.

In Afghanistan, information collected at three time points (December 2020, February and March 2021) was used to show trends in actions undertaken upon the onset of COVID-19 symptoms (see Figure 59). Overall, the proportion of respondents intending to seek health care services increased. Assessed more closely, those that intended to call a public helpline on COVID-19 decreased from 28 per cent (December 2020) to 25 per cent (March 2021); those intending to go to a clinic or hospital increased from 17 per cent to 25 per cent; and those intending to try to get tested remained unchanged at 5 per cent. Those intending to treat themselves at home using home remedies decreased from 30 per cent in December 2021 to 28 per cent by March 2021 while those intending to isolate themselves at home remained unchanged at 9 per cent.
Similarly, in India, data collected in April 2021 indicated that a majority of respondents would actively seek support from a health service along the following dimensions: going to a clinic or hospital (45 per cent); getting tested for COVID-19 (20 per cent); though only 6 per cent of respondents indicated calling a public helpline. Furthermore, only 14 per cent reported that they would isolate themselves at home and 7 per cent that they intended to treat themselves with home based remedies (see Figure 60).
In Nepal, active health seeking behaviour (i.e. go to a clinic or get tested) remained the most cited intended actions that respondents would take upon the onset of COVID-19 symptoms in both August and December 2020 survey rounds (see Figure 61). Based on the CRA done in December 2020 (as a single response question) and August 2020 (asked in a way that permitted multiple responses), 39 per cent and 80 per cent of the respondents reported that they intended to go to a clinic or hospital respectively, followed by 27 per cent (December 2020) and 48 per cent (August 2020) that they would try to get tested respectively. Furthermore, 25 per cent (December 2020) and 28 per cent (August 2020) of respondents indicated that they would isolate at home, which is in line with general advice at the onset of COVID-19 symptoms.

Figure 61: Intent to take specific actions upon onset of COVID-19 symptoms (Nepal, Aug. and Dec. 2020)

Note: this question was a multiple-choice question in the August survey and a single response question in the Dec. 2020 survey.
In Pakistan, in December 2020, January and March 2021 respondents were asked which one measure they would take if they thought they had COVID-19 symptoms. Overall, upon the onset of COVID-19 symptoms, only a minority would practice active health-seeking behaviour, such as get tested, go to a clinic or hospital or call a helpline. This changed little across the months (see Figure 62). Notably, there was an increasing proportion who would do nothing.

Figure 62: Trends in intent to take specific actions upon onset of COVID-19 symptoms (Pakistan)
CHAPTER 8: CONCLUSIONS

COVID-19 is a pandemic affecting billions of lives across the world. Effective management of the pandemic depends on communication about the pandemic; people’s knowledge, attitudes, behaviours and practices about it; as well as the effective engagement of communities and local Organizations in emergency response. The CRA data from Afghanistan, India, Nepal and Pakistan have helped examine vaccine willingness, behaviours and their drivers related to COVID-19, which are invaluable in the pandemic response. The data helped unpack the factors that influence individual willingness to get the vaccine and collective behaviours related to COVID-19 to avoid misalignment of efforts. Recognizing that behaviour and social change are complex phenomena, further providing insight into public opinion, levels of trust and engagement mechanisms which will enable better programme strategies that are community-responsive and people-centred.

a) Vaccine willingness. Data for all four countries indicate that people were willing to get the COVID-19 vaccine, if available. Willingness ranged from 57 per cent in Afghanistan, 65 per cent in Pakistan, 80 per cent in the five survey states in India and 90 per cent in Nepal. In fact, as demonstrated by Afghanistan, these proportions have great potential to increase further upon advocacy by health workers as in Afghanistan about 35 per cent reported wanting to first get advice from their doctors. In the three countries that had trend data, willingness remained stable over time. Furthermore, significant associations were observed between vaccine willingness with respondents’ demographic characteristics such as education and gender. Also, data from India and Pakistan indicated that respondents who trusted government information and effectiveness regarding the vaccine were more likely to report vaccine willingness.

