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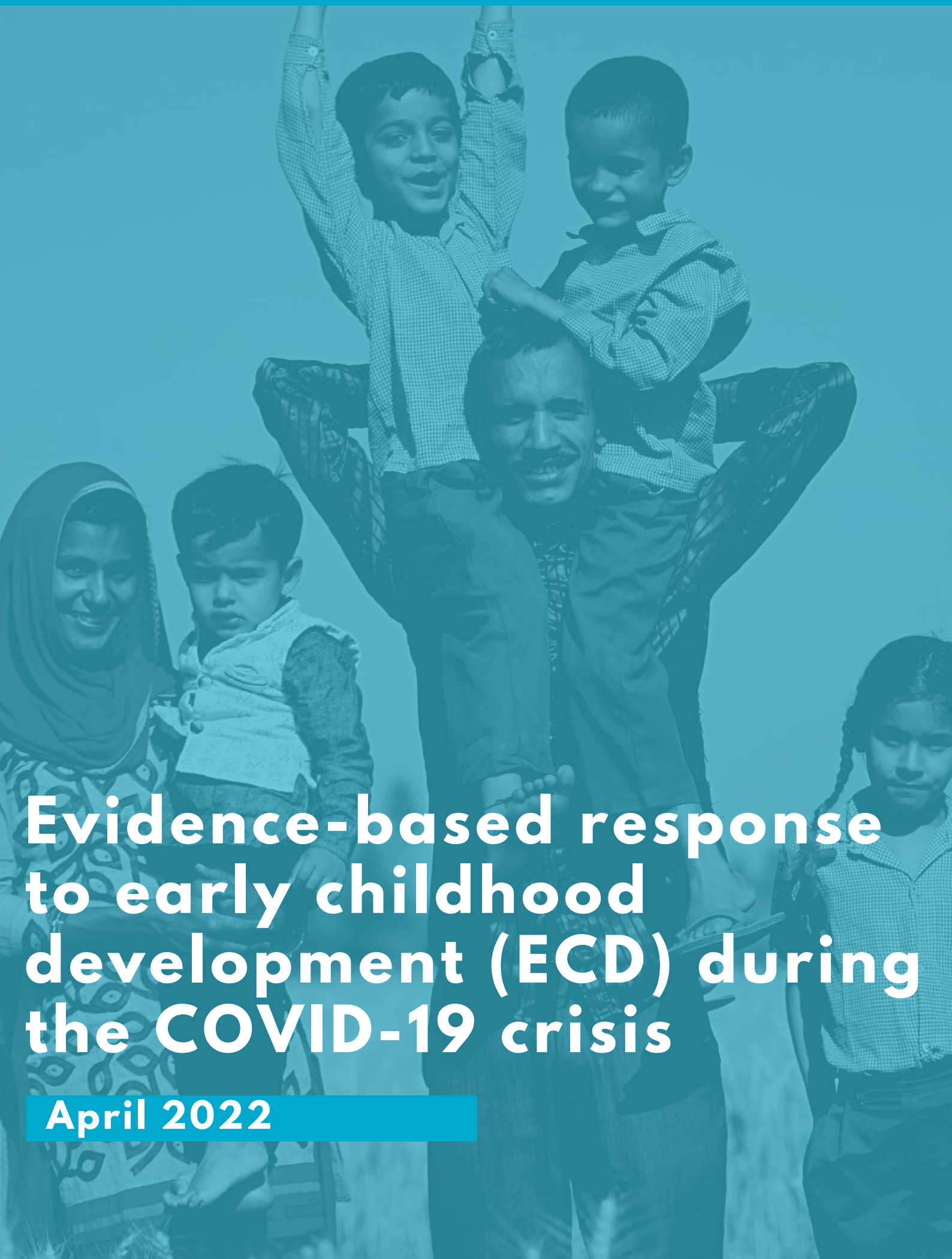


Evidence-based response to early childhood development (ECD) during the COVID-19 crisis

April 2022

ACKNOWLEDGMENTS

This study was conducted to understand the impacts of the COVID-19 pandemic on young children and their caregivers. Data collection was done between December 2020 and February 2021 across selected states in India. The study focused on exploring the influence of the pandemic on the availability and delivery of Early Childhood Development (ECD) services. Through this study, we have focused particularly on the disruptions related to *nurturing care* components of ECD, including health, nutrition, early learning, and responsive caregiving for young children (aged six and under), and on the well-being of their caregivers as well as frontline workers.

The study was conducted by Dalberg Advisors and Kantar Public and funded by Bernard van Leer Foundation, Porticus, Echidna Giving, and Dalberg. The study team gratefully acknowledges expert inputs from project advisors – Venita Kaul (Professor Emerita, Ambedkar University Delhi), Seemant Dadwal (Founder, Meraki Foundation), Tinni Sawhney (CEO, Aga Khan Foundation), Samyukta Subramanian (Program Coordinator, Pratham), and Sumitra Mishra (Executive Director, Mobile Creches). The advisors provided inputs during the design of data collection tools. Preliminary findings were also shared with advisors for comments.

Data collection for the study was possible thanks to support from the Department of Women and Child Development and National Health Mission offices in the eleven states covered in our study (Andhra Pradesh, Assam, Bihar, Haryana, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, and Uttar Pradesh).

NITI Aayog provided technical support for the study. This was led by Anamika Singh, Director (Women and Child Development and Nutrition), with Nina Badgaiyan, Senior Consultant (Health) and Vedeika Shekhar, Associate (Women and Child Development) providing support.

Last but certainly not least, the study would not have been possible without the support of 10,112 households, 1,422 Anganwadi Workers, 1,334 ASHA workers, and 160 Village Health Nurses who participated in surveys and interviews. We are grateful for their time and effort.

We hope that this report shall serve as a source of evidence for understanding some key impacts of the pandemic on young children and their caregivers, and as a starting point for discussions on what short-term and long-term measures are required to strengthen ECD in India.

ABBREVIATIONS

ASHA	Accredited Social Health Activists
AWC	Anganwadi Centre
AWW	Anganwadi Worker
ANM	Auxiliary Nurse Midwife
APL	Above Poverty Line
BCG	Bacilli Calmette-Guérin (BCG)
BPL	Below Poverty Line
CATI	Computer-assisted Telephonic Interviews
ECD	Early Childhood Development
HCD	Human-centred Design
ICDS	Integrated Child Development Services
NCF	Nurturing Care Framework
PSCG	Primary and Secondary Caregivers
PDS	Public Distribution System
PLW	Pregnant and Lactating Women
VHN	Village Health Nurse

EXECUTIVE SUMMARY

On March 25th 2020, in response to rising cases of COVID-19, India entered a nationwide lockdown. The lockdown brought an immediate halt to formal and informal early childhood development (ECD) activities – schools, creches, and Anganwadi Centres were shut, parks and playgrounds remained closed, and socializing with family and friends outside one's home was forbidden. At a household level, the loss of employment, reduced access to markets, and the fraying of social bonds due to continuing social distancing increased potential disruption of ECD.

In order to understand the influence of the pandemic on young children (aged six and under) and their caregivers, a consortium of partners commissioned this study to learn from impacts and actions taken in response to ECD during Pandemic. The objective was to focus particularly on the disruptions related to the nurturing care components of early childhood development including health, nutrition, early learning, and responsive caregiving of young children, and on the well-being of their caregivers as well as frontline workers. Between December 2020 and February 2021, this study was conducted using qualitative interviews and quantitative data from a survey that covered 10,112 primary/secondary caregivers and 2,916 frontline workers across 11 states[1]. While the study was designed to cover households across the socio-economic spectrum, we had to rely on telephonic rather than in-person interviews. The findings have been summarised into sub-sections that cover each of the dimensions in the *Nurturing Care Framework* to show the influences of the pandemic on the lives of children, their caregivers and frontline workers (ASHAs, Anganwadi Workers, and Village Health Nurses). The analysis presented in this report has been further layered with rural-urban and state-level differences.

By the time of our survey, access to health was largely restored to pre-pandemic levels. Some gaps remained in nutritional support. Our survey found that 94% of households reported having received medical attention for their child when required, 96% of children under the age of one had been born in a medical facility, and the average timing of pregnant women's first antenatal care visit was in line with historical averages. These numbers are in line with pre-pandemic levels. However, Anganwadi-centre (AWC) based nutritional service provision continued to see disruptions. 43% of households with pregnant or lactating women (PLW) faced challenges in receiving food from AWCs. Frontline workers' accounts also revealed a decrease in time spent on undertaking various nutrition-related activities. For example, only 47% of AWWs reported spending more time providing take-home rations to children/PLW even though 95% of them reported they were no longer providing hot cooked meals. In terms of access to nutrition for children, 47% of households with a child aged 15 months to 6 years reported that they were receiving less or no food from AWCs. There were pockets of households that reported an increase in their child's weakness (6%), with an increased concentration in rural parts of Uttar Pradesh, Bihar, and Rajasthan, and in BPL and Antyodaya families.

In terms of caregiving and learning support for young children, a fall in both institutional and informal support mechanisms was reported during the survey. Parents reported bearing a greater share of learning and caregiving without much support. One in five parents reported spending more time on caregiving with their children[2]. In this context, many parents also reported challenges related to not being able to give enough time and attention to their children and had using stricter disciplining techniques. In addition to this, findings revealed that use of technology has increased among some children. One third of children started watching videos / playing games on the TV / phone / computer for the first time following the start of the pandemic in March 2020. This is also true for children <2 years of age, when screen exposure—especially passive tech usage—is known to be harmful for the cognitive development of children. Most parents (65%) with a child aged 3-6 years of age report facing challenges in continuing their young children's learning at home. The most cited challenges included a lack of time due to work (23%) and issues with technology (19%). Challenges were exacerbated in the case of rural households, Antyodaya households, and parents who reported increased stress. In the context of learning, 1 in 4 AWWs also reported not receiving necessary training support for conducting remote learning activities.

Among caregivers, the lack of support is coupled with additional stressors. Over 1 in 5 parents reported feeling more stress or fatigue during the pandemic. A higher proportion of rural and multi-child households reported feeling more stressed/tired during the pandemic. The most commonly cited drivers of stress included fear of COVID-19 infection (74%), followed by loss of work/income/wages (61%), and disruption of learning/ care for their children (41%).

Frontline workers played a critical role in softening the blow of the pandemic, but this has come at significant personal cost. They had to work additional hours, experienced greater stress, and as a result started to find their work unmanageable. Nearly half of surveyed ASHAs and 36% of AWWs reported working longer hours, and 34% and 38% respectively reported increased stress levels. As with caregivers, frontline workers also reported the need for more support especially in terms of resources and training to manage effective delivery of ECD services during the pandemic[3].

The findings from the study highlight several key lessons and recommendations to improve ECD services. Some of the key recommendations emerging from the study are:

- ***Recognize and celebrate frontline workers' efforts*** by acknowledging their contributions not just for COVID-19 (through slogans such as that of the 'Corona warrior') but more generally for the tremendous efforts they make for the health and wellbeing of the entire community. In-depth interviews showed that this was an effective tactic to motivate workers and would likely contribute to longer-term efforts to improve social capital.
- ***Where possible, rationalize roles and responsibilities of frontline workers to*** *enable better prioritization of service delivery*. Frontline workers have many responsibilities across health, nutrition, education, and caregiving. Supporting them in prioritizing efforts and having clearly delineated responsibilities can enable them to focus on core tasks, while also keeping their overall work hours under control[4].
- ***Closely track reopening of AWCs and intervene to encourage attendance where needed.*** At the time of our study, nearly half of parents were not ready to send their young children back to school or AWCs. As states are reopening these facilities, it will be important to keep an eye on whether children are actually returning or not. Where needed, community level drives can help ensure that children are attending AWCs.
- ***Make efforts to sustain the involvement of fathers in their children's lives post pandemic.*** Our findings suggest that fathers are spending an increasing amount of time with their children because of the crisis (although, still slightly lower compared to mothers)[5]. These interactions are particularly influential during the first three years of life, when brain growth is most rapid in children[6]. We should leverage this opportunity to encourage sustained interaction evidence-based program development, and targeted advocacy, such as the MenCare Program[7].
- ***Generate evidence to understand the impact of the pandemic on child-level outcomes.*** While various articles and reports have discussed the pandemic's potential impact on children's learning and development, it may be worthwhile to conduct further research to generate evidence around the actual impact on children directly. This will enable policy makers to take specific actions to address any longer-term issues.
- ***Surface and share good practices.*** Sharing of good practices can be helpful for states to take informed decisions and implement strategies to improve the quality of ECD programmes. Additional investment is needed to document and more deeply understand why, for whom, and in what context, certain interventions are working well.

Contents

I. CONTEXT AND INTRODUCTION

The economic and social impacts of the COVID-19 pandemic have significantly disrupted the lives of young children and their caregivers. In March 2020, India went into lockdown, creating widespread economic disruption. Many people lost their sources of income and livelihoods, creating economic pressures on families with young children. Social interactions came to a halt as families adopted social distancing norms and limited movement outside the home, reducing access to informal caregiving networks. The crisis and lockdown have transformed the lives of young children and their caregivers; it seems almost certain that this will have long-lasting impacts.

Institutional support mechanisms also underwent significant shifts to respond to the pandemic, furthering the disruptions parents and young children experienced. Healthcare and welfare services such as the ICDS system provide wide-ranging institutional support to parents to help with young children's learning and development. However, these systems affected many routine services, some of which were critical for young children, as focus shifted to preparing for and addressing the spread of COVID-19. For instance, one study found that over half of the parents with children under the age of five did not have access to immunization in April 2020[8]. These changes further impacted parents who were also dealing with the loss of livelihood and social support. At the same time, frontline workers (ASHA and AWWs) took on additional COVID-19 activities which put major stress.

The opening up of economies post-lockdown has resulted in a resumption of work and a recovery of livelihoods, but many services remain disrupted. For example, AWCs and pre-schools continue to remain shut in many parts of the country, meaning that young children continue to spend the their time at home with minimum learning support even while their parents have resumed paid work outside. By the time society and the economy open up completely, our youngest children will have lived a substantial portion of their first few years in crisis and recovery mode, with likely impacts on their physical, intellectual, social, and emotional development. These impacts will vary across socio-economic groups in India. Given the importance of early childhood and especially the first 1,000 days of life, decision-makers need to understand the key impacts of the pandemic on the availability and delivery of ECD services for young children and their caregivers —and use this evidence to further strengthen the ECD services for this and future crises.

Our study is designed to answer two key research questions:

1) How has the COVID-19 pandemic affected the availability and delivery of various ECD services for children under six years old across the various domains of early childhood development?
2) How has the COVID-19 pandemic influenced the lives of the caregivers along with the frontline workers who provide ECD services to children under six, both at home and in the community?

We explore both these research questions through two quantitative surveys, a set of in-depth interviews[9] with caregivers, consultations with experts, and other research efforts.

II. Conceptual Framework, Approach and Methodology

The following section of the report presents the conceptual framework, approach and methodology which define the scope and nature of the data collected and the criteria used for conducting the study.

Conceptual Framework

The conceptual framework for conducting the study takes ***Nurturing Care Framework*** released by WHO, UNICEF, and the World Bank Group, in collaboration with the Partnership for Maternal, Newborn, and Child Health and the Early Childhood Development Action Network, as a reference point and attempts to builds on nurturing care components of ECD including good health, adequate nutrition, responsive caregiving, safety and security, and opportunities for early learning for determining the impacts across various components. **We prioritized outcomes within the *Nurturing Care framework* and included a few additional areas of inquiry based on ongoing events at the time of study design.** Each of the component of nurturing care framework contains a set of outcomes that are linked with ECD. We prioritized among these outcomes based on those which were most likely to have been impacted by COVID-19, could easily be measured through telephonic surveys, and had long-term consequences for childhood development. Other outcomes that were relevant in the COVID-19 context, such as access to information and welfare support from the government, were included as well. These prioritized outcomes were thoroughly validated through interviews with the advisory panel of ECD experts. Figure 1 below showcases the prioritized set of outcomes we included as areas for inquiry in this study.

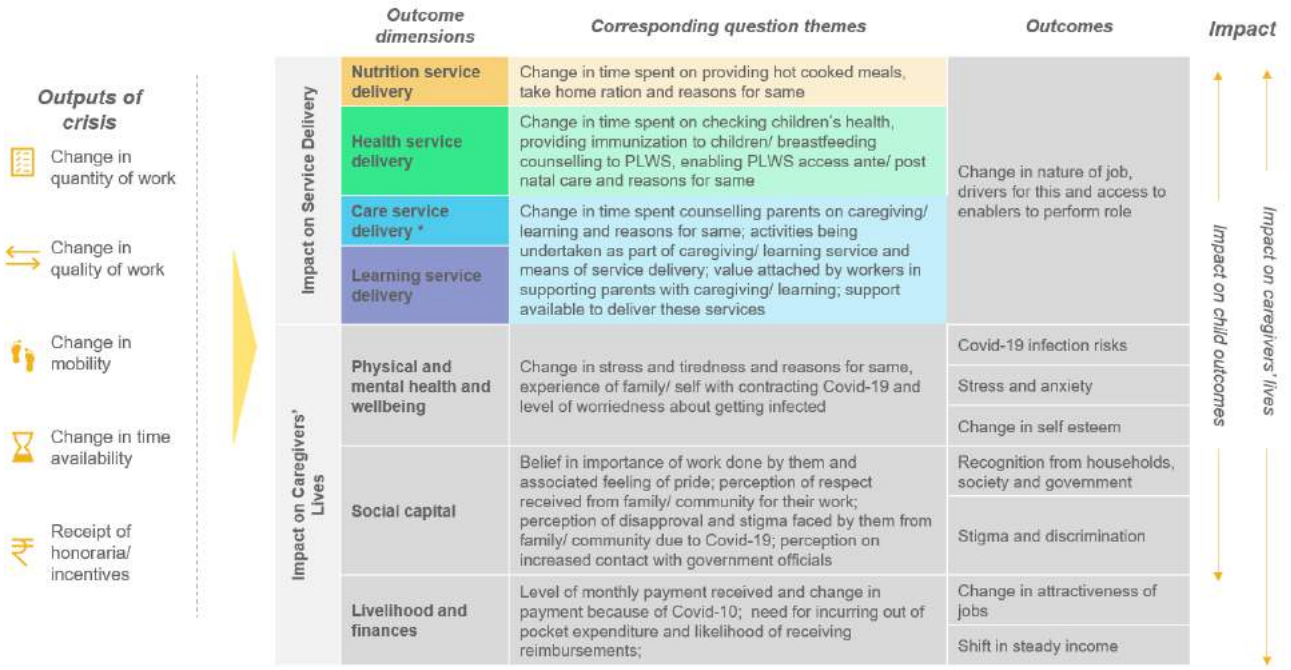
Figure 1: Summary of prioritized (bold) outcomes within 'Nurturing Care'

Bucket	Good health	Adequate nutrition	Security and safety	Responsive caregiving	Early learning
Outcomes	**Mental and physical health of caregivers[1]**	**Nutritional status of caregivers**	Clean and safe environments	**Secure emotional relations**	Language-rich communication
	Quality of antenatal, childbirth, and postnatal care[2]	**Early and exclusive breastfeeding**	**Good hygiene**	Sensitivity and responsiveness to cues	**Age-appropriate play and learning at home and in the community**
	Immunization of mothers and children[3]	**Appropriate complementary feeding for 6-23 months**	**Supportive discipline**	**Stimulating interactions**	
	Timely care-seeking for childhood illness	Micronutrient supplementation	Neglect, violence, displacement, conflict	Bi-directional communication	
	Appropriate management of childhood illness	Management of childhood malnutrition			

Note: (1) We cover mental health only of caregivers (2) We cover only antenatal care and childbirth (3) We cover only immunization for children; also included a light tough on 'access to government messaging around Covid-19' and 'access to government subsidy/special funds'

We also devised a conceptual framework to focus our study on frontline workers within the health and ICDS systems. This study helps uncover the impacts of COVID-19 on frontline workers—both in terms of service delivery and their own well-being. In order to address both of these areas of inquiry, we developed a framework by drawing from official documents from the Government of India that report on the services these workers provide, and from discussion with ECD experts. Figure 2 illustrates the framework created for this purpose, covering both 'impact on service delivery' (service categories corresponding to Figure 1[10]) and 'impact on caregivers' lives'.

Figure 2: Framework for impact of COVID-19 on frontline workers' work and lives



Methodology

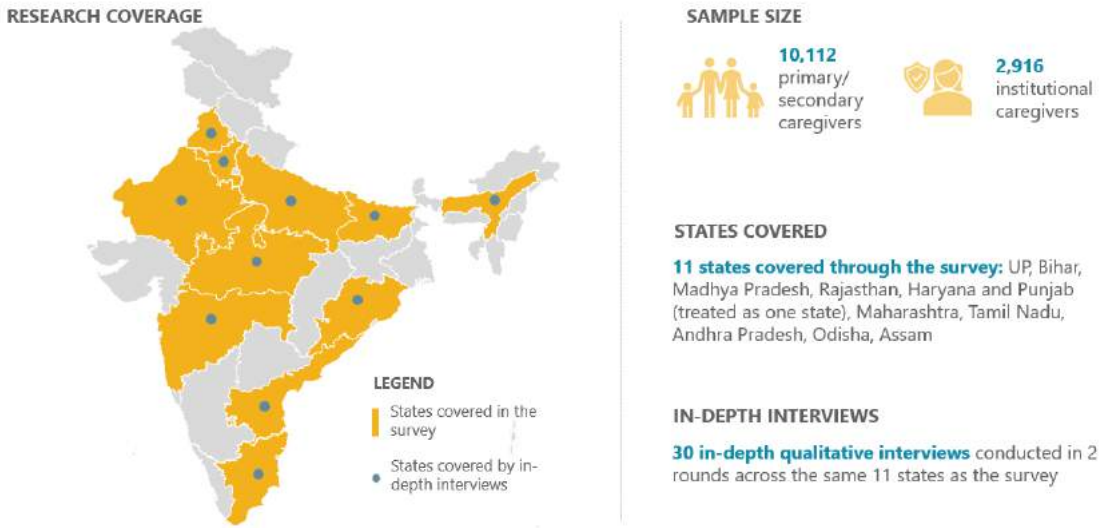
The study's mixed-methods approach draws on quantitative and qualitative evidence both to explore the broad impacts of the coronavirus pandemic on ECD and to highlight the nuanced experiences of individuals. This study relies on three sources of evidence: a survey and in-depth interviews of parents (both primary and secondary caregivers) of children below six years of age, a survey and in-depth interviews of frontline workers who provide ECD services, and secondary research. Additionally, we consulted sector experts during both the survey design and analysis phases[11].

Surveys (inc. respondent demographics)

We collected data for both surveys (including pilot) between September 2020 and February 2021. For primary/secondary caregivers, data collection began on 17 December 2020 and concluded on 28 January 2021. Data collection began on 2 January 2021 for frontline workers and concluded on 11 February.

Enumerators in each state administered questionnaires over the telephone in the local language. We conducted both surveys across eleven states[12]. The selected states are geographically diverse, had varied experiences of the coronavirus pandemic, and differed in terms of access to early childhood development services.

Figure 3: Overview of research coverage[13]

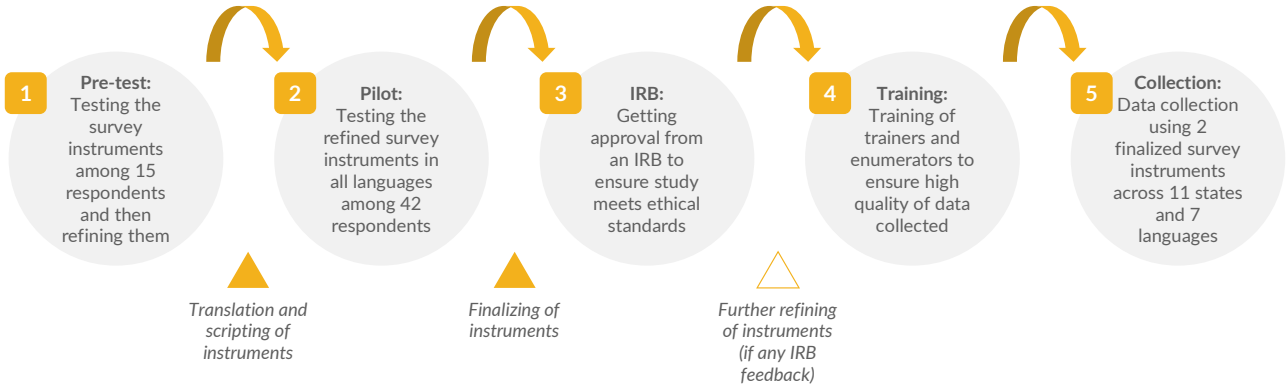


Survey instrument design

As discussed above, we grounded the survey for primary/secondary caregivers in the WHO/UNICEF *Nurturing Care* framework; for the survey of frontline workers, we designed a framework to capture the impact of COVID-19 on both their work and their lives outside of work. A first round of in-depth interviews also informed the design of the surveys by highlighting key questions and experiences we might want to capture quantitatively through the survey.

After designing the surveys, we undertook a rigorous process of refining the instruments before beginning data collection, as laid out in Figure 4.

Figure 4: Overview of process up till data collection[14]



Pre-test and piloting began in September 2020 and ended in November, IRB approval from the Social Research Institute was received in December, training was completed on December 16th, and data collection began on December 17th.

Additional details on each of these five phases is provided in the Appendices.

Sampling

A. Primary/secondary caregiver survey

We conducted the survey with a sample population selected to provide optimal representation of key groups of caregivers—primary and secondary. We designed our sample to ensure sufficient representation of both primary caregivers (who are traditionally mostly women) and secondary

caregivers (traditionally men)[15]. We sought to cover each state with a large enough sample to allow basic within-state analysis, and we ensured the sample was self-weighted in terms of urban/rural coverage. These aims resulted in the following sampling parameters:

- The sample for primary/secondary caregivers comprised 67% women and 33% men[16]
- The sample was distributed evenly across all states (except Punjab and Haryana, whose combined sample was the same as in any other state, given their smaller and relatively homogenous populations)
- For each state, the rural/urban sample split was proportionate to that state's rural/urban population projections for the year 2020[17]
- Our sample provides for a +/- 5% confidence interval at the 95% confidence level for each gender across all states combined. Additionally, our samples at the state level provide a 95% level of confidence for women and a 90% level of confidence for men.

Table 1: Primary/secondary caregiver sample by state, gender, and residence type

State	Total sample	Male respondents	Female respondents	Urban	Rural	Children in 0 to 3 age group only	Children in 3 to 6 age group only	Children in both 0 to 3 and 3 to 6 age groups	PLW
Andhra Pradesh	1036	333	703	318	718	311	580	145	114
Assam	915	303	612	164	751	399	459	57	119
Bihar	938	306	632	109	829	257	423	258	161
Haryana	527	211	316	183	344	164	253	110	74
Madhya Pradesh	1014	381	633	294	720	379	541	94	106
Maharashtra	952	332	620	461	491	369	459	124	102
Odisha	971	317	654	201	770	379	485	107	100
Punjab	541	170	371	211	330	221	249	71	68
Rajasthan	1131	466	665	283	848	469	574	88	114
Tamil Nadu	1043	345	698	627	416	382	563	98	75
Uttar Pradesh	1044	366	678	268	776	305	488	251	148
Total	**10,112**	**3,530**	**6,582**	**3,119**	**6,993**	**3,635**	**5,074**	**1,403**	**1,181**

B. Frontline worker survey

We designed our sample of frontline workers to provide sufficient representation of the main categories. Our sample provides a 95% level of confidence[18] for each of the main categories of frontline workers (Anganwadi and ASHA workers) across all states combined.

- Our sample for frontline workers comprised 50% Anganwadi workers and 50% ASHA workers in each state (except in Tamil Nadu, where we additionally sampled Village Health Nurses (VHNs), since ASHAs are located only in tribal, hilly, and difficult-to-reach areas)
- As with the primary/secondary caregiver survey, the sample was distributed evenly across all states (except Punjab and Haryana, whose combined sample was equal to that of any other state)

Table 2: Frontline worker sample by state and occupation

	State	Total	Anganwadi workers	ASHA workers	Village Health Nurses
1	Andhra Pradesh	274	143	131	X
2	Assam	274	130	144	X
3	Bihar	255	130	125	X
4	Haryana	138	71	67	X
5	Madhya Pradesh	268	130	138	X
6	Maharashtra	286	143	143	X
7	Odisha	271	128	143	X
8	Punjab	151	88	63	X
9	Rajasthan	307	182	125	X
10	Tamil Nadu	431	142	129	160
11	Uttar Pradesh	261	135	126	X
	Total	**2916**	**1422**	**1334**	**160**

We selected our respondents from pre-existing contact lists. For the primary/secondary caregiver survey, we chose respondents in each state using a database previously created by Kantar and containing over 500,000 phone numbers that had been collected and updated over the past five years. The database footprint spans India and its characteristics align broadly with the 2011 Census. Respondents were selected across multiple districts in every state to avoid clustering errors.

For the frontline worker survey, respondents were randomly selected from lists provided by respective state government departments. In each state, we received lists of ASHAs (and in Tamil Nadu, of VHNs) from the National Health Mission (NHM) state offices. We also received contact lists of Anganwadi workers from Integrated Child Development Services (ICDS) state offices. With few exceptions (see below), these state offices shared complete lists of ASHAs, Anganwadi workers, and VHNs employed in their states, which we used to randomly draw samples for our interviews. We applied a buffer of 2–4x (depending on the sub-groups) while survey sampling to account for non-responses and to ensure that we hit our sample and sub-sample targets in the frontline worker survey.

For some frontline worker sub-groups complete data were not available. Therefore, we adopted workaround solutions to construct our samples.

- For Anganwadi workers in Assam, the database we used to create our sample had details for ~54,000 Anganwadi workers of a total of ~61,000 employed in the state, due to data availability limitations. Every district was represented in this database, such that we could reasonably assume that those workers not included in the database were distributed randomly across the state.
- For Anganwadi workers in Odisha, we relied on a national database of Anganwadi workers available at the ICDS website to construct our sample of 500 (4x our sampling frame for this sub-group). Of these 500 workers, phone numbers were available for 260 (including replacements where possible). We proceeded with data collection using this buffer sample of 260 Anganwadi workers.

In-depth interviews

We conducted 60-minute in-depth phone interviews with 30 primary / secondary / frontline workers to better understand their experiences with caregiving for young children during the pandemic. These interviews were inspired by a human-centred design (HCD) methodology, which focuses on gaining a nuanced and holistic understanding of people's lived experiences, perspectives, and behaviours. We conducted 10 in-depth interviews before our survey began during August–September 2020, capturing details of interviewees' experiences to inform the survey design and generate hypotheses

for further exploration[19]. We also conducted an additional 20 in-depth interviews during January–February 2021 to investigate the 'why' and 'how' of user experiences observed in the data and gain a deeper understanding of potential solutions. These interviews helped us bring forth the experiences of vulnerable populations and 'extreme users'[20], enabling us to also test whether the changes and recommendations we propose have resonance. We conducted these interviews for both frontline workers[21] and primary / secondary caregivers in the same set of states[22] as the survey.

The interviews covered 16 primary caregivers and 14 frontline workers (7 Anganwadi workers and 7 ASHA workers). Nineteen of the respondents were from rural regions (10 out of 16 primary caregivers and 9 out of 14 frontline workers).

Among primary caregivers, five interviewees were male and 11 were female primary caregivers; two were pregnant during the interview. Most of the respondents came from households with one to two children and a monthly income between Rs 5,000-20,000. They represented a mix of educational (ranging from Class 6 to B.Com graduation) and social backgrounds (Hindu/ Muslim; General/ BC/ OBC/ SC category).

Among frontline workers, there was diverse representation in terms of age (24 to 52 years), experience of being a frontline worker (2 years to 20+ years), social backgrounds (Hindu/ Muslim; General/ OBC/ SC category), and economic backgrounds (monthly household income ranging from Rs 3,500 – 15,000). Of the 14 frontline workers interviewed, 6 were members of a worker union while 8 were not. Further, all of them had between 10-12 years of education (10th/ 11th/ 12th pass)

Limitations

As with all surveys, our sampling methodology contains some limitations[23]. Our analysis is not nationally representative and is applicable only to the 11 states surveyed. As the interviews were conducted by telephone, households without access to phones (including those unable to charge their phone, without the money to top up their phone credit, and/or those without network coverage) have been excluded. As such, any telephonic survey is unable to be fully representative of the country as a whole. Those excluded are likely worse off than those we were able to reach by phone—as such, our findings may be expected to represent a 'best case scenario'. For our primary/secondary caregiver survey, we classified primary and secondary caregivers using a self-identification question in the questionnaire[24]. To ensure that respondents answered from their own experience rather than projecting, we asked secondary caregivers the same or similar questions as primary caregivers. For our frontline worker survey, responses are representative only of the perceptions of ASHA, Anganwadi, and VHN workers, and may not be representative of all frontline workers even in the states surveyed.

Additionally, in both our surveys, some of the questions[25] required parents and frontline workers to compare their current or their children's current (Dec 2020-Jan 2021 for primary/secondary caregivers and Jan 2021-Feb 2021 for frontline workers) behaviours or surroundings with pre-pandemic levels (before March 2020), resulting in some recall bias. However, some research[26] suggests that some maternal/ new born care indicators women reported accurately at baseline were consistently recalled with accuracy even at 13–15 months follow–ups. Although there is deterioration in women's recall in some indicators over time, the extent of deterioration does not appreciably compromise reporting accuracy for indicators with high baseline validity.

III. FINDINGS

This chapter consists of two sections: first, looking at the impact on children aged 0-6 and their caregivers. The first section is further segmented into sub-sections that cover each of the dimensions in the *Nurturing Care Framework* that anchors this study. At the end of each sub-section is a fact-sheet containing summary statistics. The second section looks at the pandemic's impact on the lives of frontline workers (ASHAs, AWWs, and VHNs). We have layered in this analysis with rural-urban and state-level differences. Responses to additional questions are attached as state-level fact-sheets.

Impact on children aged 0-6 and their primary and secondary caregivers' lives

Health

SUMMARY:

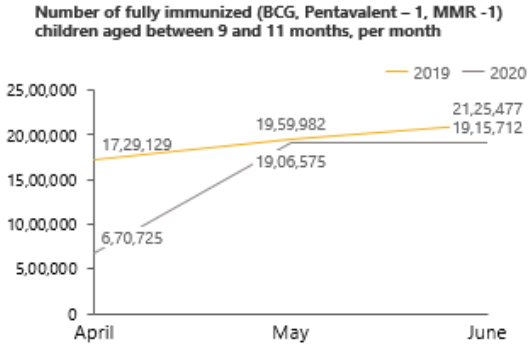
The immediate lockdown period of March–May 2020 created significant disruptions to access the healthcare services in India. Health services were severely curtailed during the months of the strictest lockdown—March–May 2020—compared with the same period a year earlier and with the months leading up to March. Even where services remained open, use of essential services decreased. This includes reduced use of essential reproductive, maternal, new-born and child health interventions, such as antenatal care, skilled attendance at birth, and treatment for pneumonia. A preliminary analysis, conducted by a leading online news platform, based on data released by the National Health Mission (NHM) revealed that March 2020 saw a 15% fall in BCG, Pentavalent 1, and at-birth oral polio vaccinations[27]. Institutional deliveries fell by 21% and deliveries at home attended by a skilled birth attendant by 25%[28]. Routine checks on pregnant women and vital tests for the health of the mother and child were missed.

But as of December 2020 / February 2021, most services covered in our survey indicated improvements, similar to pre-pandemic levels. Many of the health services, both in terms of access and usage, were back to normal levels of service delivery[29]. ASHA, AWWs, and VHNs worked more than pre-pandemic levels to support in this resumption of service delivery. However, some households—the highest proportion of which are Antyodaya / BPL households or households without ration cards[30], OBC / SC / ST communities, and households in Bihar and Rajasthan[31]—reported not accessing all healthcare services.

ACCESS TO IMMUNIZATION FOR CHILDREN

Despite initial disruption in immunization, 86% of households with children under two years of age reported their child having received the necessary vaccinations[32]. Data from the Health Management Information System (HMIS) suggest that vaccination programs were initially disrupted due to COVID-19 lockdown restrictions and the priorities of the health infrastructure shifting towards COVID-19 management. However, 86% of households in this survey reported that their children aged 0–2 years had received all vaccinations.

Figure 6: HMIS data for Apr-May 2020 of fully Immunized children



ASHA and AWWs worked more to resume immunization campaigns. Overall, 36% of ASHAs and 34% of AWWs reported spending more time than before on immunization, with only 6% of ASHAs and

5% of AWWs reported spending less time[33]. States reporting lower vaccine coverage among households with children 0–2 years old—such as Bihar and Rajasthan—are also states in which a greater proportion of AWWs and ASHAs reported spending less time on providing vaccinations.

In-depth interviews indicated that while parents were worried about the halting of immunization services during the crisis, ASHAs, AWWs and VHNs played a critical role in both providing continued guidance and ensuring that most children received their due vaccinations.

In rural Madhya Pradesh, immunization activities returned to pre-pandemic levels. This AWW shared that with data-entry work complete, her focus was on providing inoculations to pregnant women and children.

"We do immunization on Tuesdays and Fridays at the Anganwadi Centres for pregnant women, children, etc. Immunization was not happening earlier. It has started again. We immunized those who had missed them 2–3 months afterwards. We have also finished the data entry work we had to do. We are now focusing on immunizing whoever needs it now."

– AWW, rural Madhya Pradesh

Frontline workers use the tools available to them – especially mobile phones – to drive vaccinations.

"In spite of extra COVID-19 duties, the level of vaccination has not been affected as such for parents and children. … Using the phone was also helpful because I used to coordinate with women on the phone to get the children the required vaccination on a particular day."

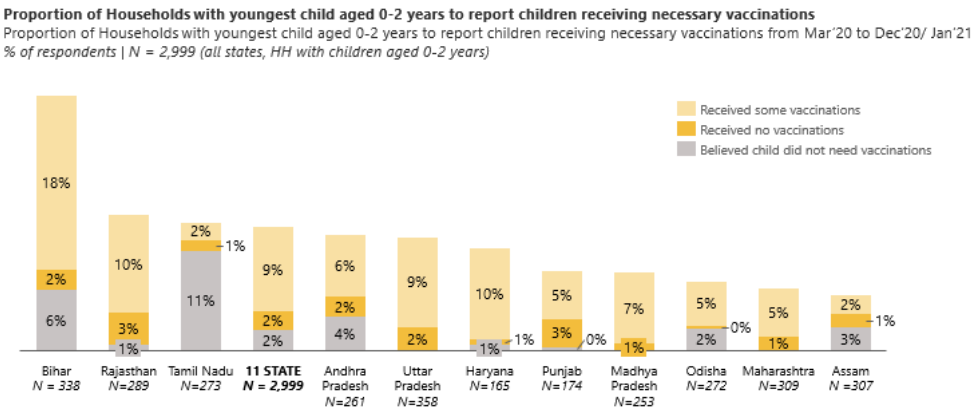
– VHN, urban Tamil Nadu

However, a few segments of households with children under two years of age reported that they had not received all vaccinations. While the proportion of households to report their child receiving all vaccinations did not depend on the education level of parents or income / paid work loss due to COVID-19, it did vary based on:

- Social category: A higher proportion of households belonging to the general social category (91%) than of households in the OBC / SC / ST categories (85%) reported their child receiving all vaccinations
- Income category: A higher proportion of APL households (90%) reported that their child received all vaccinations than other categories (83% of BPL households)

- Place of residence: A higher proportion of households in urban areas (90%) reported their child received all vaccinations than of households in rural areas (85%). Furthermore, only 71% of households in Bihar reported their child receiving all vaccinations. Notably, a higher proportion of households in Bihar (6%) and Tamil Nadu (11%) believed their child did not need any vaccinations, when compared with overall weighted average for 11 states of 2% as shown in Figure 7.

Figure 7: Proportion of Households with youngest child aged 0-2 years to report children receiving necessary vaccinations



The reasons for households not receiving all vaccinations included supply-side disruptions and fears of contracting COVID-19. Among those households with children under 2 years of age whose children had received some or none[34] of their vaccinations, common reasons for not receiving vaccinations included that the medical facilities or workers were not providing them (37%) or that the frontline workers / Anganwadi Centres were unsafe because they posed a risk of infection (32%)[35].

"A lot of women did not get vaccinations, the children did not get vaccinations either. The women were scared to go to the hospital and get vaccinations. Earlier people used to go to the hospitals for small ailments like cold, cough. But now even for big issues like vaccinations women were not willing to go the hospitals. We didn't tell them anything, we couldn't say anything because we can't force them." ***- AWW, Rural Rajasthan***

Rural-urban lens: Urban households reported a greater proportion of completed vaccinations. Immunization has bounced back in both urban and rural areas, with urban areas exhibiting stronger performance where 90% of households reported their children received all vaccinations (as compared to 85% of households in rural areas). Of the households to have reported missing vaccinations, a higher proportion of rural (as compared to urban) households cited medical facilities/ workers not providing vaccinations as reason for the same (41% of rural households vs 17% of urban households).

State-level lens: Significant differences were observed across states in terms of vaccination coverage. Bihar (where only 71% of households with youngest child aged 0-2 years reported their child having received all vaccinations) falls behind other states in terms of vaccination coverage. Notably, a higher proportion of households in Bihar (6%) and Tamil Nadu (11%) believed that their child did not need any vaccinations.

Access to Other Healthcare Services For Children

Of households in which a child had fallen sick (12%), the vast majority (94%) had received treatment from a healthcare provider. The majority of parents visited a private health centre or hospital (52%) for care, followed closely by a government hospital/ health centre (29%) and a pharmacist or compounder (18%). While these trends were similar across both rural and urban India, a greater proportion of BPL households than of APL households reported visiting government health facilities and seeking medical attention from Anganwadi workers as shown in the table below.

Health care services	BPL (N=578)	APL (N = 280)
Visiting government health centres/facilities	35%	28%
Seeking medical attention from AWWs	6%	0.2%

Of the 6% of households that did not receive treatment from a healthcare provider, two-thirds received medical attention from friends or family at home, and only one-thirds did not receive any medical attention for their illness. Notably, of those households that did not receive any medical attention for the latest instance of their children's illness in our study, 48% said they did not need or try to get medical attention[36].

Rural-urban lens: Limited variation was observed between rural/ urban households in terms of receiving medical attention for their children during the pandemic[37]. A significant majority of households in both rural (94%) and urban areas (93%) reported receiving medical attention for their child. Both in rural and urban areas, a large proportion of households reported that their child received medical attention at private health centres or hospitals (52% and 51% respectively), followed by government health centres or hospitals (29% and 30% respectively) and pharmacists or compounders (18% and 16% respectively).

State-level lens: Significant differences were observed across states in terms of access to medical attention in times of child illness. Of the households[38] to report their child falling sick, 21% of households from Andhra Pradesh and 7% from Assam reported not receiving medical attention for their child during the pandemic - in contrast, under 5% of households from other states reported not receiving medical for their child's illness across other states. While a higher-than-average proportion of households in Haryana (64%), Odisha (47%) and Rajasthan (45%) reported receiving medical attention for their child from a government health centres, a majority of households in Maharashtra (86%), Punjab (84%) and Uttar Pradesh (71%) reported accessing care from private health centres.

Access to Healthcare Infrastructure (Combination of vaccinations and medical needs)

10% of households had limited access to healthcare infrastructure for their child's immunization and medical needs during the crisis. As evident in the table below, these households were over-represented in rural areas, among BPL households, and among households from OBC/ SC/ ST communities.

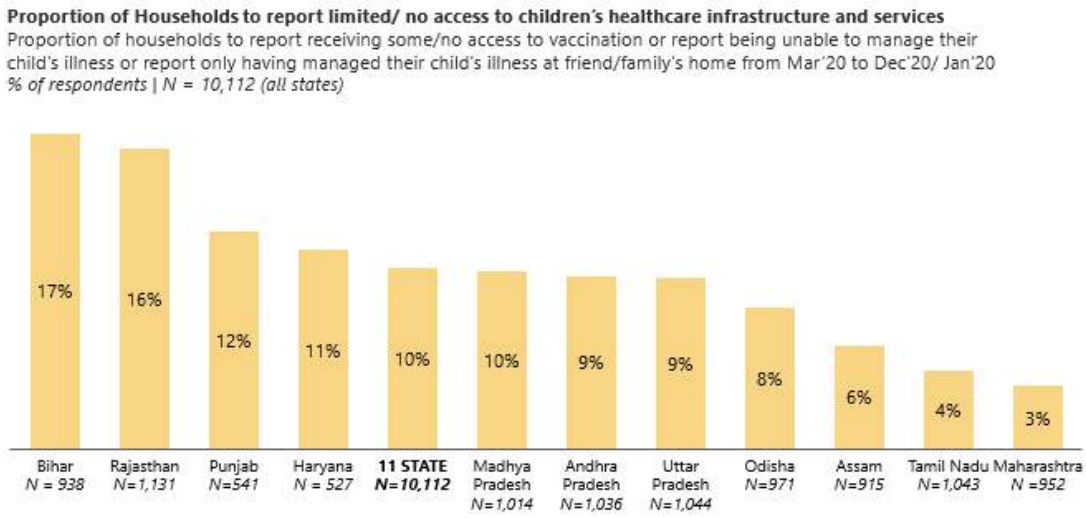
Variations among households with limited access to healthcare infrastructure across different categories		
Place of residence	Rural (11%)	Urban (8%)
Income category	BPL (9%)	APL (7%)
Social category	OBC/ SC/ ST communities (11%)	General social category (7%)

ASHA and AWWs were the primary channel for health-related information reaching many households. 76% of households reported having received information about children's health including information on immunization and management of illness and 73% of households reported having received information on pregnancy care including information on healthy eating, exercise during pregnancy and birth options[39] from an ASHA/ Anganwadi worker since the pandemic began. In terms of variation across rural and urban areas, urban areas saw lesser penetration of information (73%) than rural areas (77%), an expected outcome given the historical strength of these channels in rural locations. In addition, there was some state-level variation observed in the access to information,

with respondents in Odisha (85%) and Tamil Nadu (88%) reporting higher coverage of information than their counterparts in states Bihar (54%) or Punjab (46%).

The coverage of health-related information was higher than other topics such as nutrition (65%) or caregiving and learning (61%). In-depth interviews have also shown that ASHA and AWWs have made special efforts to assuage people's concerns and fears during this period. For example, 89% of the households that reported receiving information on children's health also reported that their child received all relevant vaccinations (as compared to only 76% of the households that reported not receiving the information).

Figure 8: Proportion of households to report limited/ no access to children's healthcare infrastructure and services



Access to Healthcare Services Among Pregnant Women

Pregnant women were largely able to access antenatal care on time. Of the 2% of women who were pregnant in our sample at the time of surveying, the majority (88%) had accessed antenatal care at least once. The average pregnant woman accessed antenatal care for the first time three[40] months into her pregnancy both in rural and urban areas. Our survey also found that 65% of currently pregnant women who had accessed antenatal care had done so in their first trimester, with an additional 27% doing so in the fourth or fifth month of their pregnancy. These observations[41] are also in line with NFHS 2015–16 findings, indicating that antenatal care is reaching pregnant women at levels similar to pre-pandemic.

This mother of three from urban Odisha noted that her local AWC remained open to provide critical health care services even during the lockdown months (March to May 2020).

> *"Even in the lockdown the AWC opened every Wednesday for check-ups. Pregnant women and children need to be tested regularly. If they don't, they'll get sick. So the AWC took permission to open and they continued this during the lockdown."*
>
> ***- Mother of 5-year old, 8-year old and 10-year old, Urban Odisha***

Provision of institutional deliveries was also adequate. In most states, the vast majority (96%) of children born in the past year were born in healthcare facilities, except Uttar Pradesh, where a greater proportion of children (~10%) were born at home.

These findings suggest an improvement from the early disruptions indicated by HMIS data, which show that institutional deliveries for March 2020 were below the numbers for the same period in 2019[4243].

ASHAs/VHNs reported spending more time on other aspects of maternal health. Roughly 40% of ASHAs/VHNs reported spending more time on tasks like managing children's illness, supporting women's access antenatal care, and assisting women with childbirth and postnatal care; a further ~50% reported spending the same amount of time on these efforts as before the pandemic. The aspect wise distribution reported by ASHAs/VHNs is shown in the table below:

Aspects of maternal health	Spending more time	Spending same time
Child health management	39%	57%
Supporting women's access to antenatal care	45%	51%
Supporting child birth and postnatal care	38%	57%

The top reasons cited by ASHAs/ VHNs for spending more time on providing these services included receiving instructions from supervisors to do so, ASHA/ VHNs' personal beliefs that these services were important in the prevailing situation, and greater public demand for institutional support.

Similarly, **AWWs reported spending time on managing aspects related to children's health** (including measuring growth and providing health referrals). 41% of AWWs reported spending more time and 49% reported spending the same time. Around 20-25% of AWWs in Assam (20%), Rajasthan (23%), and Bihar (25%), however, reported spending less time on managing children's health, primarily due to AWC closure and AWW/ public fear of COVID-19 infections.

The fear of being infected created significant challenges. This rural ASHA notes that there was a general reluctance to visit hospitals in the city.

> *"The women were very scared, they didn't want to go to the hospitals at all. They were thinking that they'll get quarantined. Even women in labour refused to go to the hospital, but then I told them that in the village this is not clean. Home deliveries are not hygienic here and that they must go to hospital. … We have to go to the city, but there are no housing facilities for us there. If the delivery happens in a day then it's fine, but if the delivery is on going then we don't have a place to stay. During COVID-19 this is worse, because we are also scared about catching the virus. … Fortunately no one in my village had to suffer but I have heard from other ASHAs that pregnant women did not receive health services because doctors were scared of touching them."*
>
> ***- ASHA, Rural MP***

Rural-urban lens: Urban households reported a greater proportion of institutional births. A large majority of both rural and urban birth occurred in health facilities, with the percentage higher in urban areas (98%, compared to 95% for rural).

In terms of spending time by Frontline workers on aspects related to health, similar proportion of urban Frontline workers reported spending same time (vis a vis more time) when compared to their rural counterparts: 68% of urban ASHAs/ VHNs reported spending the same time on managing children's health (vs 56% of rural ASHAs/ VHNs); 64% of urban ASHAs/ VHNs reported spending the same time on supporting childbirth and post-natal care (vs 57% of rural ASHAs/ VHNs); and 59% of urban Anganwadi workers reported spending the same time on managing children's health (vs 48% of rural Anganwadi workers); 55% of urban ASHAs/ VHNs report spending the same time on supporting ante-natal care (vs 50% of rural ASHAs/ VHNs).

State-level lens: Institutional births seem to be the norm across all the states. Across all states, over 90% of households that reported childbirth during the pandemic, reported that they took place in health facilities.

Nutrition

SUMMARY

Many households[44] report minimal disruption or recovery of children and pregnant/ lactating women's nutritional *behaviours*, while disruptions to the Anganwadi-Centre-based nutritional service provision persist.

ACCESS TO NUTRITION FOR PREGNANT AND LACTATING WOMEN (PLWS)

The nutritional metrics we studied for PLWs have largely returned to pre-pandemic levels, as of Dec-Jan 2021. Consumption of iron supplements bounced back[45], with 80%[46] of pregnant lactating women indicating that they were able to take their supplements (compared to 85% before the pandemic[47]). In fact, a greater proportion of currently pregnant women[48] (87%) reported taking their supplements than did recently pregnant[49] women (79%).

During the time of the survey (Dec-Jan 2021), service provision of food/nutrition through AWCs continued to be low. 43% of households with pregnant women or with children under nine months of age reported that they faced challenges in receiving food from AWCs. Frontline workers' accounts also revealed a decrease in time spent on undertaking various nutrition-related activities. For example, only 47% of AWWs reported spending more time[50] providing take-home rations[51] to children/ pregnant and lactating women even though 95% of them reported not providing hot cooked meals anymore.

State-level lens: State-level differences in access to nutrition among pregnant and lactating women exist. Madhya Pradesh and Uttar Pradesh, lag behind other states in terms of proportion of recently pregnant women or household with children under 9 months of age to report consuming full dose of IFA tablets (64% and 65% respectively against overall average of 79%)

ACCESS TO NUTRITION FOR CHILDREN

The at-home nutritional metrics we studied for children have largely returned to pre-pandemic levels, as of Dec-Jan 2021. Breastfeeding in households with a youngest child aged ≤ 2 years was not severely impacted and 95% of households with a child aged 15 months did not report a reduction in the amount of food consumed by their child or an increase in their child's weakness since the pandemic began. In-depth interviews also indicated that while there had been disruptions to food availability during the pandemic (especially the early phases of lockdown), parents reduced their own portions of nutritional food and took on more debt for food purchases to ensure that their children received sufficient nutrition.

Food/nutrition related service provision through AWCs continued to be low. 47% of households with a child aged 15 months – 6 years reported that their children were receiving less/ no food from AWCs. Across the 11 states in our sample, 8%[52] of households that reported that their child was receiving less[53] food from AWCs during the pandemic also reported their child growing weaker. Frontline workers' accounts also revealed a decrease in time spent on undertaking various nutrition-related activities. For example, only 47% of AWWs reported spending more time[54] providing take-home rations to children/ pregnant and lactating women even though 95% of them reported not providing hot cooked meals anymore. In fact, in Bihar and Assam, where 29-30% of AWWs reported spending less time (or stopped) providing take home rations, 30–50% of households reported a reduction in food received from AWCs[55]. In Bihar, a higher proportion of rural (56%) than urban households (40%) report a drop in food received from AWC. The reverse is true in Assam, however—a similar proportion of urban households (37%) report a reduction than rural households (30%). Moreover, 31% of households (30% in rural and 34% in urban)also reported not receiving information on nutrition-related topics including nutrition for child and mother (e.g., breastfeeding and diet for young children). from frontline workers, which is greater than the proportion of households not receiving general health and COVID-related information (23–25%).

"Was not getting food from AWC for 2 months, only ration shop. Used to get daal, chaval. So for 2 months we couldn't feed her daal, were just managing with the ration. Government didn't give, that's why we didn't get. I didn't think to ask. We had to manage with just the ration. She used to eat little-little, she wasn't used to eating without the daal. But then she got used to it, slowly-slowly. […] She wasn't eating on time, was crying all the time, of course I could tell she was not okay. But what to do?"