In India and Pakistan, the most cited bottlenecks towards getting the vaccine, despite high willingness, were: fear that the vaccine would be available too late, ineligibility due to age-limit criteria, lack of a nearby vaccination centre and limited knowledge of the registration system for the vaccine. In Pakistan, lack of money to get vaccinated was also highlighted as a bottleneck, while this was hardly mentioned as a barrier in the India CRA. While amongst respondents who were not willing to get the vaccine, the most common reasons were: fear of side effects, fear that the vaccine was ineffective, desire to get natural immunity, and the feeling to first wait and see how things unfolded.

b) Risk perception for COVID-19. Data from all countries indicated that individual risk perception regarding COVID-19 infection was low and reduced significantly over time. In Afghanistan, risk perception remained unchanged at about 40 per cent between December 2020 and March 2021. In the five survey states in India, with one round done in April 2021, it was lower at only 22 per cent. However, risk perception varied substantially between the Indian states. It was substantially higher in the Northern states of Bihar and Uttar Pradesh (a bit below 30 per cent), which may have been influenced by the rapid rise in COVID-19 cases in these states during the second wave and the increasing media coverage. Data collected in Nepal since August 2020 indicated a decrease of around 20 per cent between August 2020 and January 2021 (from 48 per cent to 28 per cent).
respectively. Similarly, in Pakistan data collected between August 2020 and March 2021 showed a reduction in risk perception for COVID-19 from 59 per cent to 41 per cent. Across countries, factors associated with the likelihood of respondents perceiving themselves at risk varied. Although no significance was seen between individual risk perception and trusted sources of information, other factors including rural/urban residence, education, age and exposure to COVID-19 were associated with risk perception in several countries. However, the direction of the association varied across countries. For instance, in Afghanistan and Nepal, urban residents were more likely to perceive themselves of being infected with COVID-19 compared to rural dwellers, while in Pakistan they were less likely. Similarly, in Nepal, risk perception was positively associated with higher levels of education, while in Pakistan the association was negative, meaning that respondents with higher levels of education were less likely to perceive themselves of being infected. Gender differences remained small. Only in Afghanistan female respondents initially demonstrated a higher risk perception but in the last survey rounds in March 2021, male and female risk perception had converged. Finally, in India and Pakistan respondents who were more exposed to information about COVID-19 were more likely to consider themselves at risk of infection.

These findings underpin the importance of disaggregating COVID-19 risk data along several dimensions (gender, age, urban vs. rural, etc.). The availability of such disaggregated data can help tailor SBC and CE interventions to local conditions and needs.

c) Trusted sources of information. Overall, the radio and TV remained the most trusted sources of information on COVID-19 in all countries except in the five survey states in India where the radio was not popular. Also, other sources were cited by sizeable proportions – including mobile ringtone and social media. Furthermore, respondents in India and Nepal were asked to cite community groups they trusted the most to take actions that benefit them. In India, family, self-help groups and local government were trusted the most, while in Nepal trust in mothers’ and women’s groups and local government was high.

Findings further suggest that trust in sources of information on COVID-19 varied by country, urban/rural setting and age and even by issue, with some groups and channels of communication being more trusted on some subjects than others. In India and Pakistan where information was collected on trust in government information provided about the vaccine and respondents’ trust in the government’s effectiveness in vaccine provision, these were found to have strong significant positive associations with the respondents’ vaccine willingness.

d) Protective behaviour against COVID-19. The study has shown significant declines in handwashing, mask wearing, and physical distancing in Nepal and Pakistan although at different magnitudes. On the contrary, handwashing in Afghanistan increased while in India, it was practiced by a majority of respondents. Of the three protective behaviour, handwashing was the protective behaviour most reported as being practiced. The most common barriers for practice of protective behaviours against COVID-19 (including staying at home) cited by respondents were socio-economic (fear that practicing protective behaviour puts jobs and relationships at risk) or material in nature (lack of infrastructure such as running water, washrooms, overcrowded neighborhoods). Some respondents believed that the protective measure against COVID-19 did not work while others did not believe that the virus was real, although this remained a small minority. Some barriers were specific to certain areas and demographic characteristics; emphasizing that different demographic groups may have very different behaviours, motivations and needs. The cross-analysis of protective behaviours with respondents’ characteristics indicate a significant relationship between the likelihood of practicing protective behaviours and respondents’ rural/urban residence in all countries, although the direction of this relationship varied by country. In Afghanistan, Nepal and Pakistan, respondents who perceived themselves at risk of COVID-19 infection were significantly more likely to practice protective behaviours. Gender and education of the respondents were a significant factor in two countries. The socio-economic situation of the respondents also plays a role. In Afghanistan, India and Nepal, respondents whose did not have to reduce food consumption, were more confident to provide for their family during COVID-19 or had a higher income respectively, were more likely to practice protective behaviours.
## Table 6: Distribution of Background Characteristics of Respondents by Country