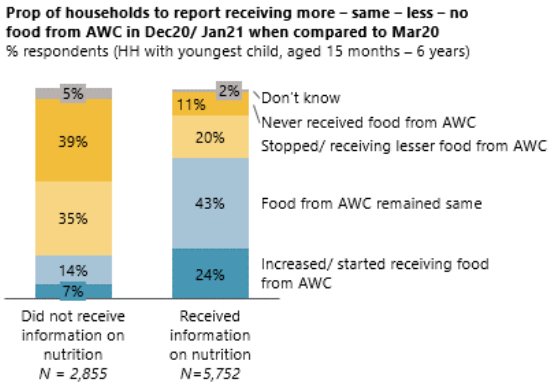
- Mother of 2.5-year old and also pregnant, Rural Maharashtra

"There will be an impact on the child's nutrition since the AWC is closed. Parents at home can't provide the same care and attention as us, they are busy with their work. When they go to work, they leave the child with the grandmother or their aunt, then the children get overlooked and don't receive the same level of care. Here there are mothers who leave their 2 year child at their home and lock the door."

- AWW, Rural Haryana

In addition, some households are excluded from Anganwadi coverage on multiple nutritional parameters. 8 out of 10 pregnant or lactating women who reported not receiving food from AWCs also reported not receiving food for their child. Similarly, a greater proportion of households with child aged 15 months – 6 years of age (35%) that reported not receiving nutrition-related information also reported receiving less/ no food from AWCs. In contrast, only 20% of households that have received information from frontline workers reported receiving less food or having stopped receiving food.

Figure 9: Proportion of households to report receiving more – same – less – no food from AWCs



Based on the data reported by parents with a child aged 15 months – 6 years of age and extrapolating to the total population of the 11 states covered, we estimate that ~3 million children had grown weaker since the advent of the pandemic. While the likelihood of a household giving this response does not significantly differ based on the location of the household (rural vs. urban) or the gender of the child, the following parameters do appear to have some bearing. *As stunting and wasting will become visible only over the next 9 months – 1 year, potentially a higher proportion of children could be*

affected. On the other hand, as COVID-19 vaccination drives have been largely successful, we may also see a return to normal. Additional research should be conducted to explore this further.

State of residence: Overall, 60% of households that reported their child growing weaker during the pandemic live in Uttar Pradesh, Bihar, and Rajasthan[56]. These three states account for half (49%) of all households. In Bihar, a larger share of rural households reported an increase in child's weakness because of the pandemic[57]

Figure 10: Proportion of households to report child growing weaker during the pandemic

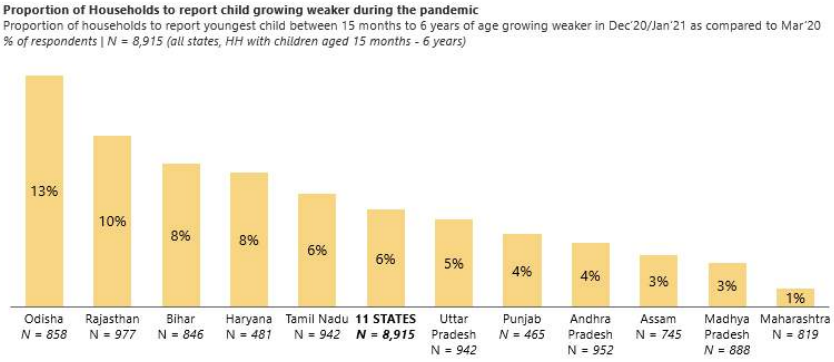
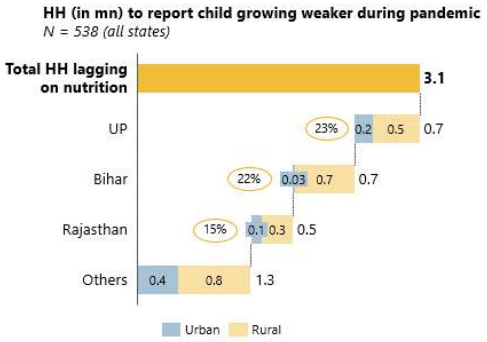


Figure 11: Distribution of HH to report child growing weaker during the pandemic (absolute numbers)

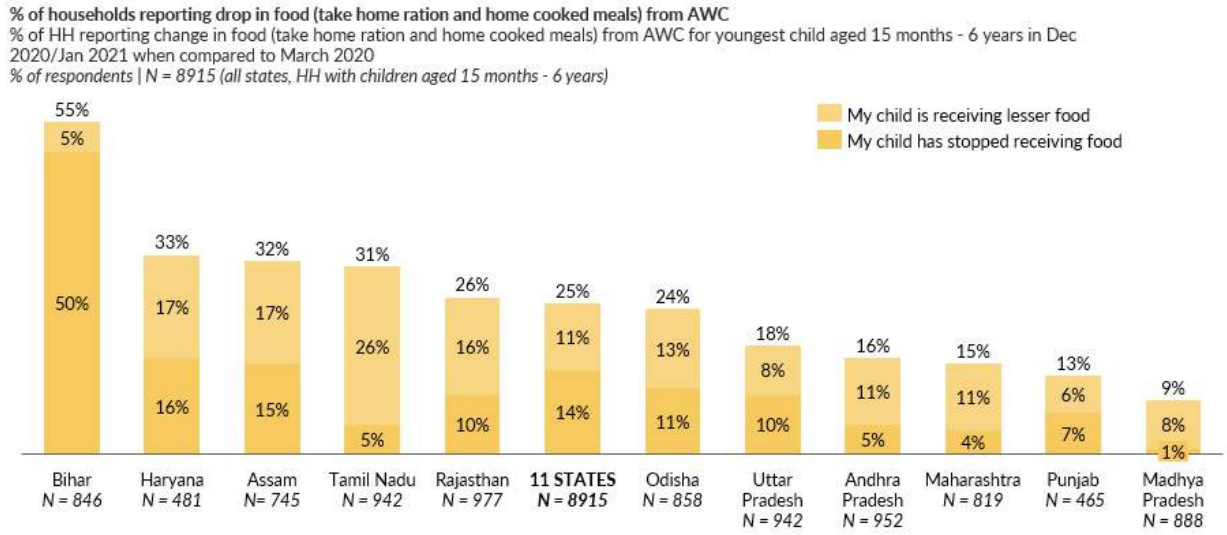


Income category: A lower proportion of APL families (4%) reported that their child grew weaker during the pandemic as compared to others (7% of BPL families and 8% of Antyodaya families)

Rural-urban lens: While most nutrition parameters don't vary much by region type, a higher proportion of urban households reported never receiving food from AWCs and a higher proportion of rural households reported a decrease in food from AWCs. Similar proportion of rural and urban households reported a reduction in breastfeeding[58] (8% of rural and 7% of urban households reported reduction in breastfeeding amount), decrease in food consumed by child[59] (4% of households each), and increase in child's weakness[5] (5% of households each) during the pandemic. Children's access to food from AWCs however varied across rural and urban areas - While a higher proportion of urban households reported never receiving food from AWCs (28% vs 19% of rural households), a higher proportion of rural households reported a stop in food from AWCs (17% vs 8% of urban households).

State-level lens: Significant differences were observed across states both in terms of outcomes like parents' perception of child growing weaker during the pandemic, as well as coverage of AWC services like change in amount of food received by a child from AWCs. Uttar Pradesh is an outlier in terms of households reporting a reduction in breastfeeding amount for their child aged 2 years or less - 17% of such households in Uttar Pradesh[60] reported a drop in breastfeeding (against overall average of 8%). While only 4% of households[61] overall reported a drop in the food consumed by their child, 11% and 10% of households[62] in Rajasthan and Odisha, respectively, reported a drop. An above average proportion of households in these states also reported their child growing weaker during the pandemic (10% and 18% in Rajasthan and Odisha, respectively). Additionally, 8% of households in Bihar also reported that their child grew weaker during the pandemic. At the same time, 50% of households in Bihar, for example, reported that their child stopped receiving food from the AWC during the pandemic. Also, a higher-than-average proportion of households in Tamil Nadu (26%), Haryana (17%) and Rajasthan (16%) reported a decrease in the food received by their child from the AWC during the pandemic.

Figure 12: % of households reporting change in food (take home ration and home cooked meals) from AWC



Caregiving

SUMMARY

During the pandemic, parents have seen a reduction in caregiving support from frontline workers, such as Anganwadi / creche workers and informal channels such as family or friends. Stress levels are also higher due to lost livelihoods and pandemic-related anxiety. Coupled with a disrupted routine and lower interaction with peer and outside environment for children, some children are at risk of negative short- and long-term development outcomes.

SUPPORT PROVIDED TO CHILDREN

Children in over one-third (31%) of the households have spent less time with other adults (excluding parents) in/outside the households **since the pandemic began.** [63] This is especially true for rural households (32% vs 28% of urban households). In contrast, it was reported that only 53% children spending same time and 10% spending more time with other adults in/outside the households since the pandemic began.

1 in 5 parents reported more frequently engaging in activities with their kids—including everyday activities such as feeding / bathing (20%), interactive activities such as having conversations / singing / reading aloud (19%), and playing (23%)[64]. However, a lower proportion of secondary caregivers (17%) cited an uptick in base caregiving like feeding / bathing[65] compared to primary caregivers (20%). Interestingly, the qualitative data revealed the increased involvement of fathers in providing caregiving support to children at home especially during the lockdown.

70-75% reported spending the same amount of time. A slightly higher proportion of parents in urban (22%) than in rural (19%) households, and in single-child (22%) than in multiple-children (19%) households, reported spending more time with their young child[1]; a smaller proportion of fathers (17%) reported this than did mothers (21%).

"My husband used to have less time earlier but he now spends more time. My son sometimes goes more to my husband now. In general, children's attachments to their fathers have grown during the pandemic. Mother is more concerned about his health - he has more freedom with his father so he's happy. "

- Mother of 2.5-year old, Urban Haryana

There have been changes in how we look after the child. Now that I am home, I can be there for my child to feed him to play with him while my wife cooks. The child used to be with her the entire time earlier. Now there is some relief for her since I can look after him while she's working."

- Father of 3-year old, Rural Bihar

Also of note, there are state-level initiatives underway that are encouraging fathers to take on greater caregiving responsibilities, e.g., the Ghare Ghare Arunima program in Odisha[66].

Use of technology has increased among some children. 1 in 3 children started watching videos / playing games on the TV / phone / computer for the first time following the advent of the pandemic in March 2020. This is driven by urban households, with 41% of urban parents reporting their child started watching TV/phone/computer compared to 26% of rural parents. Conversely, 50% of rural parents reported their child continued to watch TV/ phone/ computer compared to 38% of urban parents. This is also true for children <2 years of age, when screen exposure—especially passive tech usage—is known to be harmful for the cognitive development and psychosocial health of children[67]. In-depth interviews also revealed that parents used phones and videos as a distraction to reign in their child's behaviour.

1 in 4 households reported children spending less time with other children including siblings, cousins or neighbors' children **of their age.**[68] A greater proportion of urban households (29%) reported this than did rural households (23%).

Additionally, parents highlight children feeling more isolated and agitated; secondary research suggests higher usage of tech products and less interaction with peers may be a cause.[69] During in-depth interviews, parents recalled their children becoming agitated due to a lack of routine, lack of social interaction, and staying indoors.

"Our son is 2.5 years old and so he doesn't understand much. He likes watching TV, playing with the mobile, with his toys. These things have increased a little - as he grows, we also feel like he's sitting around and so can do it. We do think there are some possible effects of spending time on the mobile or TV. We have thought that it's okay to give when I'm tense and then I can relax for a little bit of time."

*1- **Mother of 2.5-year old, Urban Haryana***

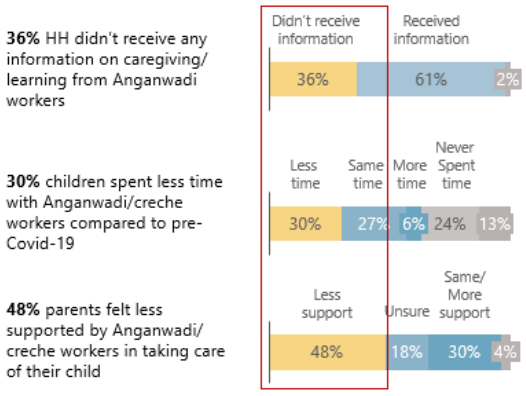
Rural-Urban lens: There are differences in how/ with who children are spending their time across rural and urban households. A greater proportion of rural households[70] (vs urban households) reported their children spending less time with other adults (32% of rural households vs 28% of urban households) and Anganwadi/ creche workers (32% of rural households vs 26% of urban households). At the same time, a greater proportion of urban households (41% of urban vs 26% of rural households) reported that their child started watching TV/ phone/ computer during the pandemic[71]. A lower

proportion of rural households (19%) reported spending more time with their child when compared to urban households (22%). Moreover, a greater proportion of rural households reported not being able to give enough time and attention to their child (30% vs 24%) and having to use stricter disciplining (such as scolding etc.) with their child (49% vs 41%).

State-level lens: There were significant differences across states in terms of change in time spent by parents with their child and changes to child's daily routines. A lower than average proportion of respondents in Madhya Pradesh (12%) and Bihar (16%) reported spending more time with their child themselves. In the case of Odisha and Tamil Nadu however, a higher-than-average proportion of respondents reported spending more time with their child (26% and 30% respectively). There is also a wide variance between states in terms of changes to children's activities because of the pandemic. While a higher-than-average proportion of households in Maharashtra and Tamil Nadu reported that their child started watching videos or playing games on the TV/ phone/ computer (57% each), playing outside the house (69% and 67% respectively), and listening to stories/ songs/ rhymes in person (53% and 61% respectively), majority of the households in Assam and Odisha reported that their child continued doing these activities.

SUPPORT PROVIDED TO PARENTS[72] FOR CAREGIVING ACTIVITIES AND ITS IMPLICATIONS

Figure 13: % parents and children supported by Anganwadi/creche workers



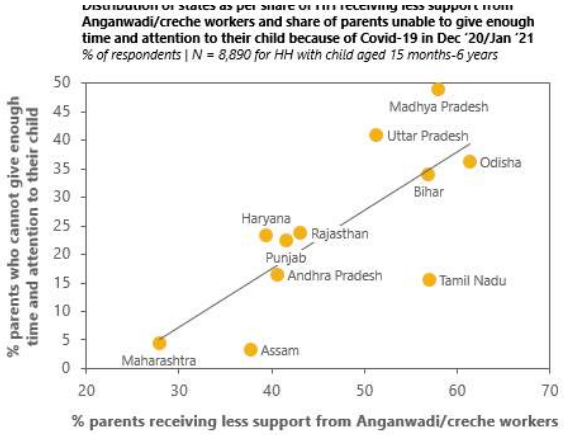
Parents reported receiving limited time and support from Anganwadi / creche workers during this critical period. 36% of households (and as many as 68% for Bihar[73]) did not receive any information from AWWs on caregiving / learning (lower than for any other topic[74]). Moreover, 30% of households reported that their children aged 15 months – 6 years spent less time with Anganwadi or creche workers than they did before the crisis, and about 50% of them believed they received less support from frontline workers in taking care of their children. Households that reported reduced support corresponded to the more vulnerable segments, i.e., households belonging to the non-general[75] and BPL categories[76], located in rural areas[77], with multiple children[78], and with parents that had either experienced job[79] or income loss[80] because of COVID-19.

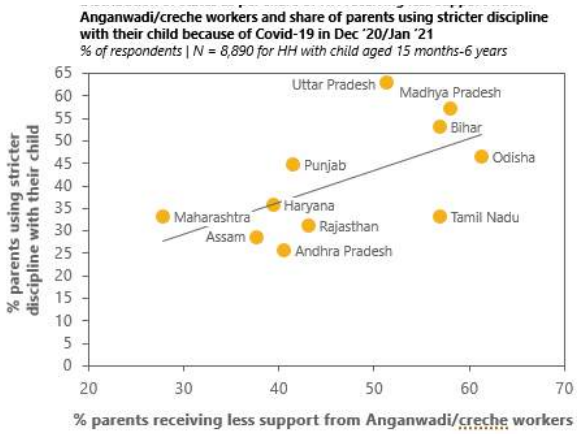
Some parents believed they were unable to provide adequate support to their children; this was especially the case in households under greater stress and receiving less support from Anganwadi / creche workers than before the pandemic. Parents reported having difficulty taking care of their child since the pandemic began—28% believed they had not been able to give enough time and attention to their child and 47% believed they had to carry out stricter disciplining while taking care of their child. These parents tended to be members of more vulnerable population segments, i.e., they belonged to BPL / Antyodya[81], belonged to the non-general category[82], lived in rural areas[83], and/or had lost paid work[84].

Over 1 in 5 parents (27%) with children across age groups in this survey reported feeling more stress or fatigue during the pandemic[858687]. A greater proportion of these overburdened parents (by 8–9 percentage points reported facing difficulties while taking care of their children[88] Fear of COVID-19[89]. In-depth interviews also revealed that increased stress levels may have led to high emotional strain on parent-child relationships, even as parents tried to prevent it.

Parents also highlight the importance of AWWs in enabling positive caregiving outcomes in both children's and parents' lives. In multiple in-depth interviews, parents expressed that they often relied on AWWs for emotional support and viewed them as a trusted source of information. Furthermore, a greater proportion of households in which parents reported receiving less institutional support from Anganwadi / creche workers than before COVID-19 also reported resorting to stricter disciplining and being unable to allocate sufficient time and attention to their children than other households[90]. This was especially true among respondents in Bihar, Madhya Pradesh, Uttar Pradesh, and Odisha. Interestingly, as discussed in the section on FLW findings below, FLWs themselves do not always receive or perceive this sense of gratitude from parents.

Figure 14: % parents receiving less supported from Anganwadi/ creche workers vs facing difficulty in responsive caregiving





"The AWC center was closed, but we used to send them a calendar and activity to their parents on their phone through whatsapp. We used to tell them that today this game should be played, and what should be studied. We keep the numbers of all the parents and send it to them. We used to type the message and send it to the parents, our supervisor told us to send across the messages. We didn't send youtube links, or voice notes. We used to type in Hindi and send it.

We are in contact with the children and the parents so we know who has a cellphone and who can do these activities. The parents used to call us to tell us that they have performed these activities and send us the picture and we used to send it to the supervisor so she knows we are performing the activities."

- AWW, Rural Rajasthan

Rural-urban lens: There were no differences in level of support from frontline workers received by region type. But fatigue among primary and secondar caregivers was higher in rural areas. 48% of both urban and rural households believed they received less institutional support than before the pandemic. However, a greater proportion of rural households reported feeling more stressed and tired (26% and 19% respectively) as compared to urban households (21% and 15% respectively).

State-level lens: There were significant differences across states in terms of perceived level of support from frontline workers and change in parenting style (disciplining techniques used). Significant variation was observed across states in terms of parental perception of support received from frontline workers for caregiving. While a majority of households in Odisha (61%), Madhya Pradesh (58%), Tamil Nadu (57%) and Bihar (57%) believed they were receiving less support from AWWs/ creche workers on caregiving due to the pandemic, a relatively lower proportion of households in Maharashtra (28%), Assam (38%), and Haryana (39%) reported this. A majority of households in these states (except Tamil Nadu) also reported using stricter disciplining techniques

with their children during the pandemic (63% of households in Uttar Pradesh, 57% of households in Madhya Pradesh, 53% of households in Bihar). Moreover, a lower-than-average proportion of households in Bihar (3%) and Tamil Nadu (4%) also reported that AWWs/ creche workers were spending more time with their child since the advent of the pandemic.

Learning[91]

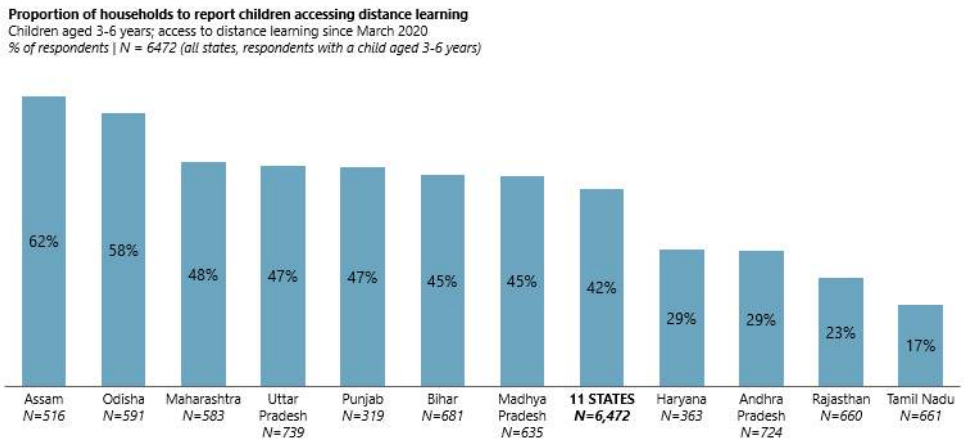
SUMMARY

Since the advent of the pandemic, children's education has been severely disrupted as distance learning efforts have been highly variable in uptake, delivery, and efficacy. When India went into lockdown in March 2020, all schools, pre-schools, creches, and Anganwadi Centres were required to close, completely halting in-person education for young children. Closures of Early Childhood Education (ECE) centres such as AWCs, Balwadis and Creches have severely disrupted early learning for children 3–6 years of age and has deprived children of cognitive stimulation and socio-emotional development, which fundamentally support their future learning and development. Governments across the country have tried to reach out to the children through different distance measures to keep the learning going. This includes online platforms, television, radio and paper-based take-home packages. Nearly a year into the pandemic, while some households with young children reported having adopted distance learning (despite inconclusive evidence of its efficacy for young children), most households reported facing challenges with limited access to and effective adoption of distance learning.

ACCESS TO DISTANCE LEARNING RESOURCES

Closures of ECE centres have meant that while some children have had access to distance learning, most have not been able to access any form of distance learning measures. Only 42% of households with a child aged 3-6 years reported some form of distance learning during the pandemic; the majority reported that their children did not get access to any distance learning opportunities at all. While there were no significant differences based on either the gender of the child[92] or the household's residence type (rural or urban) [93], levels of access varied significantly from state to state and across other parameters.

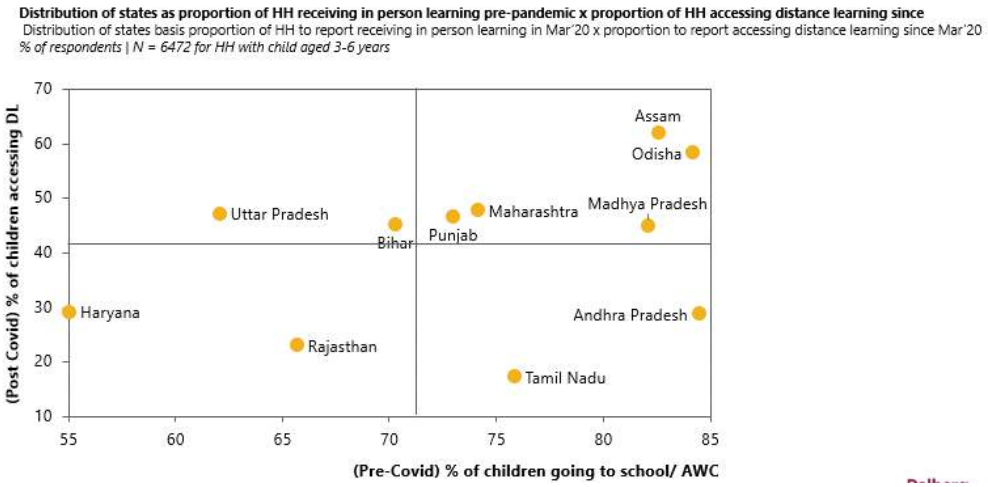
Figure 15: Proportion of households to report accessing distance learning since the advent of the pandemic



Access to learning opportunities prior to the pandemic – States with a greater proportion of children attending a school, pre-school, crèche, or centre prior to the pandemic also saw a greater proportion of children access distance learning once the pandemic began[94]. Andhra Pradesh seems to be an

outlier[95] in this case, with 84% children aged 3–6 years enrolled in a school / centre prior to the pandemic, but a mere 29% receiving distance learning during the crisis[96].

Figure 16: Distribution of states basis proportion of households receiving in-person learning pre-pandemic x those accessing distance learning since



Type of learning institution prior to the pandemic – A greater proportion of households whose children were attending private schools or centres (59%) before March 2020 had accessed distance learning since, when compared to those who went to government institutions or Anganwadi Centres (42%). The difference was starker in rural areas – 61% of rural (vs 56% urban) households where children used to visit private centers reported receiving distance learning when compared only 41% of rural (vs 43% urban) households where children used to visit government schools.

Age of the child – Unsurprisingly, it seems likely that households encouraged access to distance learning as a child grew older. While only 37% of households with a three-year-old reported accessing distance learning, 47% of households with a five-year-old reported accessing it.

Presence of siblings – A greater proportion of single child households (49%) reported their child aged 3-6 accessing distance learning than multi-child households in that age range (40%). This difference was starker in rural areas, with urban areas reporting similar proportions – 50% of rural (46% of urban) single-child households reported receiving distance learning when compared only 40% of rural (41% of urban) multi – child households. This might have been because the limited resources for learning were provided to older children to learn.

Loss of income due to COVID-19 – A lower proportion of households that reported a drop in income due to COVID-19 reported their children accessing distance learning (38%) than of households whose income did not decrease (47%). This difference was starker in urban areas, with rural areas reporting similar proportions – 49% of rural (51% of urban) households which did not see an income drop reported receiving distance learning when compared only 38% of rural (38% of urban) households which saw an income drop.

Access to a smartphone – A lower proportion of households with a feature phone (38%) reported that their children accessed distance learning than of households with a smartphone (45%)[97]. Perhaps most of these opportunities were primarily provided through digital platforms such as YouTube, WhatsApp etc. which households with smartphones could access.

Parents played a significant role in supporting the learning of children at home through distance learning. Collaboration between parents and teachers is important for holistic development of the child. However, with remote learning, this need of close collaboration has increased further. The responsibility shifted more to the parent with them being the only facilitators in contact with the child. Our survey showed that parents supported remote learning for over 4 in 10 children, while private tutors / teachers took on this role for a quarter (24%) of the children and ASHA /Anganwadi workers did so for 17% (since these AWCs were technically closed during this time, it is likely that in areas where COVID-19 cases eased, AWWs either informally opened up the centres for conducting the learning activities in small groups with the children or conducted home visits for ensuring their learning at home by supporting parents). A greater proportion of parents in urban households (50%) taught their child themselves than in rural households (38%).

In terms of the modalities used for continued learning of children at home, 33% of households reported using printed materials such as textbooks / worksheets and storybooks / colouring books / picture books for learning. The next most commonly used modality involved the spectrum of digital resources which included TV (29%) and YouTube / websites / blogs (28%)[98]. Interestingly, only ~14% of parents cited using SMS or WhatsApp as a learning channel—these primarily were urban households with access to a smartphone[99]. Moreover, only 3 in 10 children received home visits or calls from an AWW / teacher[100], underscoring the fact that parents emerged as an important workforce for supporting the learning of young children in the current Pandemic.

Qualitative interviews suggest that parents see physical learning materials like books to be more effective than digital (phone-based) approaches.

> *"More than a phone, I would like to teach him in person - with books, such as understanding the alphabet. He's quite small and cute but doesn't come in control right now. You can also teach this with the phone but with the phone the child remembers the activities such as games and songs that he can also do with the phone. With books, the books are open in front of him and I can show the visuals over and over again. I think they are better. I think anyone gives more focus to textbooks - I think when a child goes to a school, they are given books only, whether that's to recognize colours, or pictures, or anything. Children are very smart now - they know what to do on the phone. With books, they will learn concentration."*
>
> ***- Mother of 2.5-year old, Urban Haryana***

While schools remain closed, private offerings (tuition classes) have resumed in some parts of the country.

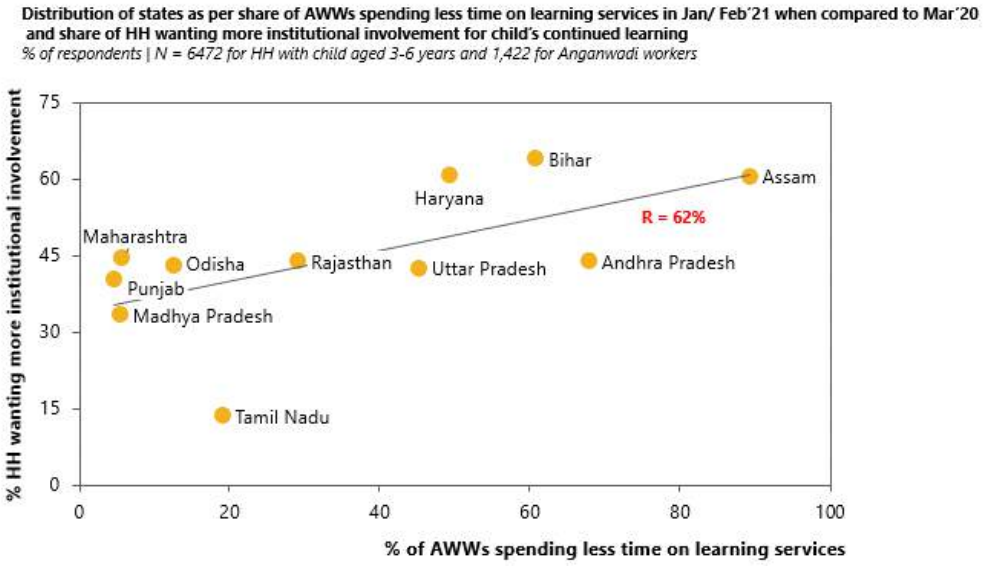
> *"There are some teachers and ASHAs in the village, so I ask them if I have any questions. I had gone to them last week about admissions, they said that schools are closed so they told me to teach him at home or go to tuition. Currently I am free, so when I have time I teach him at home. Currently we are not thinking of starting tuitions, we think he is still small. And the tuition fee is also high, so we decided to wait. I have a keypad phone so I can't use that to teach him. Currently the book is most effective in teaching him, but I think school will be better since the teachers are trained to do so."*
>
> ***- Father of 3-year old, Rural UP***

However, most parents (65%) with a child aged 3-6 years of age have faced immense challenges in ensuring that their children continue to learn at home during the pandemic . The most cited challenges included a lack of time due to work (23%) and issues with technology (19%). Rural households, Antyodaya households, and households where parents faced greater stress were likelier to face challenges.

Anganwadi workers reported continuing with educational services, although there are some gaps that need to be filled. Most Anganwadi workers are still trying to provide educational services[101], although many are doing so at a lower intensity than before. 35% of Anganwadi workers reported stopping or reducing the time spent providing learning services since the COVID-19 pandemic began[102,103]. The most commonly cited reason for reducing or stopping learning activities was the closure of AWCs (71%), followed by fear of infection (27%) and instructions from ICDS supervisors (22%)[104].

There is an association between time spent by Anganwadi workers on providing educational services and requests from parents for additional support. A majority of AWWs in Assam (89%), AP (68%), and Bihar (61%) said that they had either reduced or eliminated the time they formerly spent on providing educational services[105]. In these states, despite varying levels of distance learning penetration, a higher proportion of parents (compared to other states) reported that they would appreciate increased institutional and teacher / volunteer involvement in helping their child learn[106]. In Assam, for example, although 62% of households reported that their child accessed distance learning, most of it was conducted by parents themselves (82%) with limited involvement or guidance from AWWs. Notably, 2 out of 3 parents in Assam thought that distance learning was less effective than in-person learning.

Figure 17: Relation between % of HH wanting increased institutional involvement in children's learning and % Anganwadi workers to report spending less time on learning services in that state



A minority of Anganwadi workers who were providing learning services, however, felt inadequately supported. 1 in 4 AWWs reported not receiving necessary training support in terms of conducting the remote learning activities using the distance learning materials and further building capacities of parents to conduct these activities with their children at home. Of the AWWs who felt inadequately supported[107], 84% also stated that they faced challenges in providing learning / caregiving services.[108]. A greater proportion of AWWs (than of their counterparts who felt fully supported) cited challenges related to not having the right digital content[109], not having access to a suitable device[110], and having to incur additional expenses for data[111].

Location (state): Anganwadi workers who reported not receiving the necessary support were over-represented in states like Rajasthan (one in two AWWs i.e., 48%) and Bihar / Uttar Pradesh (one in three AWWs i.e., 40% and 37% respectively).

Social category: A lower proportion of Anganwadi workers belonging to the general social category (19%) reported not receiving the necessary support when compared to over 27% of those belonging to non-general (OBC, SC, and ST) categories.

Rural-urban lens: Children from rural and urban households accessed distance learning at similar rates. While a similar proportion of both rural and urban households wanted schools to re-open, a

greater proportion of rural households requested for additional guidance from frontline workers for supporting better learning of their children. Similar proportion of rural and urban households reported accessing distance learning during the survey period (42% of rural households and 43% of urban households). A greater proportion of parents in urban households (50%) taught their child themselves than in rural households (38%). While a similar proportion of rural and urban households used distance learning materials like textbooks, storybooks, TV, Youtube/ websites/ blogs/ apps, etc, a greater proportion of urban households (24%) reported using Whatsapp/ SMS for distance learning when compared to rural households (11%). Moreover, a lower proportion of parents from urban households (62%) reported facing challenges in supporting the learning of their children at home as compared to those from rural households (67%).

Finally, greater proportion of rural households (48% vs 37% of urban households) reported that they would appreciate increased guidance and/ or more frequent interactions of AWWs/ teachers with their children for supporting their continued learning, while a similar proportion of rural households (39% vs 37% of urban households) reported that they would appreciate AWWs/teachers and volunteers taking classes in smaller groups for their children and/ or wanted safe spaces in their neighbourhood for play and learning to take place, and similar proportion of rural households (55% vs 56% of urban households) wanted schools to re-open.

State-level lens: Significant variation across states in terms of penetration of distance learning and medium used for distance learning (refer figure 16). A greater proportion of households in states where majority of children were reported to be accessing learning in-center pre-pandemic (like Assam and Odisha) also reported accessing distance learning since the advent of the pandemic (62% and 58% respectively). Andhra Pradesh is an outlier in this case with 84% of children aged 3–6 years enrolled in a school / centre prior to the pandemic, but a mere 29% receiving distance learning during the crisis. Support received for distance learning also varied across states – while 82% of households accessing distance learning in Assam reported that parents themselves supported children's learning, only 28% of households from Odisha reported the same. Furthermore, a higher-than-average proportion of households to access distance learning in Andhra Pradesh (34%), Madhya Pradesh (47%) and Odisha (29%) reported receiving support from ASHA/ AWW while only 1% and 2% of households from Assam and Bihar, respectively, reported the same. The modalities used for ensuring the continued learning of children at home usingdistance learning opportunities also vary across states. While a higher-than-average proportion of households in Assam (75%), Maharashtra (47%), and Bihar (44%) reported using no tech modality i.e., printed materials such as textbooks and worksheets, 55% of households in Madhya Pradesh reported using broadcast technologies i.e., TV (against overall average of just 29% households to report using TV). Over 30% of households in Maharashtra (33%) and Punjab (31%) also stand out by using high to medium tech digital modalities such as SMS/ WhatsApp for distance learning.

Views on Distance Learning Efforts

Many parents (71%) considered distance learning to be equally or more effective than in-person learning. Of those households in which children aged 3–6 years were accessing distance learning (and where children had accessed some form of in- person learning pre-COVID), 42% believed distance learning was more effective than centre-based learning. In comparison, 26% felt it was less effective and 29% felt the two were comparable.

Furthermore, in-depth interviews revealed that while parents recognized that distance learning afforded many options for children to learn (given the scale of resources available online), many parents (55%) were keen for a return to schools / centres when possible[112]. Educational experts also believe that distance learning, especially for young children under 6 years of age, when delivered

online, falls short on building psycho-social and conversational skills, which build the foundations for essential learning for the age group.

"Children are children, so he wants to have fun and play. He doesn't sit still for a long time and spends time with someone and then someone else. He understands about 20% of what I'm trying to explain to him right now. I had spoken to the AWW about the reopening of the AWC and she said that if we have time, I can make the child sit there." - ***Mother of three-year-old, rural MP***

"More than a phone, I would like to teach him in person - with books, such as understanding the alphabet. He's quite small and cute but doesn't come in control right now. You can also teach this with the phone but with the phone the child remembers the activities such as games and songs that he can also do with the phone. With books, the books are open in front of him and I can show the visuals over and over again. I think they are better. I think anyone gives more focus to textbooks - I think when a child goes to a school, they are given books only, whether that's too recognize colours, or pictures, or anything. Children are very smart now - they know what to do on the phone. With books, they will learn concentration."

- Mother of 2.5-year old, Urban Haryana

Increased Anganwadi worker involvement has yielded positive results in a few states. States such as Maharashtra (80%) and Odisha (87%), in which at least 80% of AWWs reported spending the same or more time on learning services as before the pandemic show positive results[113]. A significant majority of households in Maharashtra (81%) and Odisha (78%), for example, reported receiving information on caregiving, stimulation, and learning from AWWs. Moreover, households in these states also reported above average levels as compared to 11-state weighted average of 42% of distance learning penetration (48% in Maharashtra and 58% in Odisha). A greater proportion of households in these states also reported not facing any challenges in aiding their children's learning (52% in Maharashtra and 48% in Odisha, compared to an 11-state weighted average of 35%). A majority of households in Maharashtra 45% wished for increased teacher / volunteer involvement in their children's education, underscoring the need for continued AWWs guidance and involvement.

Rural-urban lens: Children from rural and urban households reported effectiveness of distance learning at similar rates. There were similar proportions of rural/ urban households believing that distance learning was as or more effective as in-person learning (70% vs 72%).

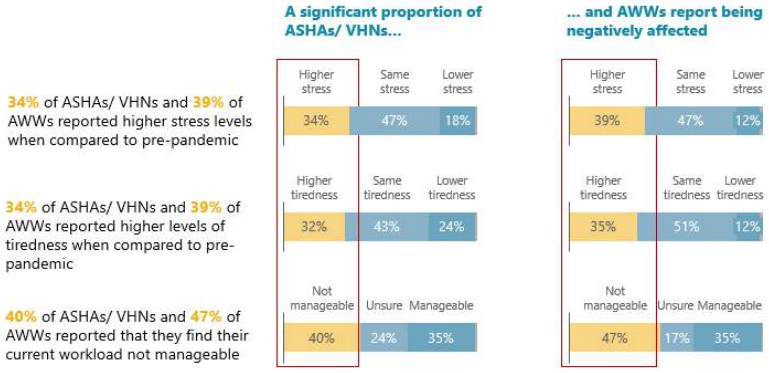
State-level lens: States where AWWs spend more time on providing educational services seem to witness better learning support when compared to states witnessing a drop in AWW time spent on education. States such as Maharashtra (80%) and Odisha (87%), in which at least 80% of AWWs reported spending the same or more time on educational services as before the pandemic show positive results. Many households in these states also reported above average levels of distance learning penetration (48% in Maharashtra and 58% in Odisha). A greater proportion of households in these states also reported not facing any challenges in aiding their children's learning (52% in Maharashtra and 48% in Odisha, compared to an 11-state weighted average of 35%). On the other hand, in states like Assam (89%), Bihar (61%), and Andhra Pradesh (68%) where a majority of AWWs reported spending less time on educational services, a smaller proportion of households reported not facing challenges in aiding their child's education (20% in case of Andhra Pradesh, 23% in case of Bihar) or a larger proportion of households believed distance learning was less effective than in person learning (64% in case of Bihar). A greater proportion of households from Assam and Bihar also reported that they would appreciate increased guidance and/or more frequent interactions from AWWs with children for supporting better learning of their children at home (61% of households from Assam and 64% of households from Bihar) and re-opening of schools (77% of households from Assam, 72% of households from Bihar).

Impact on frontline workers' lives

Frontline workers are the government's most direct agents of engagement with children under the age of six. They play the role of direct caregivers and also have an important support function for parents. The COVID-19 pandemic significantly impacted their work and role in the system—while some of their usual activities were disrupted due to lockdown, they also took on additional responsibilities as part of the government response to the pandemic. Their work has helped significantly soften the blow of COVID, especially on the most poor and vulnerable. However, our study shows that the expanded responsibilities necessitated by the pandemic have placed tremendous pressure on frontline workers.

FRONTLINE WORKERS' WORKLOAD

Figure 18: Impact of COVID-19 on ASHAs, VHNs, and AWWs



After the advent of the COVID-19 pandemic, frontline workers[114] reported feeling more stressed, tired and finding their workload unmanageable. One in three frontline workers reported an increase[115] in stress and tiredness, with 90% of those frontline workers reporting more tiredness also reporting higher levels of stress. A majority of frontline workers in Tamil Nadu (66%), Andhra Pradesh (64%), and Odisha (60%) felt more stressed in Jan/ Feb 2021 than they did pre-pandemic, while a smaller share of those in Uttar Pradesh (18%) and Assam (17%) reported a rise in stress. Furthermore, only 9% of urban frontline workers reported feeling less stressed when compared to 15% of rural frontline workers[116,117].

Across our sample, one in two frontline workers also reported finding their workload unmanageable as of January/ February 2021. A greater proportion of VHNs (66%) reported finding work unmanageable, as compared to ASHAs (40%) and Anganwadi Workers (47%). Also, a similar proportion of urban frontline workers (47%) find their work manageable, when compared to their rural counterparts (43%).

More than half of frontline workers[118] in Tamil Nadu (as many as 73%), Madhya Pradesh (65%), Rajasthan (56%), and Bihar (53%) reported finding their work unmanageable[119]. Notably, a greater proportion of frontline workers who find their work unmanageable also reported experiencing an increase in stress or tiredness[120] when compared to pre-pandemic levels[121].

*Figure 19: Proportion of **ASHAs/ VHNs**, by state, who do / don't agree that their work is unmanageable*

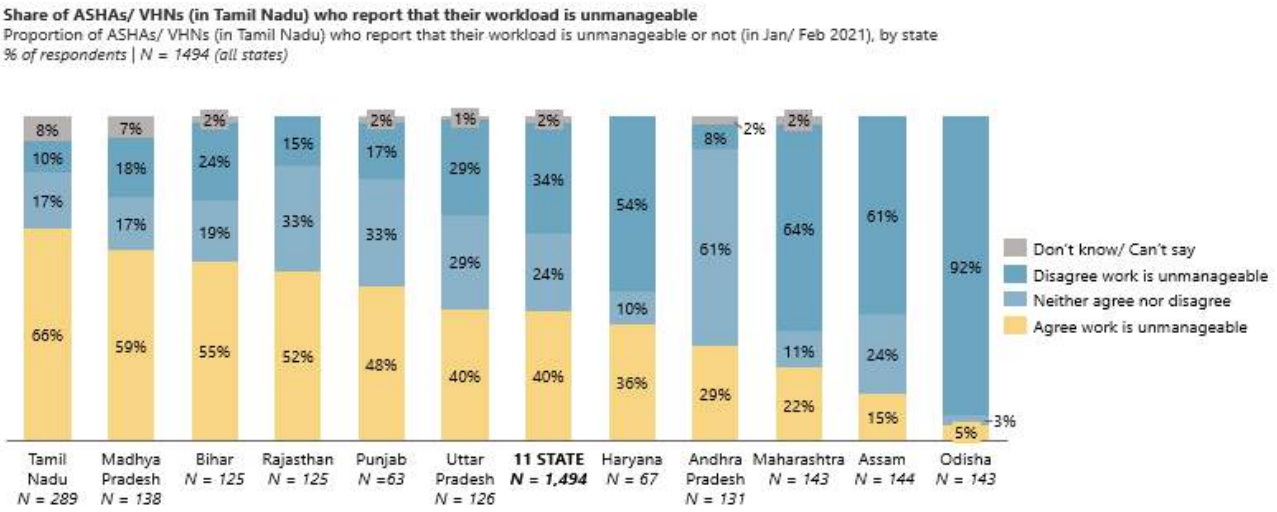
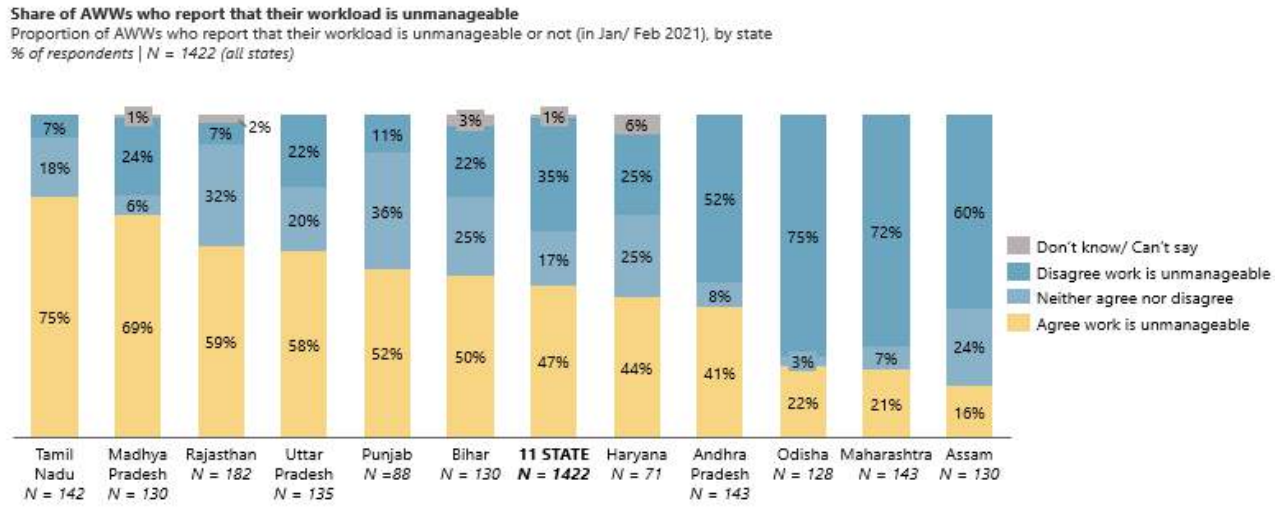


*Figure 20: Proportion of **AWWs**, by state, who do / don't agree that their work is unmanageable*



Across states, ASHAs/ VHNs and AWWs serve larger than optimally prescribed sections of population[122,123]. While ASHA guidelines prescribe allocation of 1 ASHA worker per 1000 residents[124], no state except Odisha seems to adhere to this guideline (median residents per ASHA/ VHN for the 11 states surveyed is 1395). Similarly, while AWC guidelines suggest setting up of 1 AWC (and consequently 1 AWW) for every 800 residents[125], no states except Odisha and Assam adhere to this guideline (median residents per AWW for the 11 states surveyed is 1124). In fact, despite a relatively heavy COVID-19 burden (cases per capita[126]), frontline workers in states like Andhra Pradesh and Maharashtra—where residents per ASHA/ VHN or AWW ratios are closer to the median

— are less likely to report finding their work unmanageable than their counterparts in states like Tamil Nadu and Madhya Pradesh (with highest residents per ASHA/ VHN and AWW ratios).

Figure 21: Distribution of states by ratio of residents-to-ASHA and % of ASHAs to report workload is unmanageable

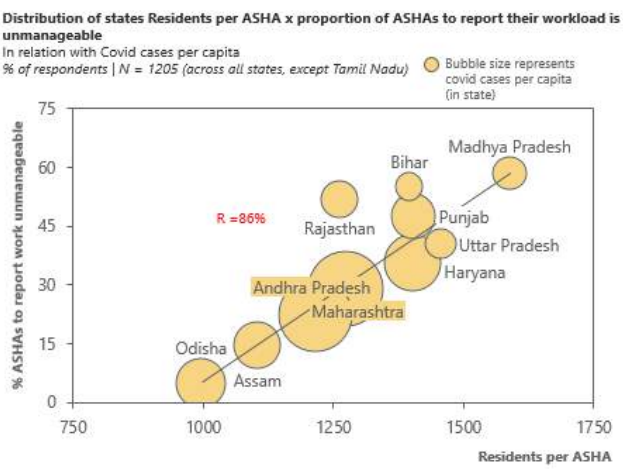
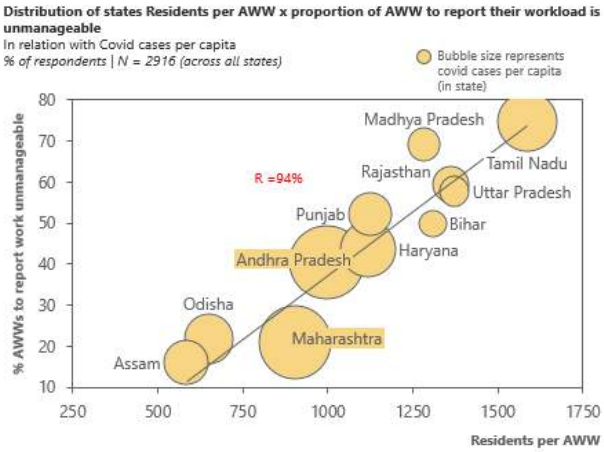


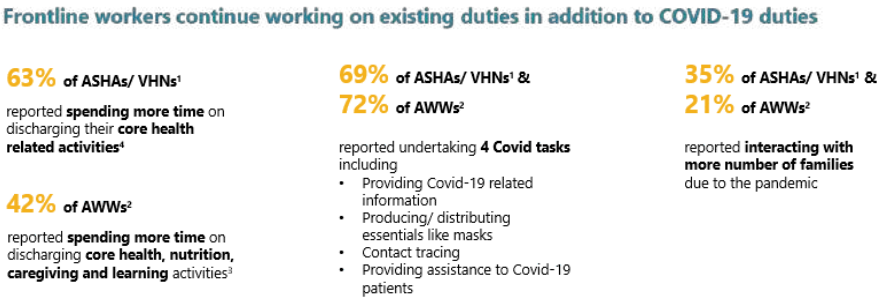
Figure 22: Distribution of states by ratio of residents-to-AWW and % of AWW to report workload is unmanageable



Frontline workers reported that primary drivers of the increase in stress and tiredness[127] were increased workload and fear of COVID.

A majority of the frontline workers reported performing multiple COVID-related tasks (69% of ASHAs/ VHNs and 72% of AWWs), despite the variation in COVID-19 burden across states. The COVID-19 pandemic has, in fact, resulted in many frontline workers expanding their service coverage; 35% of ASHAs/ VHNs and 21% of AWWs reported interacting with more families because of the pandemic[128]. At the same time, more than 70% households reported having received information on COVID-19 prevention and symptom identification from frontline workers[129].

Figure 23: Overview of work undertaken by frontline workers

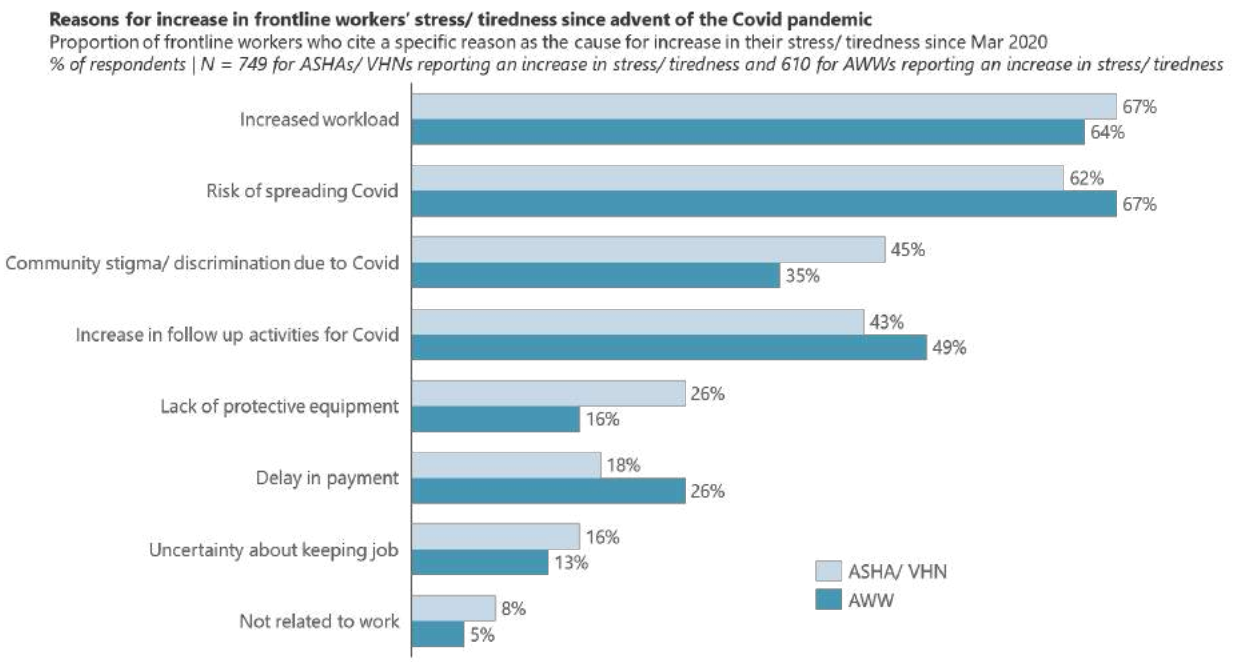


Frontline workers also reported spending more time on their ECD related core duties (such as providing take home rations and supporting vaccination drives), in addition to taking on COVID-19-related tasks[130]. 42% of AWWs reported spending more time cumulatively on their core duties which include providing take home rations, providing pre-school education, counselling parents on caregiving and stimulation, managing children's health, and supporting vaccination.[131] Similarly, 63% of ASHAs/ VHNs reported spending more time cumulatively on their core duties including supporting pregnant women access, antenatal care, assisting childbirth and providing postnatal care, counselling women on breastfeeding, providing vaccination, and managing children's illness.[132]

Consequently, 49% of ASHAs/ VHNs and 36% of AWWs reported an increase in their overall working hours when compared to before the pandemic[133]. Most frontline workers who reported working more hours reported spending more time on core duties (72%) and non-COVID-19 administrative tasks (74%)[134]. Our in-depth interviews also suggest that frontline workers have been working hard to balance additional COVID-19 responsibilities and to deliver services (like child vaccinations) that were curtailed during the initial phases of the lockdown.

Factors like fear of spreading COVID-19 and community stigma/ discrimination due to COVID-19 are also top reasons cited by frontline workers[135] for an increase in stress.