<table>
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<tr>
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<tbody>
<tr>
<td>% [95% CI]</td>
<td>% [95% CI]</td>
<td>%</td>
<td>% [95% CI]</td>
<td></td>
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<tr>
<td><strong>Age</strong></td>
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<tr>
<td>30-39 years</td>
<td>20.9 [19.2-22.8]</td>
<td>26.5 [22.2-31.4]</td>
<td>38.6</td>
<td>23.5 [22.7-24.3]</td>
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<tr>
<td>40-49 years</td>
<td>13.3 [11.7-15.0]</td>
<td>21.3 [17.2-26.3]</td>
<td>22.5</td>
<td>16.6 [15.8-17.4]</td>
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<tr>
<td><strong>Gender</strong></td>
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</tr>
<tr>
<td>Female</td>
<td>472.2 [45.0-49.4]</td>
<td>49.5 [45.9-53.0]</td>
<td>48.6</td>
<td>48.1 [47.0-49.2]</td>
</tr>
<tr>
<td>Male</td>
<td>52.8 [50.6-55.0]</td>
<td>50.6 [47.0-54.1]</td>
<td>51.4</td>
<td>51.9 [50.8-53.0]</td>
</tr>
<tr>
<td><strong>Setting</strong></td>
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<tr>
<td>Rural/Villages</td>
<td>68.4 [66.5-70.2]</td>
<td>76.7 [73.8-79.4]</td>
<td>Rural Municipality: 41.2</td>
<td>63.0 [61.9-64.1]</td>
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<tr>
<td>Urban/Cities</td>
<td>31.6 [29.8-33.5]</td>
<td>23.3 [20.7-26.2]</td>
<td>Municipality: 46.0</td>
<td>370 [36.0-38.1]</td>
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<td></td>
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<td>Sub/Metropolitan city: 12.8</td>
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<tr>
<td><strong>Education</strong></td>
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<tr>
<td>No school</td>
<td>54.9 [52.8-57.0]</td>
<td>33.2 [29.5-37.1]</td>
<td>22.9</td>
<td>18.1 [170.19.4]</td>
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<tr>
<td>Matric</td>
<td>10.9 [10.1-11.7]</td>
<td>37.6 [34.2-41.0]</td>
<td>22.7</td>
<td>18.3 [172-19.6]</td>
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<tr>
<td>Intermediate</td>
<td>11.8</td>
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<td>36.3 [34.8-37.9]</td>
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## Table 7: Trends in willingness to get a COVID-19 vaccine, if available, by gender for Afghanistan, India, Nepal and Pakistan

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<th>Background characteristics</th>
<th>Afghanistan % [95% CI]</th>
<th>India % [95% CI]</th>
<th>Nepal % [95% CI]</th>
<th>Pakistan % [95% CI]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall</strong></td>
<td>576 [53.9,61.2]</td>
<td>570 [52.5,61.3]</td>
<td>79.8 [76.6,82.7]</td>
<td>90.4</td>
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<tr>
<td><strong>Gender</strong></td>
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</tr>
<tr>
<td>Male</td>
<td>59.2 [54.5,63.8]</td>
<td>52.9 [46.5,59.1]</td>
<td>81.5 [77.3,85.1]</td>
<td>91.3</td>
</tr>
<tr>
<td>Female</td>
<td>55.8 [50.1,61.4]</td>
<td>61.0 [54.6,67.0]</td>
<td>78.0 [72.8,82.4]</td>
<td>89.5</td>
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<tr>
<td><strong>Setting</strong></td>
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<tr>
<td>Rural</td>
<td>56.8 [51.9,61.7]</td>
<td>55.3 [49.4,61.1]</td>
<td>79.8 [76.0,83.2]</td>
<td>Rural municipality: 92.5</td>
</tr>
</tbody>
</table>
## Background characteristics