*Figure 24: Reasons for increased stress in **ASHAs/ VHNs** and **AWWs***



A greater proportion of rural frontline workers cited the risk of spreading COVID-19 as a factor causing them higher stress than was the case for urban frontline workers (52%). On the other side, a greater proportion of urban frontline workers than rural frontline workers cited community stigma due to COVID-19 (50% vs 38%) and lack of protective equipment (31% vs 19%) as reasons

Furthermore, a greater proportion of ASHAs (26%) cited lack of protective equipment as a reason for increased stress when compared to AWWs (16%)

"COVID-19 activities were difficult to manage but we managed because everyone was working very hard. We didn't take any holidays. Sunday wasn't a holiday either. We also weren't able to have proper meals. We are entitled to one day holiday a week but that didn't happen. We were facing a lot of difficulties during covid times. We could only concentrate on covid cases. We had to report early - 7 am - 8 pm (late working hours). We could not attend to our own families during these times. We couldn't get any proper sleep either. Only now, with the vaccine coming out, we have started taking offs." ***- VHN, Urban TN***

"I have more work now when compared to the remainder of the past year. At the Coronavirus times, I had to focus on the Coronavirus work. Now, other work like routine vaccinations are also there - there are pending vaccinations from 6 months ago as well that we need to take care of. Earlier, I didn't have to fill in the forms and there's pending forms to fill for the past 6 months as well, such as the vaccinations that I had to do." ***- ASHA, Urban Assam***

Rural-urban lens: Similar proportion of rural and urban frontline workers were undertaking additional pandemic related tasks, seeing increased working hours, finding workload unmanageable and reporting increased stress levels. Similar proportion of rural/ urban frontline workers reported undertaking all 4 additional COVID-19 tasks[136] covered in the survey (71% of rural frontline workers vs 69% of urban frontline workers), an increase in overall working hours (42% each) and reported finding their current workload not manageable (43% of rural frontline workers vs 47% of urban frontline workers). However, while there were no significant differences between proportion of rural/ urban frontline workers to report an increase in stress (36% of rural frontline workers vs 42%

of urban frontline workers), the reasons for increased stress varied. For example, while a greater proportion of rural frontline workers cited the risk of spreading COVID-19 (67%) as a factor causing them higher stress compared to urban frontline workers (52%), a greater proportion of urban frontline workers compared to rural frontline workers cited community stigma due to COVID-19 (50% vs 38%) and lack of protective equipment (31% vs 19%) as reasons for higher stress.

State-level lens: Significant differences observed between states in terms of proportion of frontline workers to report more stress, finding workload unmanageable, and stress levels. A majority of frontline workers in Tamil Nadu (66%), Andhra Pradesh (64%), and Odisha (60%) feel more stressed in Jan/ Feb 2021 than they did pre-pandemic, while a smaller share of those in Uttar Pradesh (18%) and Assam (17%) reported a rise in stress. Moreover, over half the frontline workers in Tamil Nadu (as many as 73%), Madhya Pradesh (65%), Rajasthan (56%), and Bihar (53%) reported finding their work unmanageable.

FRONTLINE WORKERS' ACCESS TO TRAINING AND TOOLS

32% of ASHA/s VHNs and 35% of AWWs reported the need of further training to manage the delivery of services during Pandemic . The degree of training satisfaction varied significantly by state. For example, over 75% of frontline workers from Maharashtra (75%) and Odisha (81%) found their training sufficient while less than half of frontline workers from Bihar (45%), Punjab (38%), and Rajasthan (36%) felt their training sufficient. Moreover, even though frontline workers' perceptions of training were positively associated with their ability to manage their workload, over a third of frontline workers report the need of further training to carry out their work effectively. Notably, increasing training time does not appear to be a solution: we do not see evidence that frontline workers who reported spending *more time* on training since the advent of the pandemic found training to be sufficient, or by extension their work manageable.

*Figure 25: Share of **ASHAs/ VHNs** who reported the need of further training*

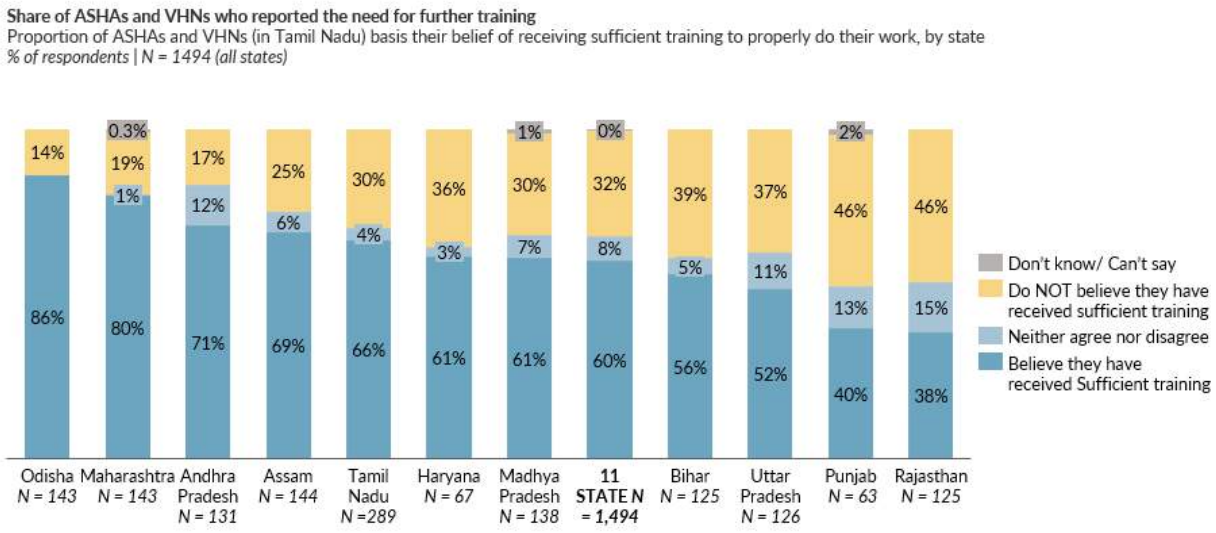
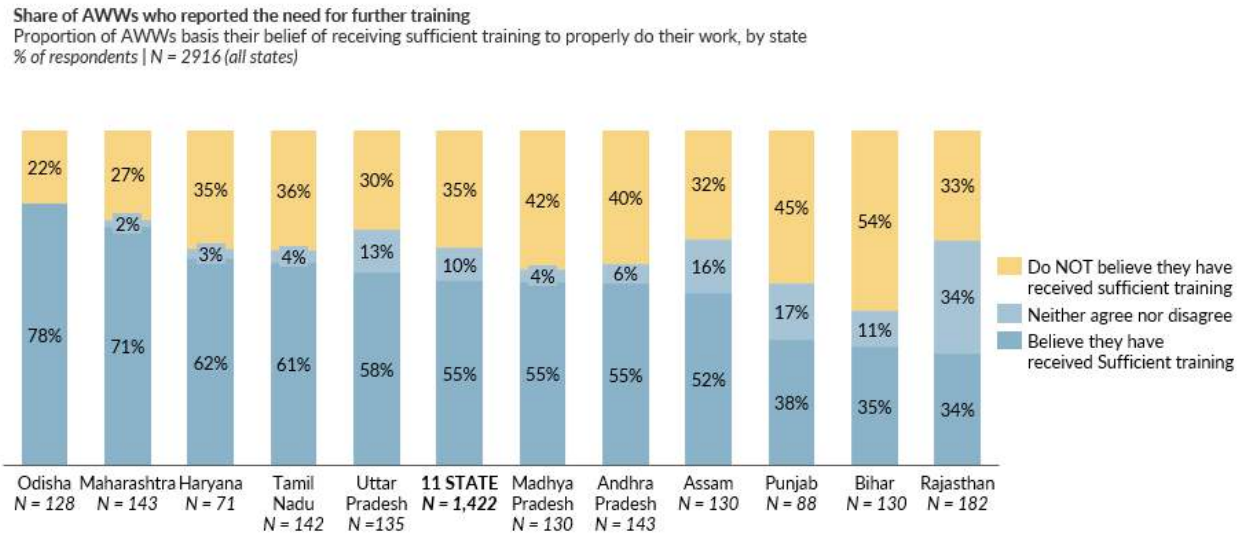


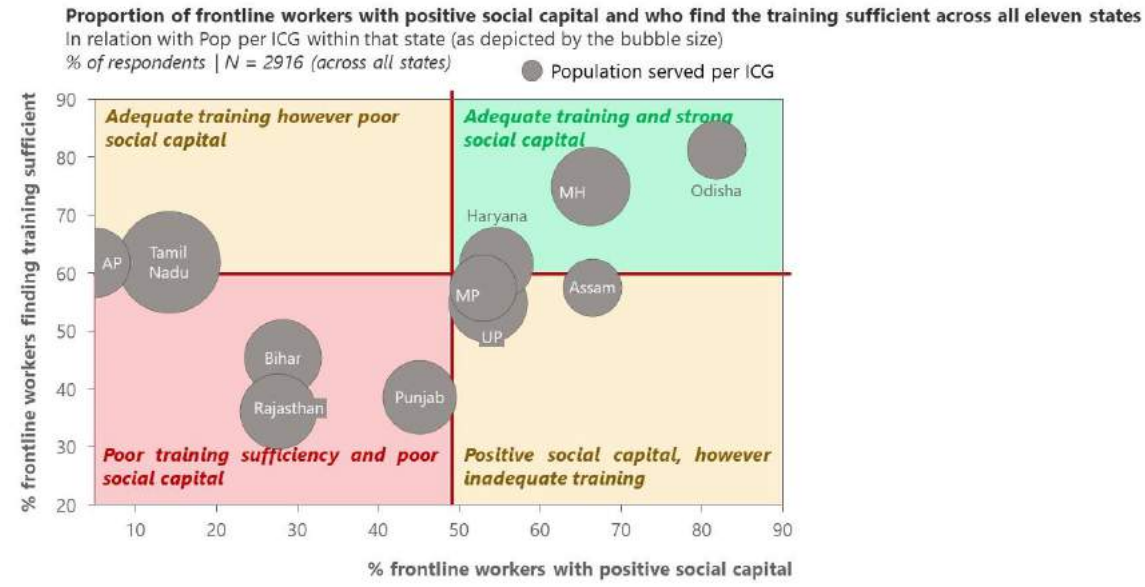
*Figure 26: Share of **AWWs** who reported the need of further training*



1 in 3 ASHAs/ VHNs and 1 in 5 AWWs reported the need of having resources and tools (such as phone, internet, handbooks, etc.) to do their work effectively. A lower proportion (by 10-20 percentage points) of such frontline workers, both AWWs and ASHAs/ VHNs, reported using their phone for work than frontline workers who reported having all tools[137,138]. The problem of inadequate resources/tools is even more acute in states like Haryana, Rajasthan, and Bihar, where one in three frontline workers reported the requirement of having necessary support resources and tools[139,140]. Our study also indicates that a greater proportion of frontline workers, both AWWs and ASHAs/ VHNs, who are smartphone users than those who are feature phone users reported using their phone for work.[141,142] However, the study indicates that not all frontline workers have been equipped with requisite phones.

The level of institutional support currently offered to frontline workers varies from state to state. Frontline workers in Bihar, Rajasthan, Punjab, and Tamil Nadu lagged behind other states in two or more parameters found to affect work manageability. Moreover, households in Bihar and Rajasthan also lagged in vaccination, nutrition, and learning outcomes (as discussed in other sections of the report). [143]

Figure 27: Distribution of states by % of frontline workers with positive social capital and % of frontline workers to report receiving sufficient training



"We started to take the weighing machine to the homes while distributing the masks and doing the duties there. We were told by the LS (supervisor) that we have to create the reports irrespective so we have to find new ways of doing our work. We did not receive any training. There was a meeting and we were told how to distribute the food, sanitizer, mask. After that amongst the three of us (ASHA and Anganwadi helper) we decided our plans and delegated our work." ***- AWW, Rural, Rajasthan***

Rural-Urban lens: Both rural and urban frontline workers report feeling similarly supported in terms of tools (75% each) and training (58% and 56% respectively).

State-level lens: Significant differences observed between states in terms of proportion of frontline workers to report feeling supported with adequate training. There was significant variance across states in terms of support offered to frontline workers. A majority of frontline from Maharashtra (75%) and Odisha (81%) found their training sufficient while less than half of frontline workers from Bihar (45%), Punjab (38%), and Rajasthan (36%) felt the same.

FRONTLINE WORKERS' SOCIAL CAPITAL

1 in 2 frontline workers also lacked positive social capital (comprising positive self-image and family/ community/ governmental support). We define frontline workers as having *positive social capital* if they have largely not faced disapproval and stigma from their family/ community because of the coronavirus and if their work in general is respected by members of their family, community and themselves[144].

A lower proportion of ASHAs/ VHNs with positive social capital (31%) than without it (47%) and a lower proportion of AWWs with positive capital (34%) than without it (60%) found their workload unmanageable, despite often reporting working more hours during the survey period when compared to before the pandemic[145].

44% of ASHAs/ VHNs and 50% of AWWs report having positive social capital. Furthermore, the proportion of frontline workers reporting positive social capital varies across states[146,147], as do the underlying drivers of lower social capital. Frontline workers in Tamil Nadu[148] reported a dip in social capital due to the disapproval and stigma they faced from family and community because of COVID. In Bihar, Rajasthan, and Andhra Pradesh poor self-image and limited family/ community respect (both in general and because of the pandemic) seems to drive low social capital[149].

Front line workers who received adequate training, have positive social capital, and observe moderate ratio of residents-to-frontline worker are more likely to believe that their workload is manageable.

*Figure 28: Proportion of **ASHA/ VHNs** to report workload is manageable based on receiving adequate training, having positive social capital and having a ratio of residents-to-ASHA/ VHN no more than 1400*

150 151

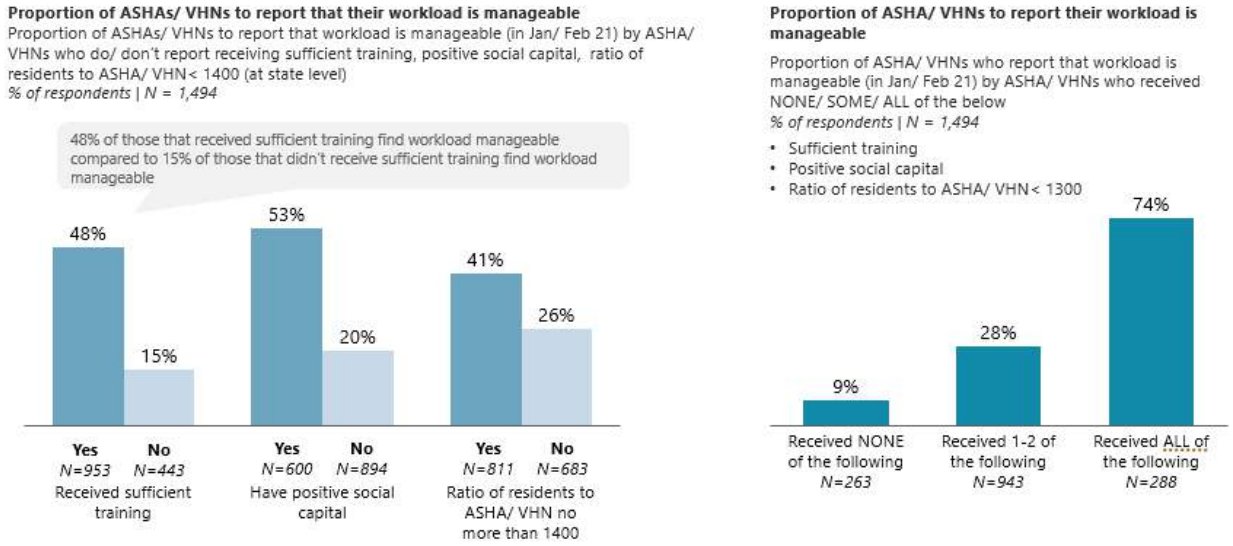
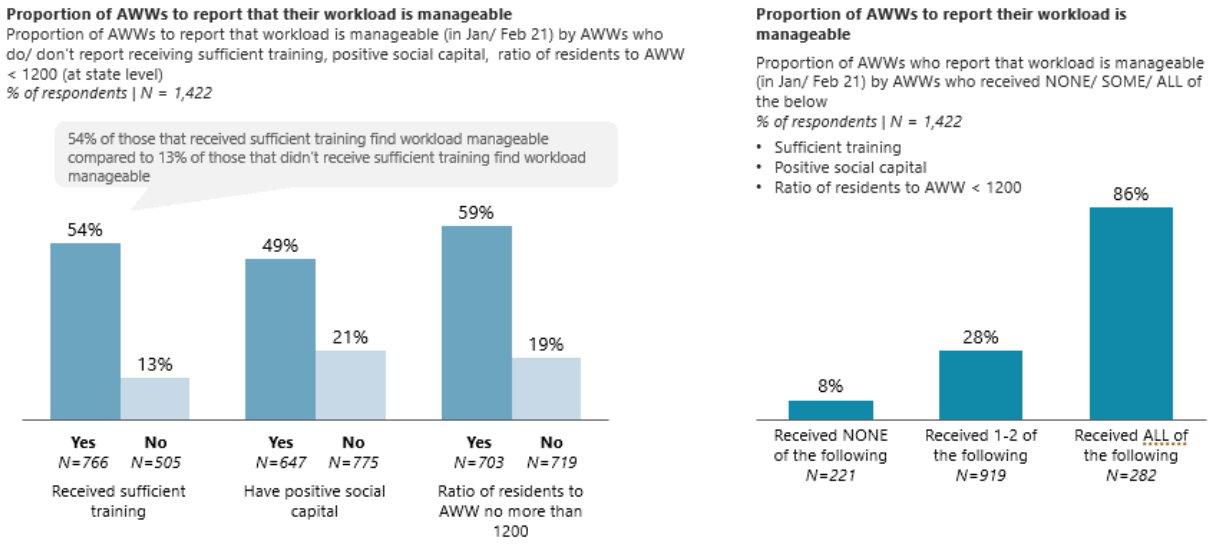


Figure 29: Proportion of AWWs to report workload is manageable based on receiving adequate training, having positive social capital and having a ratio of residents-to-AWW no more than 1200

152,153



Rural-Urban lens: **No significant differences were visible in proportion of rural (47%) and urban (49%) frontline workers to report having positive social capital.**

State-level lens: Significant differences observed between states in terms of proportion of frontline workers to report having positive social capital. A limited proportion of frontline workers from Andhra Pradesh (5%), Tamil Nadu (14%), Bihar (28%) and Rajasthan reported (28%) having positive social capital, while a majority of frontline workers in Assam (66%), Maharashtra (66%) and Odisha (82%) reported having positive social capital.

IV. Concluding Remarks

Due to the timing of our survey (in between the first and second wave of COVID-19) and its telephonic nature, our findings likely represent the best-case scenario of the pandemic's impact on young children and their caregivers. Yet it is still evident that the pandemic disrupted the lives of millions, particularly those who were already vulnerable and disadvantaged. While caregivers and frontline workers have played a critical role in supporting young children's development across health, nutrition, caregiving and learning during this time, it has come at a huge personal cost to them. The pandemic has steeply escalated their workload and stress levels.

We hope that the findings from this report help continue the discussion around the importance of ECD and the impact of COVID-19 on ECD related outcomes. We have summarized below some of our recommendations coming out of this study.

Recommendations to better support frontline workers

- ***Recognize and celebrate frontline workers' efforts*** by acknowledging their contributions not just for COVID-19 (through slogans such as that of the 'Corona warrior') but more generally for the tremendous efforts they make for the health and wellbeing of the entire community. In-depth interviews showed that this was an effective tactic to motivate workers and would likely contribute to longer-term efforts to improve social capital.
- ***Where possible, rationalize roles and responsibilities of frontline workers to enable better prioritization of service delivery*:** Frontline workers have many responsibilities across health, nutrition, education, and caregiving. Supporting them in prioritizing efforts and having clearly delineated responsibilities can enable them to focus on core tasks, while also keeping their overall work hours under control.
- ***In case of future COVID-19 waves, ensure safety gear and tools are provided to FLWs:*** While current trends suggest we may be seeing the end of pandemic conditions in the near future, should there be additional waves then it will be important to make sure FLWs have what they need to successfully perform their tasks.

Recommendations to better support children and their families

- ***Closely track reopening of AWCs and intervene to encourage attendance where needed:*** At the time of our study, nearly half of parents were not ready to send their young children back to school or AWCs. As states are reopening these facilities, it will be important to keep an eye on whether children are actually returning or not. Where needed, community level drives can help ensure that children are attending AWCs.
- ***Identify ways to sustain the involvement of fathers in their children's lives post pandemic:*** Our findings suggest that fathers are spending an increasing amount of time with their children because of the crisis (although, still slightly lower compared to mothers)[154]. These interactions are particularly influential during the first three years of life, when brain growth is most rapid in children[155]. We should leverage this opportunity to encourage sustained interaction evidence-based program development, and targeted advocacy, such as the MenCare Program[156].
- ***Strengthen focus on all the components of nurturing:*** While planning for young children, it is important to consider all the aspects that impact their development and learning. It includes all the components as highlighted in the nurturing care framework - nutrition and health, responsive caregiving and opportunities for early learning.
    - *Nutrition and health:* Due to the economic effects of the pandemic, financial stability of many families has taken a hit. It is therefore important to ensure that children get proper

nutrition through resuming hot cooked meals and other services. Similarly, continuity of basic immunization and vaccines such as polio drops needs to be ensured.

- *Caregiver support*: Love and care from caregivers is of crucial importance for the child to feel safe and confident. However, the lack of social interactions, loss of income and financial instability have led to increased stress on caregivers. Thus, it is very important to provide them adequate support. Parents need to be oriented to give time to children by playing and interacting with them.
- *Opportunities for early learning:* For learning to happen, it is of crucial importance that children be provided with developmentally appropriate opportunities to learn. For young children, long-hours of digital interaction are not advisable considering their attention span, inability to process complex digital content and need of hands-on experiences and interactions to learn. It is important to design opportunities where children can engage in concrete learning activities with support of their parents. In addition to this, content needs to be responsive towards the language and context of the child. Our survey showed that 1 in 5 households reported facing issues with helping their child learn due to not understanding the educational content well enough. 37%[157] of these households (and over 60% in Andhra Pradesh and Maharashtra) mentioned that they would appreciate receiving content in the preferred language of the child, indicating that language could be a key barrier to their comprehension. A systemic focus on the creation and dissemination of content in vernacular languages can help bridge this gap.

Recommendations to strengthen ECD systems at the state, national, and ecosystem level

- ***Generate evidence to understand the impact of the pandemic on child-level outcomes:*** While various articles and reports have discussed the pandemic's potential impact on children's learning and development, it may be worthwhile to conduct further research to generate evidence around the actual impact on children directly. This will enable policy makers to take specific actions to address any longer-term issues. Some of the specific research questions to consider include:
    - Identifying the longer-term impacts on children's cognitive and socio-emotional development through longitudinal research efforts, so as to help identify gaps or delays that emerge and require urgent addressal.
    - Assessing changes in quality and nutritional value of food consumed by children during the crisis, and its short-term and long-term effects on their nutritional and health outcomes (including on phenomena such as stunting, wasting, and being under- or overweight)
    - Assessing the models of distance learning to understand workable strategies to support children's learning at home
    - Determining the efficacy of different methods of training and varied incentive schemes to support frontline workers

- ***Surface and share good practices:*** Sharing of good practices can be helpful for states to take informed decisions and implement strategies to improve the quality of ECD programmes. For instance, an initiative from Odisha where fathers are involved in their child's learning may be worth understanding better; findings on why, for whom, and in what context the intervention worked well could then be shared with other states. More investment is needed to surface and share good practices.
- ***Encourage sustained adoption of technology for delivery of ECD services:*** Despite the reported growth in using technology such as telehealth[158] during the pandemic, households largely reported receiving medical attention in person[159]. Given households' and frontline workers'

(justified) fear of contracting COVID[160][161], it will be helpful for frontline workers to pivot to using their phones for information dissemination and follow-ups[162]. During our in-depth interviews, few frontline workers indicated that they are adopting the phone to keep in touch with beneficiaries, however, systemic attention to this issue (for example providing necessary applications[163], infrastructure and training to digitalize data capture, enable teleconsultations, etc[164]) can drive a more pervasive shift in behaviour.

- ***Launch multi-pronged interventions to raise social capital to support frontline workers in effectively managing their work and stress levels*:** Our in-depth research notes that many frontline workers acknowledge that, despite an increase in their workload, they continue to remain motivated because of the support and recognition they receive in their community. Hence, states like Andhra Pradesh, Tamil Nadu, Bihar, and Rajasthan could institute multi-pronged mental health and wellbeing focused interventions such as (i) providing increased engagement with and recognition from more senior government officials, (ii) enhancing supervisor support to boost morale and alleviate fears[165], (iii) recognizing the efforts and contributions of workers through public messaging, and (iv) providing psycho-social counselling services to frontline workers in order to help raise social capital.

V. APPENDICES

A: Approach and methodology

Overview of the methodology up till the data collection process

Pre-testing

We conducted a small pre-test to gauge whether the survey questions were comprehensible, the instruments' flow was logical, and the length of the interview was feasible, as well as to highlight focus areas for enumerator training. We conducted the pre-test in Uttar Pradesh and Maharashtra[166] with a total of 15 respondents[167]. In each state, team members from our data collection partner, Kantar, conducted the pre-test interviews in the local language, with accompaniments from Dalberg team members. Each interviewer used a pen-and-paper version of the instruments to record responses for interviews that they conducted telephonically. For both surveys, the pre-test helped surface changes that needed to be made to question wording and answer options, as well as the overall survey flow[168]. This process revealed that the surveys were longer than they needed to be, which led us to shorten them and propose further areas for shortening if required after the pilot. This also prompted us to reframe some of the questions to ensure their correct interpretation by the respondents[169].

Piloting

We conducted a pilot of both surveys in each of the seven languages in which the interviews would be conducted to help refine and finalize the instruments. Forty-two respondents participated in the pilot[170]. Both survey instruments were first translated into the local language so that the pilot could also serve as a test of the quality of the translations. In each state, we selected for the pilot one or two districts with low levels of female literacy, high rates of poverty, and a range of COVID-19 incidence rates. Kantar team members from each state conducted the pilot using a Computer Assisted Telephonic Interviews (CATI)-enabled device to record responses. Findings from the pilot helped us refine the questions further, including tweaking word choices where needed and further reducing the length of the interviews. Any such changes were carried forward through all translations.

IRB approval

We sought IRB approval to ensure that our study met the required ethical standards. After completing changes post-pilot, we applied for approval for our study to the Institutional Review Board (IRB) of the Social Research Institute (SRI). This IRB is approved by the US National Institutes of Health (NIH) and registered with the division of assurance and quality improvement of the US Office for Human Research Protections (OHRP). The IRB granted approval for our study, deeming it to meet all the required ethical norms of large-scale primary research in social sciences.

Training and quality control

After finalizing the surveys, we trained our enumerators and launched data collection. Kantar team members, along with Dalberg researchers, first provided training to state-level managers who would oversee the data collection process in each state. These managers went on to train their respective state teams in the presence of Kantar and Dalberg researchers. Training sessions incorporated feedback from both the pre-test and the pilot.

Data collection for both surveys was conducted through Computer Assisted Telephonic Interviews (CATI). The Kantar teams in each state carried out data collection from 17 December 2020 to 11 February 2021 using Kantar's CATI system.

We used a range of measures to ensure that the data collected were of high quality. To ensure correct interpretation of questions across states, we translated the surveys into seven languages using local vocabulary and finalized the script only after the pilot tests. It was especially critical to keep our survey crisp and to an average length of approximately 25 minutes to limit drop-off, given that respondents were likely to lose interest sooner than they would during an in-person interview. During data collection, supervisors conducted accompaniments for 15% of interviews to ensure correct administration of questions and interpretation of responses by the enumerators. Additionally, Dalberg and Kantar research team members accompanied interviews at the beginning of data collection to provide feedback. During data cleaning, missing values, or inconsistencies (data-specific and interpretation-based) were corrected or rejected through targeted call-backs[171]. We also monitored the productivity of each enumerator and flagged outliers for review. These measures worked to ensure that the data being collected were of the desired quality.

Weighting methodology

A. Primary/secondary caregiver survey

We have weighted the household (HH) responses by state, residence type (rural/urban), and children's age cohort[172] to ensure that the data in our analysis are representative. Weight calculations are below[173]:

$$\textbf{Weight per respondent} \text{ (State x residence type x child's age cohort)} = \frac{\#\ \textit{of HH with at least one 0-6 year old (of said residence type and child's age cohort in a state)}}{\#\ \textit{of respondents (of said residence type and child's age cohort in a state)}}$$

$$\textbf{\# of households with at least one 0–6 year old} \text{ (State x residence type x child's age cohort)} = \text{\% of households with at least one 0-6 year old } \textit{(of said residence type and child's age cohort in a state)} \times \frac{\textit{Total population (of said residence type in a state)}}{\textit{Avg. household size (of said residence type in a state)}}$$

Notes and assumptions: In our survey, each respondent corresponds to a unique household. Since we oversampled women in our survey (2/3 of the sample), the aggregated answers for questions especially on primary/secondary caregivers' lives may skew more towards women's responses. We will thus ensure that we represent the responses separately by gender, or—if there are no gendered differences—we will call out that responses are not weighted by gender.

Limitations: To calculate weights for our survey, we have used data from different time periods and sources because they were the most representative, reliable, and recent datasets[174].

B. Frontline worker survey

We have weighted the frontline workers' responses by state and occupation to ensure representativeness. The weight calculation is below[175].

$$\textbf{Weight per respondent} \text{ (State x Occupation)} = \frac{\#\ \text{of caregivers } \textit{(of said occupation in the state)}}{\#\ \text{of respondents } \textit{(from caregivers of said occupation in the state)}}$$

Notes and assumptions: We intentionally did not weight by residence type (rural/urban)—our sample consists of 9% urban and 91% rural frontline workers due to natural fallout, which aligns with 12% urban share of Anganwadi workers[176] and 6% urban share of ASHAs in India[177].

Statistics behind our analyses

We first calculated standard errors using the delta method or from re-sampling, to account for the clusters, strata, and weights of the survey design. We then used Welch's unequal variances t-test[178], to test if differences between averages of two groups are statistically significant. We also used a generalized linear model to incorporate these design-based standard errors and inverse-probability weighting, to test for statistical significance while controlling for confounding variables.

Statistical significance was used to depict the strength of difference of a statistic calculated for a given cohort (say, rural households), compared to the statistic across all 11 states. We have only conducted significance tests for differences between statistics across two cohorts (e.g., % of children accessing Anganwadi Centre meals in rural households vs 11 state weighted average). We do not estimate significance of statistics that do not have an adequate, universal and sufficiently justifiable alternate hypothesis (e.g., % of Pregnant and/ or Lactating Women taking recommended IFA dosage)

Where relevant, we report only significant relationships and insights in our report, with a minimum of a 5% level of significance. We do not estimate family error rates[179].

Expert interviews

During the data collection and analysis stages, we consulted experts across the ECD ecosystem in India and globally. These included representatives of foundations, implementing organizations (non-governmental organizations and civil society organizations), and research organizations. Insights from these consultations helped inform the design of the surveys as well as the interpretation of results.

Table: List of ECD experts and Project advisors

S.no.	Name	Title/Organization
1	Venita Kaul	Director, CECED; Professor, Ambedkar University
2	Seemant Dadwal	Founder, Meraki Foundation
3	Tinni Sawhney	CEO, Aga Khan Foundation
4	Samyukta Subramanian	Program Coordinator, Pratham
5	Sumitra Mishra	Executive Director, Mobile Creches
6	Suneeta Krishnan	Country Lead for MLE, BMGF
7	Subhalakshmi Nandi	Senior Program Officer for Gender Equality, BMGF
8	Saachi Bhalla	Program Officer for Gender Equality, BMGF
9	Manpreet Singh	Deputy Director for FP, MNCH and Nutrition, BMGF
10	Arjun Sanyal	Senior Program Officer for Education, Aga Khan Foundation
11	Radhika Arora	Research Manager, OPM
12	Vikas Choudhry	Vice President of Public Health Practice, Sambodhi Research
13	Shajy Isac	Managing Trustee, IHAT
14	Rasmi Avula	Research Fellow, IFPRI

Project advisors
Other experts

Secondary research

We drew on ~20 reports and datasets to identify the landscape of ECD solutions, as well as the indicators used to measure their reach and effectiveness. These sources helped us form hypotheses and prioritize questions that were not already well researched. After we received our survey data, we returned to these reports and datasets to triangulate our findings and highlight the differences we

have seen in the landscape in the months since the country started opening up. A complete list of sources is available in the bibliography.

B: State-wise factsheets

We will summarize the key statistics across all themes and sub-themes in a 1-page format for each state, for quick viewing. This will not include any commentary on why the trends might be as they appear.

Please refer to the state factsheet for the impact on frontline worker lives on this google sheet link:

https://docs.google.com/spreadsheets/d/1TNHXXI-1eYqaEeF4pTIK6STC4scNf61Q4aLZWMbkf1I/edit?usp=sharing

Please refer to the state factsheet for the impact on Primary/ Secondary Caregiver lives on this google sheet link:

https://docs.google.com/spreadsheets/d/1I5NjblcwtduUD65lPfReZ0_RrBr_ve3s7tU644b9gPA/edit?usp=sharing

C: Description of respondents

Sample size estimation

Here, we will lay out the mathematical calculations undertaken to determine the sample size for each of our target groups for both surveys. Illustrative text below:

Using a one-time cross-sectional design, the sample sizes are estimated using the following formula;

$$Sample\ Size(N) = Deff * Z2 \quad * p * (1-p)X2$$

Where;

- **Deff** stands for design effect (expected variance of sample compared to a systematic random sample). For our study, we take this to be equivalent to one
- **Z** is the z-score associated with level of confidence (for 95% level of confidence, this translates to 1.96)
- **P** is expected proportion (assumes 50%, a common assumption when the proportion is not known)
- **X** refers to the margin of error (assuming 5%)

Based on the above, the minimum sample size, assuming 95% level of confidence and 5% margin of error, translates to ~384, while for 90% level of confidence it translates to ~270. For our study, we meet the minimum threshold of 95% level of confidence for mothers of children aged below 6 years, as we survey 600 women per state (except Punjab and Haryana, where we survey a combined number of 600 women), or 6000 overall. We also meet the 95% level of confidence for fathers across all states (a total combined sample of 3000 fathers across 11 states), but only meet the 90% level of confidence for fathers within any given state (where we have a sample of 300 fathers in each state except Punjab and Haryana). For frontline workers, we meet the 95% level of confidence at the all-state level only. State-level findings for frontline workers are indicative only.

Respondent profile

Here, we will include a one-line description of each respondent sub-group, clarifying the rationale for inclusion of each profile.

Respondent	Rationale for inclusion
Mothers of children aged 0-6 years who stayed with them for any time since the COVID-19 pandemic began	Home-based caregivers who took care of their young children during the COVID-19 pandemic and could speak to its impacts on the children as well as themselves
Fathers of children aged 0-6 years who stayed with them for any time since the COVID-19 pandemic began	Home-based caregivers who took care of their young children during the COVID-19 pandemic and could speak to its impacts on the children as well as themselves
Accredited Social Health Activists (ASHAs)	Frontline workers who routinely provide health and nutrition-related services to young children and their mothers, and who took on additional COVID-related duties during the pandemic
Anganwadi workers	Frontline workers who routinely provide health, nutrition, caregiving and learning services to young children and their mothers, and who took on additional COVID-related duties during the pandemic
Village Health Nurses (VHNs)	Frontline workers in Tamil Nadu who are regularly staffed frontline worker in many parts of the state, playing a role similar to both ASHAs and auxiliary nurse midwives (ANMs) in other states

D: Demographics of survey respondents by state

Table: State wise split of Primary caregiver survey respondents by income category

State	Don't know/ Can't Say	Antyodaya	BPL	APL	Don't hold ration card	Others	Total
Andhra Pradesh	3%	1%	86%	6%	3%	1%	100%
Assam	0%	4%	39%	25%	32%	0%	100%
Bihar	2%	3%	46%	14%	35%	0%	100%
Haryana	4%	3%	50%	27%	16%	0%	100%
Madhya Pradesh	4%	1%	67%	16%	12%	0%	100%
Maharashtra	1%	2%	30%	59%	7%	1%	100%
Odisha	5%	3%	61%	21%	11%	0%	100%
Punjab	1%	0%	48%	4%	46%	0%	100%
Rajasthan	3%	1%	17%	68%	12%	0%	100%
Tamil Nadu	2%	2%	70%	22%	4%	0%	100%
Uttar Pradesh	6%	13%	39%	23%	15%	4%	100%

Table: State wise split of Primary caregiver survey respondents by social category

State	Don't know/ Can't say	Scheduled Tribe	Scheduled Caste	Other Backwards Classes	General	Total
Andhra Pradesh	0%	8%	10%	28%	54%	100%
Assam	1%	12%	6%	53%	29%	100%
Bihar	0%	2%	26%	60%	12%	100%
Haryana	2%	9%	25%	23%	41%	100%
Madhya Pradesh	2%	16%	20%	37%	25%	100%
Maharashtra	1%	10%	35%	29%	25%	100%
Odisha	0%	11%	22%	24%	42%	100%
Punjab	2%	5%	35%	10%	48%	100%
Rajasthan	3%	17%	25%	22%	33%	100%
Tamil Nadu	2%	17%	29%	28%	24%	100%
Uttar Pradesh	16%	5%	18%	44%	17%	100%

Table: State wise split of Primary caregiver survey respondents by education level (in number of years)

State	Not mentioned	< = 2 years	3-8 years	9-11 years	> 11 years	Total
Andhra Pradesh	14%	14%	15%	31%	25%	100%
Assam	0%	3%	16%	35%	46%	100%
Bihar	0%	18%	20%	25%	37%	100%
Haryana	0%	6%	28%	24%	43%	100%
Madhya Pradesh	2%	5%	25%	30%	38%	100%
Maharashtra	0%	2%	10%	29%	59%	100%
Odisha	0%	4%	26%	45%	24%	100%
Punjab	2%	6%	21%	26%	45%	100%
Rajasthan	10%	5%	24%	23%	39%	100%
Tamil Nadu	0%	0%	10%	28%	62%	100%
Uttar Pradesh	0%	12%	28%	23%	37%	100%

Table: State wise split of Anganwadi workers by age

State	Not mentioned	Over 55	Between 51-55	Between 46-50	Between 41-45	Between 35-40	Under 35	Total
Andhra Pradesh	0%	4%	8%	20%	19%	29%	20%	100%
Assam	0%	5%	15%	15%	25%	22%	18%	100%

Bihar	0%	2%	5%	20%	20%	25%	27%	100%
Haryana	0%	11%	18%	25%	23%	11%	11%	100%
Madhya Pradesh	3%	3%	4%	23%	16%	28%	22%	100%
Maharashtra	0%	17%	16%	18%	14%	25%	10%	100%
Odisha	0%	6%	9%	21%	13%	27%	23%	100%
Punjab	0%	6%	14%	28%	30%	16%	7%	100%
Rajasthan	2%	3%	8%	9%	18%	34%	27%	100%
Tamil Nadu	1%	12%	8%	8%	17%	37%	17%	100%
Uttar Pradesh	0%	7%	9%	17%	21%	40%	6%	100%

Table: State wise split of ASHA/ VHNs by age

State	Not mentioned	Over 55	Between 51-55	Between 46-50	Between 41-45	Between 35-40	Under 35	Total
Andhra Pradesh	0%	2%	2%	9%	24%	28%	35%	100%
Assam	0%	1%	10%	17%	29%	26%	17%	100%
Bihar	0%	2%	1%	13%	21%	37%	27%	100%
Haryana	0%	0%	1%	15%	12%	30%	42%	100%
Madhya Pradesh	4%	0%	0%	2%	11%	33%	50%	100%
Maharashtra	0%	1%	4%	5%	19%	41%	31%	100%
Odisha	0%	3%	7%	17%	22%	38%	12%	100%
Punjab	0%	0%	3%	11%	38%	35%	13%	100%
Rajasthan	6%	1%	2%	6%	6%	39%	38%	100%
Tamil Nadu	5%	5%	15%	15%	11%	29%	20%	100%
Uttar Pradesh	0%	0%	1%	13%	15%	45%	25%	100%

Table: State wise split of Anganwadi workers by rural/ urban

State	Rural	Urban	Total
Andhra Pradesh	92%	8%	100%
Assam	92%	8%	100%
Bihar	100%	0%	100%
Haryana	100%	0%	100%
Madhya Pradesh	95%	5%	100%
Maharashtra	80%	20%	100%
Odisha	98%	2%	100%
Punjab	100%	0%	100%
Rajasthan	82%	18%	100%

Tamil Nadu	89%	11%	100%
Uttar Pradesh	80%	20%	100%

Table: State wise split of ASHA/ VHNs by rural/ urban

State	Rural	Urban	Total
Andhra Pradesh	100%	0%	100%
Assam	100%	0%	100%
Bihar	81%	19%	100%
Haryana	81%	19%	100%
Madhya Pradesh	94%	6%	100%
Maharashtra	87%	13%	100%
Odisha	90%	10%	100%
Punjab	100%	0%	100%
Rajasthan	82%	18%	100%
Tamil Nadu	89%	11%	100%
Uttar Pradesh	98%	2%	100%

Table: State wise split of Anganwadi workers by education level (in number of years)

State	Not mentioned	< 10 years	10 years	11-12 years	> 12 years	Total
Andhra Pradesh	15%	3%	39%	14%	29%	100%
Assam	0%	3%	32%	33%	32%	100%
Bihar	0%	1%	31%	41%	28%	100%
Haryana	0%	1%	49%	23%	27%	100%
Madhya Pradesh	3%	16%	17%	51%	13%	100%
Maharashtra	0%	14%	31%	28%	27%	100%
Odisha	1%	13%	45%	13%	28%	100%
Punjab	0%	1%	13%	85%	1%	100%
Rajasthan	2%	29%	32%	26%	12%	100%
Tamil Nadu	1%	11%	42%	43%	4%	100%
Uttar Pradesh	0%	0%	22%	32%	46%	100%

Table: State wise split of ASHAs/ VHNs by education level (in number of years)

State	Not mentioned	< 10 years	10 years	11-12 years	> 12 years	Total
Andhra Pradesh	0%	20%	61%	19%	0%	100%
Assam	0%	51%	17%	10%	22%	100%

Bihar	0%	36%	34%	24%	6%	100%
Haryana	0%	24%	39%	28%	9%	100%
Madhya Pradesh	5%	29%	27%	28%	11%	100%
Maharashtra	0%	11%	24%	46%	19%	100%
Odisha	0%	42%	42%	14%	2%	100%
Punjab	0%	5%	43%	43%	10%	100%
Rajasthan	6%	19%	33%	35%	7%	100%
Tamil Nadu	2%	11%	30%	54%	2%	100%
Uttar Pradesh	0%	29%	25%	29%	17%	100%

E: Annexure for Findings

Time spent by ASHAs on delivering their core duties

Core service covered in the survey	Proportion of ASHAs (%) to report change in time spent by them delivering a service					
	Started doing it now	More than before	Same as before	Less than before	Stopped doing it now	Never done it
Supporting pregnant women access ANC[180]	1%	44%	51%	5%	-	-
Counselling PLW[181]s on breastfeeding	1%	37%	58%	4%	-	-
Supporting PLWs in childbirth and with PNC[182]	1%	38%	58%	4%	-	-
Helping provide vaccinations	1%	35%	58%	6%	-	-
Helping manage children's illness	1%	38%	57%	4%	-	-

Time spent by Anganwadi workers on delivering their core duties

Core service covered in the survey	Proportion of AWWs (%) to report change in time spent by them delivering a service					
	Started doing it now	More than before	Same as before	Less than before	Stopped doing it now	Never done it
Providing Take Home Rations	3%	44%	43%	7%	3%	-
Providing Hot Cooked Meals	-	-	-	-	95%	5%
Counselling parents on caregiving & stimulation	2%	42%	44%	10%	1%	-
Providing pre-school education and creating learning materials	3%	25%	34%	27%	9%	-

Checking up on children's health	2%	39%	49%	8%	2%	-
Helping provide vaccinations	4%	30%	61%	4%	1%	-

Primary caregivers' responses on access to healthcare services

Institutional delivery: Parents (%) reporting location of their child's birth? *(N=10,112)*	
Own/friend's/family member's home, assisted by doctor/ ANM/nurse/trained midwife/lady health visitor (LHV)	4%
Own/friend's/family member's home, assisted by doctor/ ANM/nurse/trained midwife/lady health visitor (LHV)	2%
Government hospital or health centre	**66%**
Private hospital or health centre	27%
Children's illness: Children (%) under 2 years who got all the vaccinations he/she needs since the Coronavirus pandemic began? *(N=2,999)*	
Yes, all of them	**86%**
Yes, some of them	9%
None of them	2%
He/she did not need any vaccinations	2%
Children's illness: Parents (%) reporting their child received medical attention from given location, if at all, in the latest instance of illness *(N=1,219)*	
My child did not receive medical attention	2%
Doctor/nurse at government hospital or health centre	**29%**
Doctor/nurse at private hospital or health centre	**52%**
ASHA	3%
AWW	3%
ANM	1%
Pharmacist/compounder	18%
Friend/Family member at home	9%

Time spent by AWWs and ASHAs on delivering their core health-related duties

Health services covered in the survey	**Proportion of AWWs/ASHA workers (%) to report change in time spent by them delivering a service**					
	Started doing it now	**More than before**	**Same as before**	Less than before	Stopped doing it now	Never done it
Anganwadi workers (N=1,422)						
Checking up on children's health	2%	**39%**	**49%**	8%	2%	-
Helping provide vaccinations	4%	**30%**	**61%**	4%	1%	-
ASHA workers (N=1,334)						
Supporting pregnant women access ANC[183]	1%	**44%**	**51%**	5%	-	-
Counselling PLW[184] on breastfeeding	1%	**37%**	**58%**	4%	-	-

Supporting PLWs in childbirth and with PNC[185]	1%	**38%**	**58%**	4%	-	-
Helping provide vaccinations	1%	**35%**	**58%**	6%	-	-
Helping manage children's illness	1%	**38%**	**57%**	4%	-	-

Time spent by AWWs on delivering their core nutrition-related duties

Core nutrition service covered in the survey	Proportion of AWWs/workers (%) to report change in time spent by them delivering a service					
	Started doing it now	More than before	Same as before	Less than before	Stopped doing it now	Never done it
Providing Take Home Rations	3%	44%	43%	7%	3%	-
Providing Hot Cooked Meals	-	-	-	-	95%	5%

Primary caregivers' responses on access to nutrition

PLW's nutrition: PLWs (%) able to consume the recommended dosage of iron pills (IFA tablets) or syrup during recent pregnancy *(N=152)*	
Yes	87%
No	7%
Did not consume at all	2%
PLW's nutrition: Mothers (%) of children born during COVID-19 able to consume the recommended dosage of iron pills (IFA tablets) or syrup during recent pregnancy *(N=989)*	
Yes	**74%**
No	14%
Did not consume at all	1%
PLW's nutrition: PLW (%) with given frequency of receiving hot cooked meals or take-home rations from AWC *(N=1,181)*	
Once a week	14%
Once every two weeks	**7%**
Once a month	**25%**
Less than once a month	12%
Not at all	37%
Child nutrition: Mothers (%) breastfeeding more, less, or the same due to the Coronavirus pandemic *(N=3,410)*	
More	6%
Same	85%
Less	8%
Child nutrition: Children (%) who have become weaker due to the Coronavirus pandemic *(N=8,915)*	
Yes	6%
No	94%
Child Nutrition: Children (%) eating more or less food compared to before the Coronavirus pandemic? *(N=8,915)*	
More than before	11%
Same as before	85%

Less than before	4%
Child nutrition: Children (%) receiving change in the amount of food receiving regularly from the Anganwadi centre because of the Coronavirus pandemic *(N=8,915)*	
My child has started receiving food	12%
It has increased	5%
It has remained the same	33%
It has decreased	11%
My child has stopped receiving food	14%
My child has never received food	22%

Primary caregivers' responses on caregiving

Daily routine: Children (%) who started/stopped regularly playing outside the house because of Coronavirus pandemic *(N=8,890)*	
Started now	44%
Still doing it	36%
Stopped now	13%
Daily routine: Children (%) who started/stopped regularly watching video or playing games on the TV/phone/computer because of Coronavirus pandemic *(N=8,890)*	
Started now	30%
Still doing it	47%
Stopped now	6%
Daily routine: Children (%) who spend more, the same, or less time with other children (e.g., siblings, cousins, neighbours' children), compared to before the Coronavirus pandemic *(N=8,890)*	
More than before	14%
Same as before	58%
Less than before	24%
Daily routine: Children (%) who spend more, the same, or less time with Anganwadi/Creche worker, compared to before the Coronavirus pandemic *(N=8,890)*	
More than before	6%
Same as before	27%
Less than before	30%
Daily routine: Children (%) who spend more, the same, or less time with other adults in or outside household, compared to before the Coronavirus pandemic *(N=8,890)*	
More than before	10%
Same as before	53%
Less than before	31%
Secure emotional relations: Parents (%) feeding, bathing and putting to sleep more or less often with their children, compared to before the Coronavirus pandemic *(N=8,890)*	
More than before	20%
Same as before	77%
Less than before	4%
Secure emotional relations: Parents (%) having conversations, singing, or reading aloud more or less often with their children, compared to before the Coronavirus pandemic *(N=8,890)*	
More than before	19%
Same as before	69%
Less than before	11%
Secure emotional relations: Parents (%) agreeing with the following statement *(N=8,890)*	
Because of Coronavirus, I get less support from the Anganwadi/creche worker to take care of my child	48%

Since the Coronavirus pandemic began, I have had to use stricter discipline techniques (scolding etc.) with my child	47%
I cannot give my child enough time and attention due to Coronavirus pandemic	28%

Primary caregivers' responses on distance learning

Children (%) who have done distance learning, by channel *(N=6,472)*	
No	54%
By ourselves	17%
ASHA/Anganwadi worker	7%
Government school/center	2%
Private tutor/teacher	10%
Private school/center	4%
NGO	1%
Other source(s)	1%
Parents (%) agreeing with the following statement *(N=2,419)*	
My child finds distance learning more difficult	41%
I think my child is learning more through distance learning	52%
Children (%) using given materials/methods to study and learn *(N=2,819)*	
Textbooks /Worksheets	33%
Coloring Books/ Story Books/ Picture Books	33%
TV	29%
Youtube/ Websites/ Blogs/ Apps	28%
SMS/ Whatsapp	14%
Home Visits With Teachers/ Tutors	13%
Calls With Teachers/ Tutors	9%
Home Visits From Anganwadi Worker Helper	8%
Calls With Anganwadi Worker Helper	8%
Radio	1%

AWW's responses on distance learning

AWW (%) helping in education/creating learning material *(N=1,442)*	
Started doing it now	3%
More than before	25%
Same as before	34%
Less than before	27%
Stopped doing it now	9%
Never done it	0%
AWWs (%) agreeing with the statement *(N=1,442)*	
I have all the materials I need to conduct preschool activities	88%
I received sufficient training to conduct preschool activities	89%
I have received additional training to train parents to conduct preschool activities at home	91%
AWWs (%) using channel to perform learning activities *(N=1,442)*	
One-on-one in person	78%
One-on-one remotely (e.g., through phone, internet)	36%
In groups in person	21%
In groups remotely (e.g., through phone, internet)	10%

Impact on frontline workers' lives

*Figure 27: Distribution of states by share of **ASHAs/ VHNs** with positive social capita and proportion of ASHAs/ VHNs to report their workload is unmanageable*

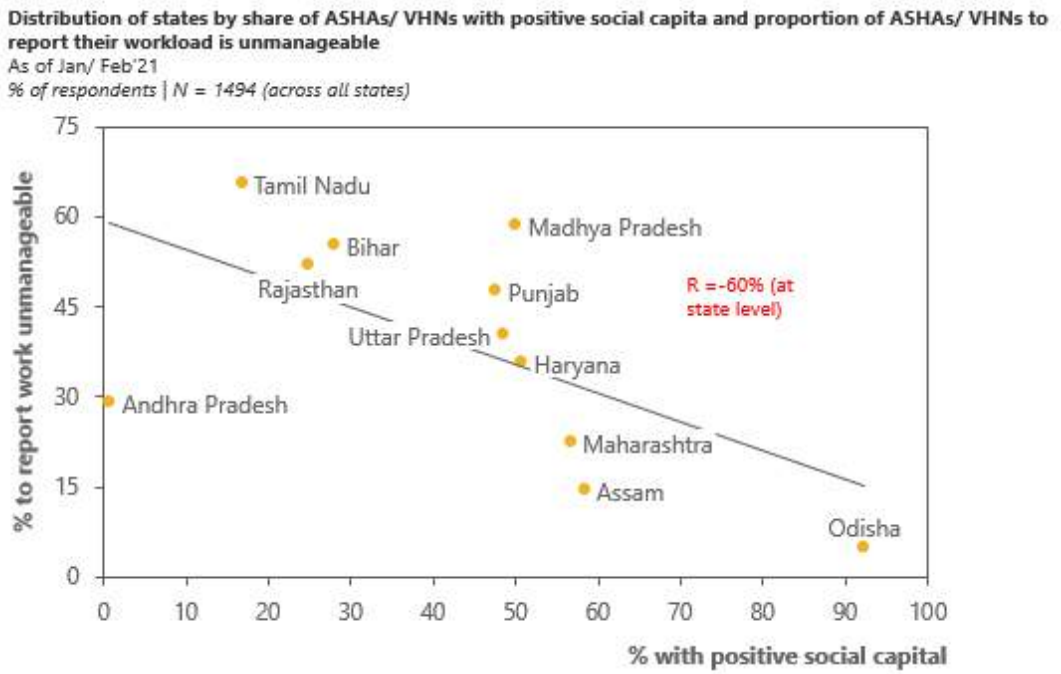
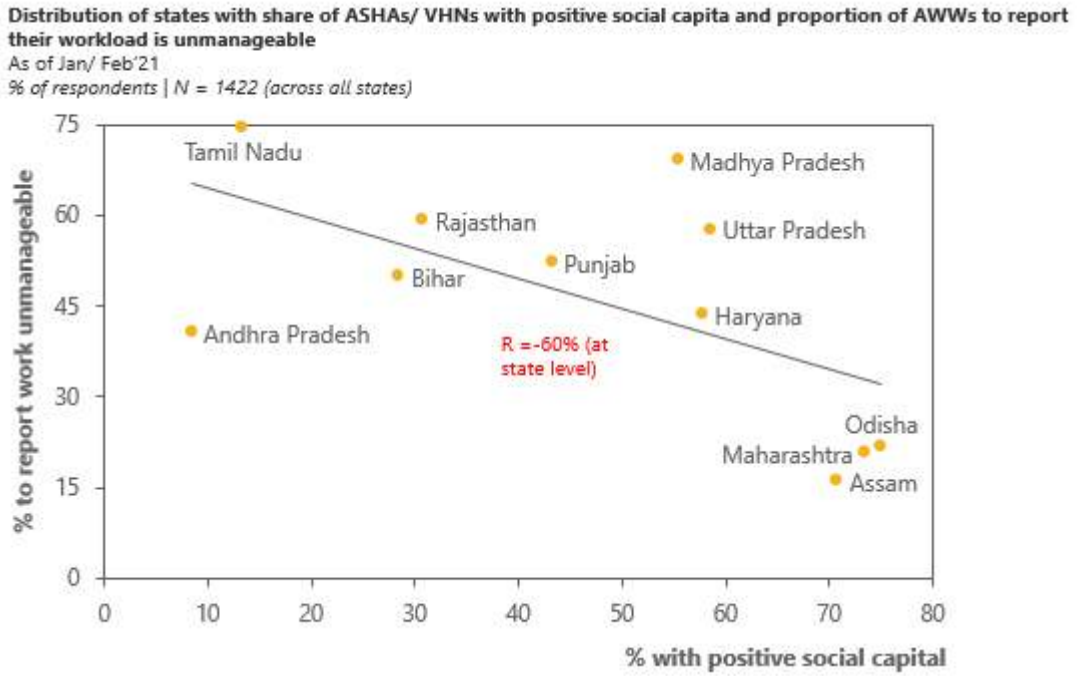


*Figure 28: Distribution of states by share of **AWWs** with positive social capita and proportion of AWWs to report their workload is unmanageable*



ASHA and AWW core duty index creation

Our core duty index shows that a majority of frontline workers (63% of ASHAs / VHNs and 42% of Anganwadi workers) report spending more time discharging their core duties (not including COVID-19 responsibilities) since the advent of the pandemic than before it. We built the core duty index by assigning a value (+1/ 0/ -1) to each activity delivered by an frontline worker based on the change in time spent on that activity by the frontline worker since the pandemic (more time/ same time/ less

time). We included six activities in the core index for Anganwadi workers and five in the ASHA core duty index[186].