<table>
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<tr>
<th>Setting</th>
<th>Afghanistan % [95% CI]</th>
<th>India % [95% CI]</th>
<th>Nepal %</th>
<th>Pakistan % [95% CI]</th>
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<tbody>
<tr>
<td>Urban</td>
<td>57.8</td>
<td>59.3</td>
<td>79.8</td>
<td>90.9</td>
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<td>[52.7,62.6]</td>
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<td>[73.4,84.9]</td>
<td>[89.5 [Sub/municipal</td>
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<td>81.7</td>
<td>66.8</td>
<td>64.4</td>
<td>66.7</td>
</tr>
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<td>Age 18-24 yrs</td>
<td>55.9</td>
<td>60.5</td>
<td>77.7</td>
<td>90.2</td>
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<tr>
<td>[50.1,61.5]</td>
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<td>[59.7,66.2]</td>
<td>[62.0,68.6]</td>
</tr>
<tr>
<td>25-49 yrs</td>
<td>57.5</td>
<td>55.9</td>
<td>81.5</td>
<td>90.6</td>
</tr>
<tr>
<td>[52.4,62.4]</td>
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<tr>
<td>18-49 yrs</td>
<td>56.8</td>
<td>57.7</td>
<td>80.6</td>
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<td>[53.0,60.5]</td>
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<td>50+ yrs</td>
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<td>52.8</td>
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<td>[48.2,71.3]</td>
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<td>[66.0,79.8]</td>
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### Table 8: Trends in individual risk perception for COVID-19

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<tbody>
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<td>Afghanistan</td>
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<td></td>
<td></td>
<td></td>
<td>41.1%</td>
<td>43.1%</td>
<td>39.6%</td>
<td>41.4%</td>
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<td>[37.3-45.0]</td>
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<td>p-value: 0.185</td>
<td>p-value: 0.0185</td>
<td>p-value: 0.025</td>
<td>p-value: &lt;0.001</td>
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<td>India</td>
<td>21.7</td>
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<td></td>
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</tr>
<tr>
<td>Nepal</td>
<td>48.1%</td>
<td>48.3%</td>
<td>37.4%</td>
<td>28.4%</td>
<td>49.0%</td>
<td>51.0</td>
<td>575</td>
<td>41.4%</td>
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<td>p-value: &lt;0.001</td>
<td>p-value: &lt;0.001</td>
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<tr>
<td>Pakistan</td>
<td>59.0%</td>
<td>52.3%</td>
<td>49.0%</td>
<td>51.0</td>
<td>575</td>
<td>41.4%</td>
<td>85.5%</td>
<td>86.4%</td>
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<td>[56.1,61.0]</td>
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<td>[46.3,51.8]</td>
<td>[48.1,53.9]</td>
<td>[54.8,60.2]</td>
<td>[38.8,44.0]</td>
<td>[82.1,88.4]</td>
<td>[63.9,68.8]</td>
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### Table 9: Trends in handwashing to prevent COVID-19 infection

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<td>Afghanistan</td>
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<td>73.2</td>
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<tr>
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<tr>
<td>[61.7,68.4]</td>
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<td>[61.7,68.4]</td>
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<td></td>
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<tr>
<td>Nepal</td>
<td>91.8%</td>
<td>56.7%</td>
<td>59.8%</td>
<td>86.8</td>
<td>79.9</td>
<td>678</td>
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<tr>
<td>[85.1,88.2]</td>
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**Figure 63:** Reasons for not adopting protective behaviour, by gender (Afghanistan, Pooled Dec. 2020, Feb. 2021, Mar. 2021)

- **Afghanistan**
  - Doing them puts my job, relationship at risk: Female 33%, Male 36%
  - Lack of infrastructure: Female 34%, Male 37%
  - My faith/religion protects me from infection: Female 12%, Male 12%
  - I believe the measures don’t work: Female 9%, Male 9%
  - I do not like how it makes me look: Female 4%, Male 4%
  - Other reason: Female 4%, Male 8%