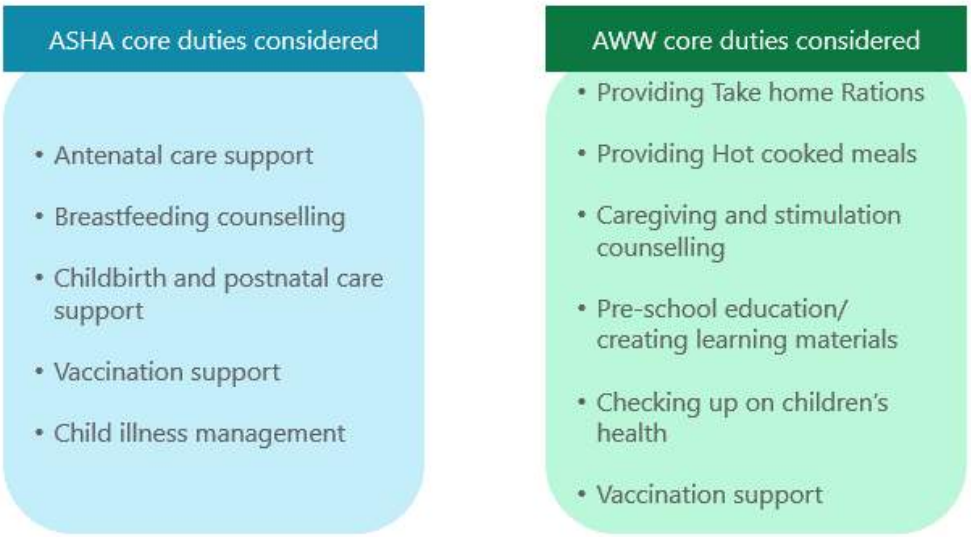


Figure 29: Distribution of ASHAs/ VHNs based on index assessing change in time spent on core duties during the pandemic

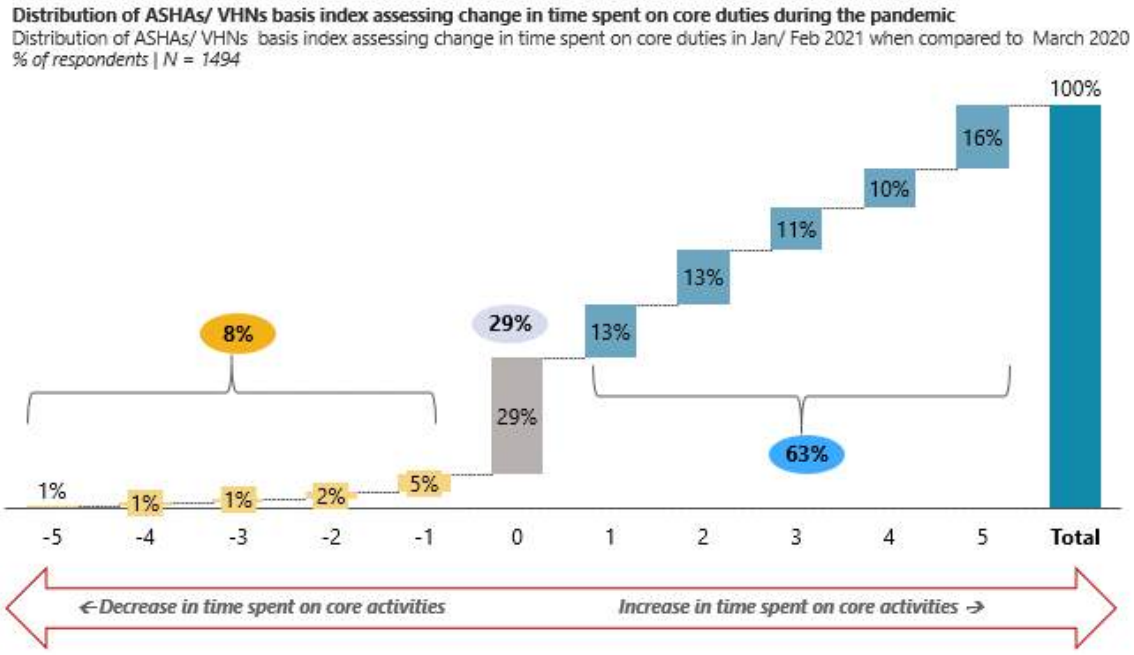


Figure 30: Distribution of Anganwadi workers based on index assessing change in time spent on core duties during the pandemic

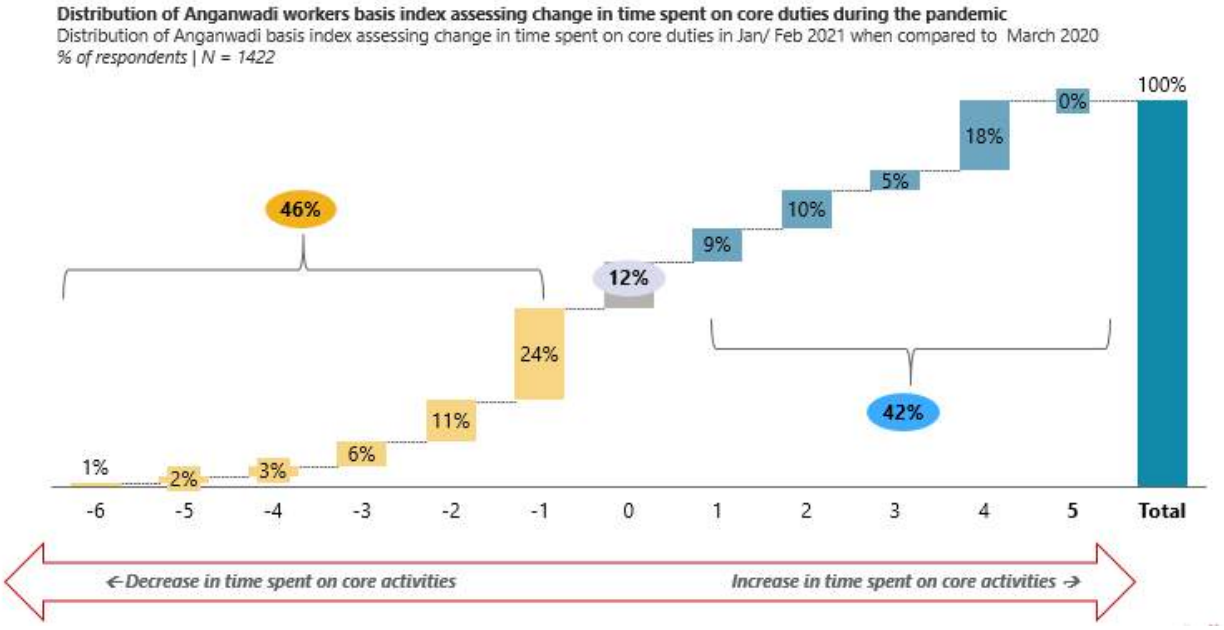


*Figure 31: Proportion of **frontline workers**, by state, who report felling more/ same/ less stress when compared to pre-pandemic*

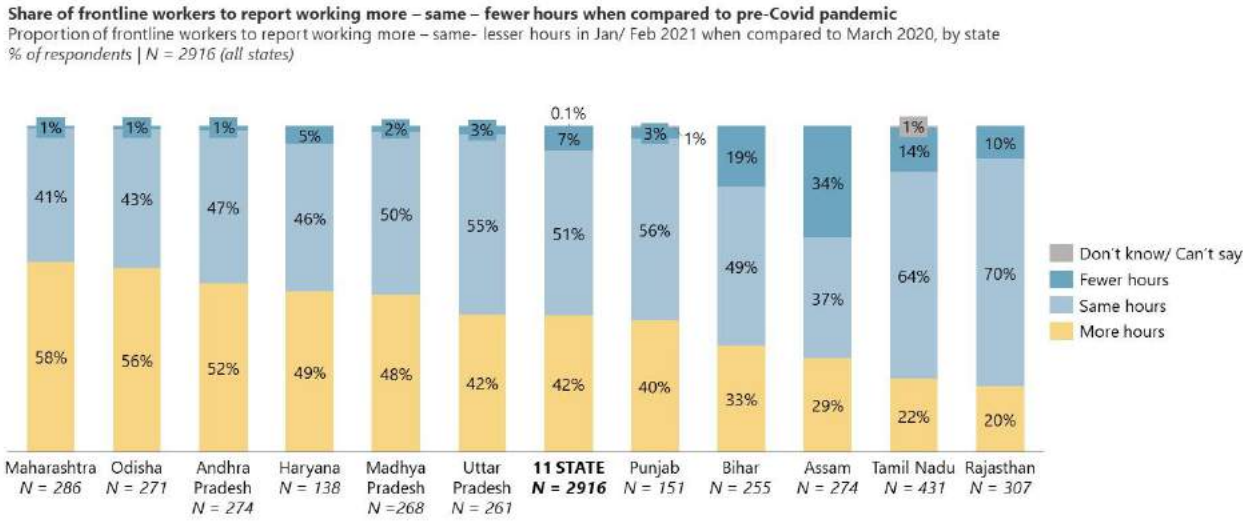


*Figure 32: Share of **frontline workers** who report interacting with more/ same number of families because of COVID-19 pandemic*

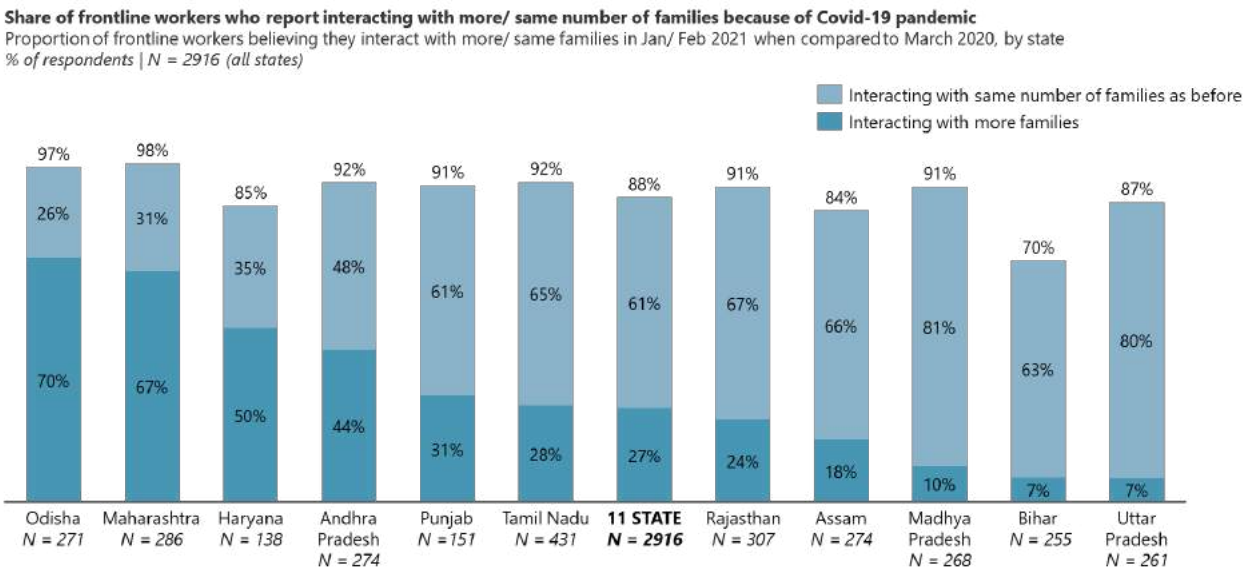


*Figure 33: Share of **frontline workers** who report receiving full – partial – no payment for last month's work*

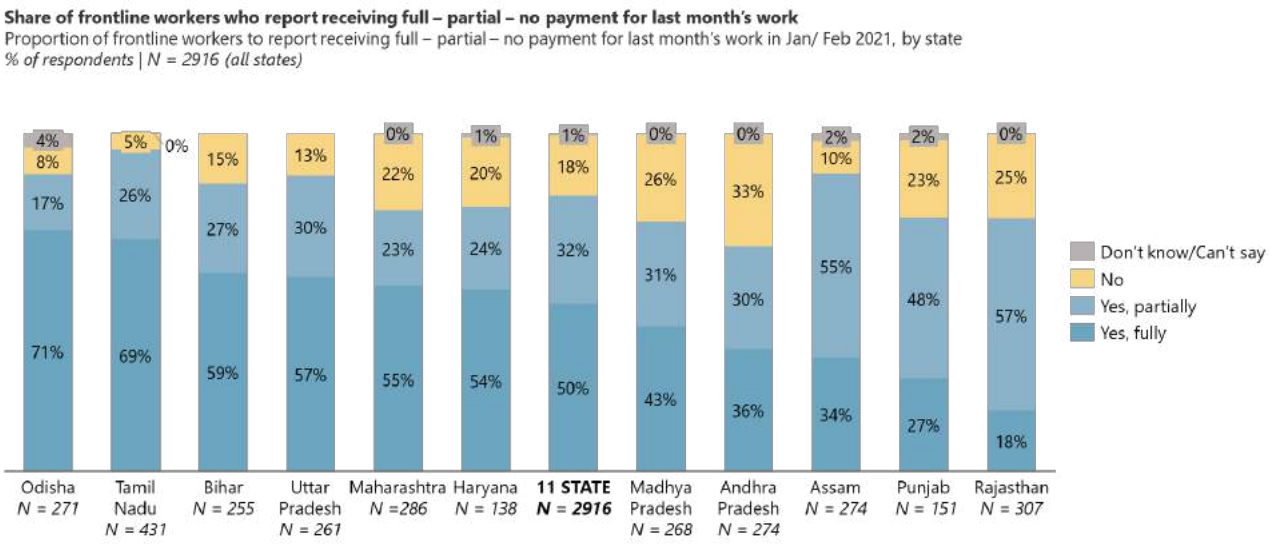
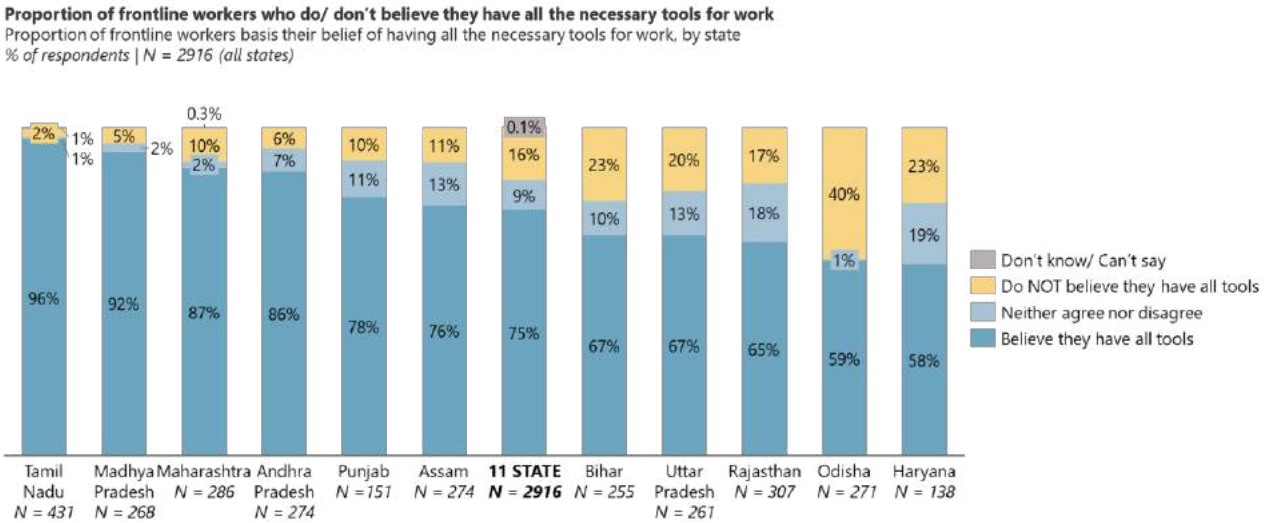


*Figure 34: Share of **frontline workers** who do/ don't believe they have all the necessary tools (phone, internet, handbooks, etc) for work*



F. Examples of State Responses to COVID-19

The below examples have been compiled by BvLF and Porticus and are meant to be an indicative (not exhaustive) list

Example 1: Responsive care for the first 1,000 days, Uttar Pradesh

ICDS staff of the state Department of Women and Child Development and RBSK units of the Ministry of Health and Family Welfare (MoHFW), the Aga Khan Foundation, with the support of local authorities including the district administration, adopted an MoHFW pilot on responsive care for the first 1,000 days and early learning in Bahraich district of Uttar Pradesh.

The team adapted key messages from the programmes into 30 posters with images, offering parenting tips and ideas for in-home activities parents could do to help their child reach important developmental milestones. These were developed to be easily shared over WhatsApp with parents, keeping in mind literacy levels, data related challenges, and availability of devices. These posters were also put up at public places in villages to facilitate wider dissemination.

Once trained on the parenting messages, anganwadi workers shared parenting tips and activities with caregivers every 7-10 days, as audio, images and text messages over WhatsApp, using Interactive Voice Recording Support and in-person during home visits, when possible. Through this collective effort, the posters reached over 17,000 parents and caregivers who are providing for continual support and awareness of critical components of ECD.

Example 2: Sajag Abhiyan – Caregiver Coaching for Nurturing Care, Chhattisgarh

In April 2020, the Department of Women and Child Development partnered with the Centre for Learning Resources to implement the Sajag Abhiyan Program across Chhattisgarh. The program aims to build systemic capacities of ICDS functionaries, on caregiver coaching for nurturing care in times of COVID-19.

The crisis presented an opportunity to support parents of young children facing financial challenges, social isolation, and mental and physical health-related fears so that they could support their infants and toddlers better. The program introduced parents to the idea of "touch, talk and play" through a series of audio messages. Every message carries powerful ideas to caregivers for nurturing care of children (0 - 6 years), in a simple language. Each message (5-6 minutes in length) is sent out fortnightly and is routed through a chain of command -- from a central directorate to district project officers to child development project officers to lady supervisors to anganwadi workers and eventually to parents and other caregivers.

Sajag Abhiyan is estimated to have reached about 7,00,000 families. It is also being adopted in Bihar, Goa, Uttarakhand, Maharashtra and Uttar Pradesh, in partnership with the departments of Women and Child Development.

Example 3: "Menstreaming" initiatives in rural Odisha

In April 2020, with the Odisha's 72,857 anganwadi centres shut and around 16 lakh children at home, the Department of Women and Child Development launched the 'Ghare Ghare Arunima' initiative, a home-based curriculum with a calendar-based list of activities for children. Topics included practicing hygienic practices, sanitation and social distancing. It also included a focus on daily routines, learning, including through songs and storytelling, and the importance of including children in household chores, adequate sleep and rest.

The initiative, run by aanganwadi workers, also focused on encouraging fathers to take additional responsibilities of their children (and by having the fathers record their engagement). By focusing on men in households, the government aimed to ingrain equal childcare responsibility in families, along with strengthening the family bond during the pandemic.

Example 4: Parents WhatsApp Groups under "Aakar," Maharashtra

In 2019, the Maharashtra State Council for Education Research and Training developed a curriculum for children ages three to five, based on their developmental milestones. The curriculum was developed with the help of the ICDS, experts, Balwadi teachers, Mobile Crèches, Dnyan Prabodhini, Maharashtra Balshikshan Parishad, Maharshi Stree Shikshan Sanstha, SNDT and Shivaji universities.

During the COVID-19 lockdown, preschool activities were carried out via 2,40,750 WhatsApp groups with 9,09,432 parents. The 28 lakh children enrolled in all anganwadis through 'Aakar' child education programme benefitted, with daily activities disseminated to WhatsApp groups of parents. Anganwadi workers explained the details in person to those who lacked digital access, setting an example of using a low tech intervention to reach and support the target beneficiaries.

Example 5: Nutri Gardens across Anganwadi Premises, Maharashtra

The Government of India encouraged states and union territories to develop kitchen gardens at the Anganwadi Centre premises to be able to provide healthy food for children. Nutrition gardens tend to improve consumption of nutritious food among communities, promote dietary diversity and increase the quantity of fruits and vegetables consumed in households.

The Government of Maharashtra aimed to scale up the initiative in several districts across the state. The Department of Women and Child Development in collaboration with the Rajmata Jijau Mother-Child Health and Nutrition Mission established kitchen gardens across anganwadi premises in the districts of Pune, Thane, Palghar, Jalgaon, Yavatmal, Parbhani, Osmanabad and Wardha.

Example 6: Sustaining Early Childhood Education by leveraging technology, Tamil Nadu

In Tamil Nadu, Anganwadi workers record educational exercises on their camera-enabled phones and leverage multimedia messaging services to send video and audio content to parents to teach their children. In addition to providing pre-school teaching material for 3-6 years olds, anganwadi workers are contacting parents of newborns, infants, and toddlers by phone to provide necessary support and advice regarding early childhood care and education during the lockdown. This has helped the states' Anganwadi workers engage parents despite the lockdown and provide continuous contextualized support.

Example 7: Anganwadi workers ensuring women's safety during the lockdown, Tamil Nadu

As per National Commission for Women, a significantly high number of complaints have been received regarding domestic violence against women during the lockdown. Throughout the lockdown, anganwadi workers countrywide have made efforts to curb domestic violence against women. In Tamil Nadu, the government has placed anganwadi workers as coordinators to receive and escalate calls of domestic abuse to their superiors. They have also been provided with smartphones to enable them to be accessible and work closely with rural communities.

Example 8: Take Home Ration (THR), Maharashtra

In Maharashtra, anganwadi workers were asked to distribute Take Home Ration (THR) after anganwadi centres were shut because of COVID-19. Throughout the pandemic, the state's 2,00,000 Anganwadi workers and helpers distributed THR for 0-6 years olds, and pregnant and nursing mothers. This effort touched the state's ~1,00,000 anganwadis and mini-anganwadis.

ENDNOTES

[1] States covered in this study are Andhra Pradesh, Assam, Bihar, Haryana, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, and Uttar Pradesh. Details on the sample are presented in Chapter III – Approach and Methodology.
[2] This was true of both women and men; 17% fathers said that that they're spending more time with their child; ~15-20% of them said they're spending more time feeding/bathing/playing etc. with their children.; ~15% also said they helping their child learn by themselves
[3] Discussions around the need for support have already begun, as workers and institutions have demanded greater recognition for Frontline workers' contributions. "Engagement of Frontline Health Workers (FLWs) in COVID-19 response in India", WGH, 2020; "Odisha: Anganwadi Workers Demand Pay Hike, Retirement Benefit", OdishaTv, 2021; "Protest call by Anganwadi workers", The Tribune, 2020
[4] Most frontline workers who reported working more hours reported spending more time on core duties (72%) and non-COVID-19 administrative tasks (74%).
[5] 17% of fathers said that that they're spending more time with their child; ~15-20% of them said they're spending more time feeding/bathing/playing etc. with their children.; ~15% also said they helping their child learn by themselves
[6] "The power of dads in childhood development–during a pandemic and beyond", Brookings, 2020
[7] MenCare campaign, Promundo
[8] Rapid online perception study about the effects of COVID-19 on children, CRY India, 2020
[9] Refer to "In-depth interview" sub-section in the "Approach and methodology section" for more details.
[10] 'Security and safety' outcomes covered under 'Responsive caregiving'.
[11] The table of experts consulted can be found in the Annex.
[12] All states had a sample target of 750 per state, except Punjab and Haryana where the sample target is 375 each. This was done to ensure zonal representation across India.
[13] One initial in-depth interview was completed in Kerala to help with survey design. As the survey was finalized, it was decided we would proceed with Tamil Nadu instead of Kerala for quantitative data collection. Learnings from the in-depth interview in Kerala were still instructive of the experience of frontline workers during the crisis, and have been included in the in-depth results presented in this report
[14] Details in the Annex
[15] 95% confidence level for all states combined.
[16] Studies show women are primary caregivers in most households with children under 5 years of age. We wanted to over index on women for that reason. To uncover the gender dynamics of care, we also wanted to target sample of secondary caregivers who are men. This split ensured that we would get a reasonably representative sample across both genders.
[17] MosPi 2020 population projections for every state except for Andhra Pradesh and NHM 2020 population projections for Andhra Pradesh
[18] With a confidence interval of +/- 5%
[19] In-depth interviews helped inform the inclusion of questions on change in quantity of food being received from AWCs instead of just quality of food, add answer options for the reasons driving increase in stress faced for parents etc.
[20] The in-depth term extreme users', would, in this case, refer to caregivers and children on the margins of a challenge or solution who can provide unique insights because of their special needs, perspectives, or actions. For example: an Anganwadi worker who hadn't received training since the crisis began or a parent (of a three-year-old) diagnosed with COVID-19.
[21] Seven Anganwadi workers, six ASHA workers, one VHN; six fathers, ten mothers
[22] One initial in-depth interview was completed in Kerala to help with survey design. As the survey was finalized, it was decided we would proceed with Tamil Nadu instead of Kerala for quantitative data collection. Learnings from the in-depth interview in Kerala were still instructive of the experience of Frontline workers during the crisis and have been included in the in-depth results presented in this report.
[23] Non-response rate for Primary/secondary caregivers survey and Frontline workers survey was 23.9% and 21% respectively
[24] 94% of females vs. 29% of males in the survey self-identified as a primary caregiver of their children. As women traditionally are regarded as being the primary caregiver in Indian households, this disparity in perception of primary caregiving could be driven by men overestimating their role in household work and caregiving work. This is recorded in various studies, for instance - "The Production of Inequality: The Gender Division of Labor Across the Transition to Parenthood", Jill E. Yavorsky et al, 2015

[25] Example question: "*Compared to before the Coronavirus pandemic, what change has there been in the amount of time you have spent on providing take-home ration as part of your role*?"; Choice of options: "*Started doing it now"/ "More than before"/ "Same as before"/ "Less than before"/ "Stopped doing it now"/ "Never done it"/ "Don't know - Can't say"*

[26] "Can surveys of women accurately track indicators of maternal and newborn care? A validity and reliability study in Kenya", K. J. McCarthy et al, 2016

[27] How COVID-19 response disrupted health services in India, LiveMint, 2020

[28] ; How COVID-19 response disrupted health services in India, LiveMint, 2020

[29] None of these parameters required any recall of assessing pre-pandemic vs during pandemic (at the time of survey) situation

[30] A lower proportion (7%) of APL households reported limited access to healthcare infrastructure/ services as compared to other segments (9% of Antyodaya/ BPL households)

[31] 16-17% () of Households in Bihar and Rajasthan report not having access to necessary children's healthcare infrastructure/ services

[32] As of Dec'20/ Jan'21 (survey period)

[33] 36%/ 58%/ 6% of ASHAs and 34%/ 61%/ 5% of AWWs reported spending more/ same/ less time on immunization

[34] Note that the sample was not large enough to further analyse these reasons by state or any other demographic cuts.