**Figure 64:** Reasons for not adopting protective behaviour, by gender (India, Apr. 2021)

- **India**
  - Some of these measures are difficult to effect: Female 28%, Male 26%
  - Lack of infrastructure: Female 17%, Male 21%
  - My faith/religion protects me: Female 7%, Male 10%
  - I don’t believe these measures work: Female 8%, Male 12%
  - Doing them puts my job, relationship at risk: Female 2%, Male 6%
  - I don’t like how it makes me look: Female 6%, Male 8%
  - Breathing problem: Female 0%, Male 1%
  - Due to work/travel: Female 0%, Male 2%
  - In hurry; I forgot the safety protocol: Female 0%, Male 0%
  - Don’t know: Female 19%, Male 26%
Figure 65: Reasons for not adopting protective behaviour, by gender (Nepal, Dec. 2020)

- Lack of infrastructure: 68% (Male), 76% (Female)
- Doing them puts at-risk my job: 14% (Male), 9% (Female)
- Because I do not believe this virus is real: 14% (Male), 2% (Female)
- I believe the measures don’t work: 3% (Male), 3% (Female)
- I do not like how it makes me look: 1% (Male), 1% (Female)
- My faith/religion protects me: 0% (Male), 0% (Female)
- Other reason: 6% (Male), 9% (Female)

Figure 66: Reasons for not adopting protective behaviour, by gender (Pakistan, Aug. to Oct. 2020 – pooled data)

- Doing them puts at-risk my job: 50% (Male), 49% (Female)
- Lack of infrastructure: 18% (Male), 18% (Female)
- I believe the measures don’t work: 8% (Male), 5% (Female)
- People make fun of me if I follow them: 6% (Male), 6% (Female)
- My faith/religion protects me: 8% (Male), 8% (Female)
- Because I do not believe this virus is real: 3% (Male), 2% (Female)
- Other reason: 8% (Male), 12% (Female)
Figure 67: Reasons for not adopting protective behaviour, by age (Afghanistan, Pooled Dec. 2020, Feb. 2021, Mar. 2021)

Figure 68: Reasons for not adopting protective behaviour, by age (India, Apr. 2021)
**Figure 69:** Reasons for not adopting protective behaviour, by age (Nepal, Dec. 2020)

- Lack of infrastructure: 65% (50+ years), 73% (18-49 years)
- Doing them puts at-risk my job: 7% (50+ years), 12% (18-49 years)
- Because I do not believe this virus is real: 4% (50+ years), 13% (18-49 years)
- I believe the measures don’t work: 4% (50+ years), 3% (18-49 years)
- I do not like how it makes me look: 1% (50+ years), 1% (18-49 years)
- My faith/religion protects me: 0% (50+ years), 0% (18-49 years)
- Other reason: 8% (50+ years), 7% (18-49 years)

**Figure 70:** Reasons for not adopting protective behaviour, by age (Pakistan, Aug. to Oct. 2020 – pooled data)

- Doing them puts at-risk my job: 47% (50+ years), 51% (20-49 years)
- Lack of infrastructure: 20% (50+ years), 17% (20-49 years)
- I believe the measures don’t work: 7% (50+ years), 6% (20-49 years)
- People make fun of me if I follow them: 5% (50+ years), 6% (20-49 years)
- My faith/religion protects me: 7% (50+ years), 8% (20-49 years)
- Because I do not believe this virus is real: 1% (50+ years), 3% (20-49 years)
- Other reason: 13% (50+ years), 9% (20-49 years)
Figure 71: Reasons for not adopting protective behaviour, by rural/urban residence (Afghanistan, Pooled Dec. 2020, Feb. 2021, Mar. 2021)

Figure 72: Reasons for not adopting protective behaviour, by residence (India, Apr. 2021)
Figure 73: Reasons for not adopting protective behaviour, by rural/urban residence (Nepal, Dec. 2020)

Figure 74: Reasons for not adopting protective behaviour, by rural/urban residence (Pakistan, Aug. to Oct. 2020 – pooled data)
COVID-19 Behavioural Drivers and Patterns: A longitudinal assessment from the South Asia region

Findings from Afghanistan, India, Nepal and Pakistan