[35] A higher proportion of rural households cite that medical facilities/ workers were not providing them (41% compared to 17%); a similar proportion of urban (N=218) and rural households (N = 68) cited that Frontline workers/ AWCs were unsafe (34% vs. 23%)

[36]Note that the sample size is small and thus findings here are only indicative (N=106)

[37] Includes 1219 households to report a child aged 0-6 falling ill during the pandemic

[38] Includes 1219 households to report a child aged 0-6 falling ill during the pandemic

[39] We considered only households with pregnant women or children < 9 months of age as of the survey period (Dec'20/ Jan'21) for this question (N=1,181)

[40] The weighted median from all relevant survey respondents is three months; the mean is 2.6 months.

[41] NFHS reports from 2015–16 showed that a median pregnant woman in India was 3.5 months pregnant when she first accessed antenatal care. They also showed that, during the last pregnancy prior to data collection, 70% of women who received antenatal care did so in their first trimester, with an additional 22% receiving it in the fourth or fifth month.

[42] Institutional deliveries dropped by 43 per cent compared to March 2019 according to HMIS data

[43] NSO 2017-18 data says 96% of births in urban areas and 90% of births in rural areas were institutional. HMIS data also suggests that 94% of all deliveries were institutional in FY 20 and from Apr – Jun of FY 21

[44] A few exceptions include: i) 17% of households with a youngest child aged ≤ 2 years in UP (N=426) reported a drop in breastfeeding as they felt more stressed/ weaker; ii) ~20% of respondents (pregnant in Dec'20/ Jan' 21 or with a child aged <9 months) in UP (N=144) and AP (N=111) reported not consuming the recommended dose of iron pills or syrup.

[45] HMIS data also indicate that 85.2% were given IFA tablets in FY 21 (Mar'20-Jun'20), which is similar to 85.1% in FY 20, showing that access to iron supplements has largely recovered.

[46] Similar proportions of rural (80%) s and urban (81%) households reported pregnant women accessing iron supplements.

[47] HMIS data for FY 20 - 85.1% of pregnant women, who had registered their pregnancy at ANC, were given recommended 180 IFA tablets

[48] i.e., more than three months pregnant in Dec'20/ Jan'21 (N=152).

[49] Women with youngest child < 9 months of age in Dec'20/ Jan'21 (N=989).

[50] Includes both respondents who said they spent more time or have started doing it now

[51] Similar proportion of urban (48%)/ rural (47%) Anganwadi workers reported spending more time providing take home rations

[52] Only 5% of households that reported a child receiving the same or more food from Anganwadi Centres also report observing an increase in their child's weakness.

[53] Includes HHs that reported i) the amount of food received by their child has decreased and ii) their child has stopped receiving food.

[54] Includes both respondents who said they spent more time or have started doing it now

[55] Correlation (R=80%) found at the state level between percentage of Anganwadi workers who reported spending less time providing take-home rations and percentage of households to reported receiving less / having

stopped receiving food from Anganwadi Centres; 54% HH in Bihar and 31% HH in Assam reported a reduction in AWC food

[56] Within Odisha, Rajasthan, and Uttar Pradesh, a similar proportion of urban and rural households report increased weakness in their child; Odisha (13% of rural HH vs 16% of urban HH); Rajasthan (9% of rural HH vs 12% of urban HH); Uttar Pradesh (4% of rural HH vs 7% of urban HH)

[57] In Bihar, 9% of rural of HH vs 4% of urban HH reported an increase in weakness in their child during COVID. Conversely, 96% of urban HH said they've not seen their child grow weaker vs 89% of rural HH

[58] Households with a youngest child aged ≤ 2 years in Dec'20/ Jan' 21 (N=3,410)

[59] Households with a child aged 15 months – 6 years in Dec'20/ Jan'21 (N = 8,915)

[60] N=426

[61] With a child aged 15 months – 6 years in Dec'20/ Jan'21 (N=8915)

[62] With a child aged 15 months – 6 years in Dec'20/ Jan'21 (N=8915)

[63] 53% children spending same time with other adults and 10% spending more time with other adults

[64] Most reported same frequency as before – 77% for feeding/bathing, 69% for conversations/singing/reading aloud, 62% for playing

[65] Similar proportion of secondary caregivers (26%) reported an increased frequency of playing time (compared to 22% of primary caregivers)

[66] Please refer to the Appendix for additional details on emerging and innovative programs. The list is indicative and not exhaustive. It has been compiled by Porticus and BvLF.

[67] Guidelines on physical activity, sedentary behavior and sleep for children under 5 years of age, WHO, 2019

[68] 58% children spending the same time, and 14% spending more time compared to pre-pandemic levels

[69] "Is technology impacting my child's social and communications skills?", The Philadelphia Inquirer, 2018

[70] Households with a child aged 15 months – 6 years in Dec'20/ Jan'21 (N = 8,890)

[71] A greater proportion of rural households (50% vs 38% of urban households) reported that their child continued to watch TV/ phone/ computer during the pandemic

[72] This analysis is for parents with children older than 18 months

[73] Other states with low information penetration - Punjab (55%), Assam (47%), Rajasthan (46%); Similar proportion of rural and urban households reported receiving this information

[74] % HH that didn't receive any information on other topics - Nutrition (31%), Health (23%), COVID-19 symptoms (26%), COVID-19 prevention (24%)

[75] A lower proportion of HH from general category (27%) reported their child spent less with Anganwadi/creche worker as compared to 30% parents from non-general category; A similar proportion of HH from general category (46%) reported receiving less support from Anganwadi/creche workers as compared to 48% of HH from non-general category

[76] A greater proportion of BPL HH (35%) reported their child spent less with Anganwadi/creche worker as compared to 26% of APL HH; Similarly, a greater proportion of BPL HH (54%) reported receiving less support from Anganwadi/creche workers as compared to 41% of APL HH

[77] A lower proportion of urban (26%) HH reported their child spent less with Anganwadi/creche worker, as compared to rural HH (32%); Similar proportion of rural/ urban HH reported receiving less support from Anganwadi/creche workers

[78] A lower proportion of single child HH (28%) reported that their child spent less with Anganwadi/creche worker as compared to multi-child HH (31%); A similar proportion of single child HH (46%) reported receiving less support from Anganwadi/creche workers as compared to multi-child HH (49%)

[79] 34% of HH where one or both parents lost their job reported their child spent less with Anganwadi/creche worker as compared 27% of HH where that is not the case; Similarly, 55% of HH where one or both parents lost their job reported receiving less support from Anganwadi/creche workers as compared to 43% of HH where that is not the case

[80] 30% of HH where one or both parents got a pay cut reported their child spent less with Anganwadi/creche worker; as compared to 25% of HH where that is not the case (pay increase) Similarly, 51% of HH where one or both parents got a pay cut reported receiving less support from Anganwadi/creche workers as compared to 49% of HH where that is not the case (pay increase)

[81] Only 20% of HH belonging to APL category reported not being able to give enough time and attention to their child (vs. 34% of BPL HH); Only 40% of HH belonging to APL category reported using stricter discipling with their child (vs. 48% of BPL/ Antyodaya HH);

[82] Only 25% of HH belonging to general category reported not being able to give enough time and attention to their child (vs. 29% of HH belonging to non-general category); Similarly, only 39% of HH belonging to general category reported using stricter discipling with their child (vs. 47% of HH belonging to non-general category)

[83] Only 24% of urban HH reported not being able to give enough time and attention to their child (vs. 30% of rural HH); Similarly, only 41% of urban HH reported using stricter discipling with their child (vs. 49% of rural HH)
[84] 35% of HH where either of the parents reported loss of paid work reported not being able to give enough time and attention to their child (vs. 23% of HH where that is not the case); Similarly, 50% of HH where either of the parents reported loss of paid work reported using stricter discipling with their child (vs. 44% of HH where that is not the case)
[85] Only 21% and 15% of urban parents cited feeling more stress and tired respectively, as compared to 26% and 19% of rural parents (vs) (from HH with children aged 15 months – 6 years)
[86] Respondent marked as being more stress/tired if he/she has reported feeling more stress without mentioning feeling less tired OR feeling more tired without mentioning feeling less stressed
[87] Only 23% and 16% of parents in single-child households) cite feeling more stress and tired respectively as compared to 26% and 19% of parents in multi-child households (vs (with children aged 15 months – 6 years); these numbers also hold true for parents with children across age groups in this survey
[88] 52% and 35% of parents who reported feeling more stress/tired compared to before March 2020 said they agree with using stricter disciplining technique with their child and not being able to give enough time and attention to their child respectively (vs 44% and 26% for parents who didn't report feeling more stressed/tired)
[89] "Discussing digital technology overuse in children and adolescents during the COVID-19 pandemic and beyond: On the importance of considering Affective Neuroscience Theory", C. Montag et al, 2020
[90] 62% and 42% of parents who agreed with getting less support from Anganwadi/creche workers because of COVID-19 said they agree with using stricter disciplining technique with their child and not being able to give enough time and attention to their child respectively (vs 29% and 16% for parents who disagreed with getting less support)
[91] Following question from the Learning section has discarded from further analysis due to poor quality of data recorded – "*Where is <name of child> going in person to learn currently"*
[92] 42% of both households with male/ female children reported their child accessing distance learning
[93] 42% of rural households reported their child accessing distance learning; 43% of urban households reported the same
[94] 47% of children accessing in person learning in Mar'20 reported accessing distance learning in Dec'20/ Jan'21 (vs 30% of children who didn't access in person learning). In rural areas the variation was 47% vs 30%, while in urban areas it was 49% vs 28%
[95] 76% of households from Tamil Nadu reported their children accessing in-person learning pre-pandemic, which is no significantly different from the overall (11 state) proportion of 71% of households reporting the same
[96] Uttar Pradesh's Mission Prerna, which aims to build foundational learning skills in young children with parental intervention has provided engaging educational programmes across various mediums (mobile phones, television, or radio) and may have contributed to higher penetration of distance learning in UP ("Mission Prerna': Suresh Raina lends support to Uttar Pradesh govt's early childhood learning initiative", Financial Express, 2020)
[97] No difference between rural/ urban households in this respect
[98] Similar proportions observed between rural vs urban households in avenues used for distance learning - 34% of rural and 32% of urban HH reported using textbook/ worksheets; 34% of rural and 31% of urban HH reported using storybooks; 30% of rural and 26% of urban HH reported using TV; 28% of rural and 30% of urban HH report using Youtube;
[99] 11% of rural and 24% of urban HH reported using SMS or Whatsapp for distance learning
[100] No difference seen between urban and rural HH
[101] Includes providing pre-school education and/ or creating learning materials
[102] 9% had stopped providing learning services, 26% had reduced their time, 34% reported spending the same time as before, and 25% had increased their time spent on learning activities.
[103] A similar proportion of rural Anganwadi workers (35%) reported reducing time spent vs 38% of their urban counterparts
[104]Similar proportion of rural and urban AWW had reasons for less time spent on providing educational services - 72% of rural (vs 68% of urban) AWWs reported AWC closure as their reason for less time spent; 29% of rural (vs 18% of urban) AWWs reported public's fear of AWWs infecting them as their reason for less time spent; 22% of rural (vs 19% of urban) AWWs reported instructions from supervisor as their reason for lesser time spent
[105] Further urban vs rural analysis could not be done as the N for urban Anganwadi workers very small (< 20 in most cases)

[106] Includes proportion of households choosing the response, "Teachers or volunteers to be in touch more frequently with my child" or "Guidance/advice from the school or the government on how to get my children to study better" in response to the question "*What support do you need from the centre/ school/ government to ensure your child continues learning?*"
[107] No statistically significant difference between AWWs who reported not receiving necessary support in rural areas (25%) and urban areas (18%)
[108] In contrast, 69% of Anganwadi workers who report being supported in terms of necessary training and tools report facing challenges
[109] 22% of Anganwadi workers who are still providing learning services and do not receive all the necessary support report not having the right digital content (vs 7% of those who have received all necessary support)
[110] 33% of Anganwadi workers who are still providing learning services and do not receive all the necessary support report not having access to a suitable device (vs 14% of those who have received all necessary support)
[111] 28% of Anganwadi workers who are still providing learning services and do not receive all the necessary support having to incur additional data expenses (vs 15% of those who have received all necessary support)
[112] A higher proportion of HH who didn't find distance learning more effective than in person wished for schools to re-open (60%) as compared to those who found it more effective (40%)
[113] Higher penetration of distance learning, lower proportion of HH citing challenges faced in helping their children learn, higher proportion of households receiving information on learning.
[114] N=2,916
[115] In the survey period (Jan/ Feb 2021) when compared to March 2020 (pre-pandemic).
[116] A greater proportion of urban Frontline workers (42%) reported an increase in stress compared to rural Frontline workers (36%); these numbers are across all states
[117] A greater proportion of VHNs (75%) reported feeling more stressed when compared to others (Anganwadi Workers (39%) and ASHAs (34%))
[118] A majority of ASHAs/ VHNs and AWWs, separately, also reported finding their workload unmanageable.
[119] In Tamil Nadu a greater proportion of urban Frontline workers found their work manageable, as compared to rural frontline workers - Urban Tamil Nadu (91%, *N=48)* vs Rural Tamil Nadu (70%, *N=383*), while the numbers were similar for - Urban Rajasthan (61%, *N=56)* vs Rural Rajasthan (54%, *N=251*)
[120] Only 32% of frontline workers who think their workload is manageable reported higher stress when comparted to 40% of frontline workers who found their workload unmanageable.
[121] Our data also suggested that a greater proportion of frontline workers who reported higher stress also reported their workload was unmanageable (48%) when compared to 44% of frontline workers overall
[122] Ratio of residents-to-frontline workers across states computed by dividing population per state with number of ASHAs, Anganwadi workers and VHNs (if applicable) in that state. Source:- State level population; # of ASHAs; # of Anganwadi workers; Tamil Nadu State Database on VHNs
[123] Urban/rural differences were not calculated in each state because of the unavailability of the number of rural/urban Anganwadi workers for each state
[124] NHM guidelines on ASHA
[125] Child development Annual Report (2017-18)
[126] COVID-19 cases per state as of 2nd Jan 2021 taken from - COVID-19 cases
[127] In Dec '20 / Jan '21 when compared to pre-pandemic (Mar '20).
[128] Limited difference between proportion of rural (27%) and urban (29%) frontline workers to report meeting more number of families due to COVID
[129] 72% of households reported receiving information on topic of COVID-19 symptom identification, 75% households report receiving information on precautions to be taken against the novel coronavirus.
[130] Similar proportion of rural (as comparted to urban) AWWs and ASHAs reported spending more time on core tasks. 42% of rural AWWs and 37% of urban AWWs reported spending more time on core tasks. Similarly, 63% of rural ASHAs/ VHNs reported spending more time on core duties when compared with their urban counterparts (59%)
[131] A further 12% of AWWs reported spending same time cumulatively on their core duties
[132] A further 29% of ASHAs reported spending same time on their core duties.
[133] Most frontline workers who reported working more hours reported spending more time on core duties (72%) and non-COVID-19 administrative tasks (74%).
[134] 48% of frontline workers who report working more hours also report feeling more stress, while only 28% of frontline workers who report working the same hours report increased stress
[135] N=1,359; frontline workers who report facing an increase in stress and/ or tiredness

[136] Providing COVID-19 related information, Producing/ distributing essentials like masks, Contact tracing, Providing assistance to COVID-19 affected patients. Additional details in "Impact on frontline workers' lives section", page 49

[137] 90% of AWWs who think they have all tools used their phone for COVID-19 tasks vs 75% of AWWs who don't, 83% of AWWs who think they have all tools used their phone for caregiving/ learning tasks vs 64% of AWWs who don't; 91% of AWWs who think they have all tools used their phone for counselling parents on caregiving vs 74% of AWWs who don't; 91% of AWWs who think they have all tools used their phone for breastfeeding counselling vs 73% of AWWs who don't; 92% of AWWs who think they have all tools used their phone for receiving training vs 73% of AWWs who don't; and 89% of AWWs who think they have all tools used their phone for administrative tasks vs 71% of AWWs who don't

[138] 80% of ASHA/ VHNs who think they have all tools used their phone for COVID-19 tasks vs 64% of ASHA/ VHNs who don't, 82% of ASHAs/ VHNs who think they have all tools used their phone for breastfeeding counselling vs 65% of ASHAs/ VHNs who don't; 79% of ASHAs/ VHNs who think they have all tools used their phone for receiving training vs 58% of ASHAs/ VHNs who don't; and 77% of ASHAs/ VHNs who think they have all tools used their phone for administrative tasks vs 52% of ASHAs/ VHNs who don't

[139] Only 58% of frontline workers in Haryana, 65% of frontline workers in Rajasthan, 67% of frontline workers in Bihar reported they have all necessary tools

[140] No such differences were found in case of rural/ urban frontline workers. However, only 67% of ASHAs believed they have necessary tools when compared with 81% of Anganwadi workers

[141] 5-10 percentage points more AWWs reported using their phone for work if they are smartphone users (vs feature phone users); 90% of AWWs who are smartphone users used their phone for breastfeeding counselling vs 82% of AWWs who are feature phone users; 91% of AWWs who are smartphone users used their phone for receiving training vs 84% of AWWs who are feature phone users; and 88% of AWWs who are smartphone users used their phone for administrative tasks vs 76% of AWWs who are featurephone users

[142] 5-15 percentage points more ASHAs/ VHNs reported using their phone for work if they are smartphone users (vs feature phone users); 83% of frontline workers ASHA/ VHNs are smartphone users used their phone for COVID-19 task related work vs 72% of ASHA/ VHNs who are featurephone users; 83% of ASHA/ VHNs who are smartphone users used their phone for receiving training vs 68% of ASHA/ VHNs who are feature phone users; and 85% of ASHA/ VHNs who are smartphone users used their phone for administrative tasks vs 62% of ASHA/ VHNs who are featurephone users

[143] The quadrants have been divided basis 11 state weighted average proportion of frontline workers to report having positive social capital (50%) and proportion of frontline workes to report finding their training sufficient (57%)

[144] To elaborate further, we assessed frontline workers' social capital based on their responses to four questions asking them how well-received their role is in general, along with their response to three questions on how supported they feel, given the COVID-19 situation. We assigned a score of +1/ 0/ -1 based on the frontline worker response to the statement being positive/ non-committal/ negative, respectively. We classified frontline workers as having a positive social capital if they scored +4 on the general perception response set of (four) questions, and earned a positive score on the COVID-specific set of (three) questions. The general assessment of frontline worker social capital drew on caregivers' assessment of the degree to which they felt i) respected by their families; ii) respected by their community, iii) proud of their own role and, iv) believed that their work is important for the community. We derived an assessment of frontline workers' social capital specifically during COVID-19 based on the degree to which frontline workers felt that they felt they had i) gained community/ family approval despite COVID, ii) come into more contact with government officials due to COVID, and iii) not encountered stigma/ discrimination despite COVID.

[145] A majority of frontline workers in majorly positive on social capital states like Maharashtra (66%) and Odisha (82%) reported working more hours in Jan/ Feb 2021 than in Mar 2020. Yet these states have low proportions of frontline workers reporting their work to be unmanageable

[146] A higher proportion of frontline workers with 12+ years of education (59%) reported positive social capital vs overall (47%);)

[147] At state level, an inverse correlation with R=60% exists between both a) % of ASHAs/VHNs to report positive social capital and % of ASHAs/ VHNs to report their workload is unmanageable, and b) % of AWWs to report positive social capital and % of AWWs to report their workload is unmanageable. Graphs showing these correlations in Annexure of Findings

[148] In Rajasthan and Tamil Nadu a similar proportion of urban/ rural frontline workers have positive social capital - 32% urban, *N=56* vs 27% rural, *N=251*, in the case of Tamil Nadu, and 7% urban, *N = 48* vs 15% rural, *N=383* in the case of Rajasthan

[149] Only 14% of frontline workers in Tamil Nadu, 5% in Andhra Pradesh, 28% each in Bihar and Rajasthan reported having positive social capital
[150] The median residents- to- ASHA/ VHN ratio is 1395 across 11 states. This has been rounded up to 1400 and set as the threshold for analysis.
[151] N=1,396 for the "received/ did not receive adequate training" graph as ASHAs/ VHNs who said neither agreed nor disagreed with receiving adequate training have been excluded from the computation
[152] The median residents- to- AWW ratio is 1124 across 11 states This has been rounded up to 1200 and set as the threshold for analysis.
[153] N=1,271 for the received/ did not receive adequate training as AWWs who said neither agreed nor disagreed with receiving adequate training have been excluded from the computation
[154] 17% of fathers said that that they're spending more time with their child; ~15-20% of them said they're spending more time feeding/bathing/playing etc. with their children.; ~15% also said they helping their child learn by themselves
[155] "The power of dads in childhood development–during a pandemic and beyond", Brookings, 2020
[156] MenCare campaign, Promundo
[157] 43% of urban households, 35% of rural households.
[158] Healthcare goes mobile: Evolution of teleconsultation and e-pharmacy in new Normal, EY, 2020
[159] Of the 1,120 HH to have reported receiving medical attention for their child's illness during the pandemic, 93% reported receiving medical attention in person, 6% report receiving it over a call, and 1% over the internet.
[160] 74% of HH to report an increase in stress/ tiredness (N=3100) cited fear of Coronavirus as a reason for their stress; 32% of HH to report their children not receiving some/ all vaccinations cited risk of infection posed by AWCs/ frontline workers as their reason for missed vaccinations
[161] 65% of frontline workers to report an increase in stress/ tiredness (N=1359) cited risk of spreading COVID-19 as a reason for their stress
[162] Secondary research also affirms that frontline workers have used phones to great impact during the pandemic – "A friendly voice down the line", UNICEF, 2020 (Excerpt from a new mother's response in the study – "*She makes at least three to four calls to pregnant women and new mothers every day. She spends around 15 minutes talking to the mothers and discussing important topics and sharing information related to their health, the infants' well-being and most importantly breastfeeding*")
[163] Msakhi for example is an application to support health workers conduct routine mother and child care activities - MSakhi: digitising healthcare at the grassroots, DownToEarth, 2016
[164] Budget push can turn ASHA workers to digital health agents, Kiran Mazumdar Shaw, New Indian Express, 2020
[165] Research suggests that effective communication and positive, safe, supportive learning environments can help frontline healthcare workers better cope with disease outbreaks, associated stigma, and stress ("Supporting resilience and mental well-being in frontline healthcare professionals during and after a pandemic", Cochrane, 2020).
[166] We prioritized these because we sought to test our instruments whether our instruments would work in some of the areas that faced extreme challenges to care giving: The COVID-19 burden was very high in Maharashtra; Uttar Pradesh is a heterogenous state that often struggles with poor service delivery
[167] 6 mothers, 3 fathers, 3 ASHAs, and 3 Anganwadi workers
[168] For instance, after the pre-test, we changed "COVID-19" to just "Coronavirus" in the questions' text in the surveys, because the pre-test showed that respondents were more familiar with commonly used phrase "Coronavirus"
[169] For instance, after the pre-test, we changed the phrasing and options of the question assessing change in food consumption for children from - "How has the amount of food that <name of youngest child> consumed changed.." to "Does <name of child> currently eat more or less food..". This change to a more direct line of questioning was done to avoid misinterpretation by the respondents
[170] 20 mothers, 10 fathers, 6 ASHAs, and 6 Anganwadi workers) across Punjab, Rajasthan, Maharashtra, Tamil Nadu, Andhra Pradesh, Odisha, and Assam
[171] Example: We called back to confirm the responses of respondents for whom the difference between their reported age and tenure as an ASHA/AWW was less than 18 years. This inconsistency occurred because some respondents answered with the age they were when they started working as an frontline worker instead on how long they had been working as a caregiver. Responses were then corrected based on these call-backs.
[172] Children's age cohort refers to 0-3 year-olds and 3-6 year-olds. There were households with only 0-3 year-old children, only 3-6 year-old children and both 0-3 and 3-6 year-old children in our survey

[173] Source for '% households with at least one 0-6 year old (5 years completed)': NFHS 2015-2016; for 'total population' for every state except for Andhra Pradesh: MosPi 2020 population projections; for 'total population' for Andhra Pradesh: NHM 2020 population projections; for 'Avg. household size': National Census 2011
[174] We did not have access to a single source that provided all the required indicators
[175] Source for # of caregivers by occupation - Lok Sabha questions, 2020, MWCD Press release, and Tamil Nadu's state VHNs database
[176] Based on a 2020 RTI plea by the Hindu
[177] Based on June 2020 quarterly NHM report
[178] Welch's t-test, or unequal variances t-test, is a two-sample location test which is used to test the hypothesis that two populations have equal means. They are typically applied when the statistical units underlying the two samples being compared are non-overlapping
[179] In statistics, family-wise error rate (FWER) is the probability of making one or more false discoveries, or type I errors when performing multiple hypotheses tests.
[180] Antenatal care
[181] Pregnant and Lactating Women
[182] Postnatal care
[183] Antenatal care
[184] Pregnant and Lactating Women
[185] Postnatal care
[186] In the case of the Anganwadi worker core duty index, we include the following six activities for computation: i) counselling parents on caregiving, ii) providing preschool education, iii) providing home-cooked meals, iv) providing take-home rations, v) managing children's health, and vi) supporting vaccination. On the other hand, for the ASHA core duty index, we include the following five activities: i) supporting pregnant and lactating women's access to antenatal care, ii) counselling pregnant and lactating women on breastfeeding, iii) supporting pregnant and lactating women in childbirth and with postnatal care, iv) providing vaccination, and v) managing children's health.


सत्यमेव जयते
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