Delhi NCR Coronavirus Telephone Survey- Round 1

April 3-6, 2020

Preliminary Report

NCAER National Data Innovation Centre

April 12, 2020

This is a preliminary report being released quickly after completing the DCVTS Round 1 due to the urgency of producing evidence to help map sensible strategies for fighting the Coronavirus Pandemic. Comments and suggestions are welcome and should be sent to sdesai@ncaer.org and spramanik@ncaer.org. All rights reserved. The material in this publication is copyrighted. NCAER encourages the dissemination of its work and will normally grant permission to reproduce portions of the work promptly. This work is the product of the research staff of NCAER. The findings, interpretations and conclusions expressed herein do not necessarily represent the views of the Governing Body or Management of NCAER.

Recommended citation:

NCAER National Data Innovation Centre (2020). Delhi NCR Coronavirus Telephone Survey- Round 1 (April 3-6): Preliminary report. Available online http://testnew.ncaer.org/image/userfiles/file/NDIC-TEL/DCVTS%20Results%202020-04-12-FINAL.pdf. Published by National Council of Applied Economic Research, New Delhi.

NCAER SINCE 1956 QUALITY. RELEVANCE. IMPACT

Key Findings and Implications

Communications strategies have worked, but need refining

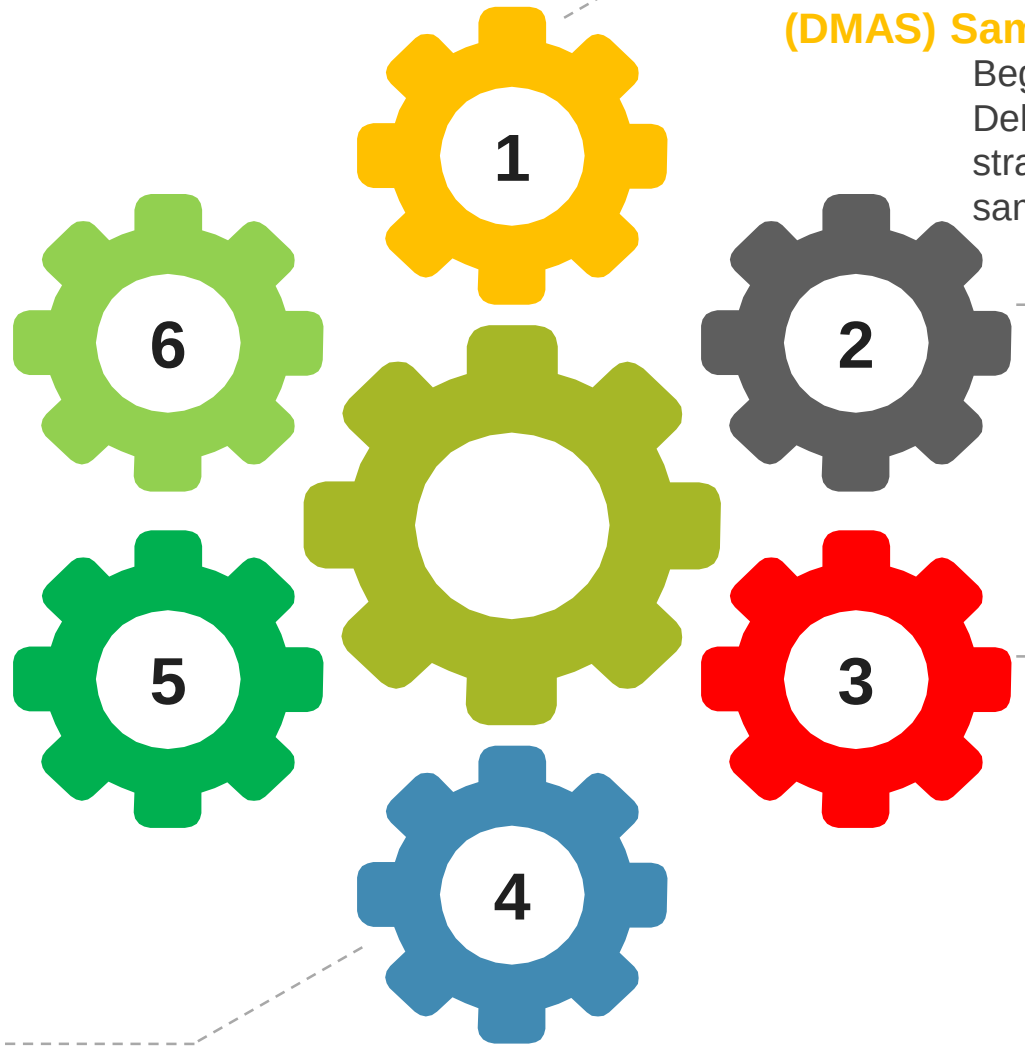
About 85% of households have seen incomes drop, particularly households with informal sector workers

People are trying hard to practice social distancing and there is continued support for lockdown

Supply shortages are affecting about 29% of households

NCAER SINCE 1956 QUALITY. RELEVANCE. IMPACT

Delhi NCR Coronavirus Telephone Survey (DCVTS)



1. Delhi Metropolitan Area Study (DMAS) Sample

Began in Feb 2019, ~ 5200 households in Delhi NCR region selected using 3 stage stratified cluster sampling. Urban and rural sample in Delhi, Haryana, UP & Rajasthan.

2. Quarterly Interviews

Tremendous background data on income, consumption & health status- randomly assigned half the DMAS sample, ~2200

3. Rapid Assessments using Telephone Interviews: April 3-6, 2020

10-12 min interview of DMAS quarterly sample households about knowledge, attitude and practices around the Coronavirus

4. Sample of ~1750 households

Higher acceptance due to prior relationship. About 77% response rate

5. DCVTS: A Representative sample of Delhi NCR

DMAS sampling frame of 132 villages and 138 urban blocks were used for DCVTS

6. Combining DCVTS & DMAS gives rich data

Telephone surveys are short, but we can build on prior data from DMAS

NCAER SINCE 1956 QUALITY. RELEVANCE. IMPACT

About 77% response rate, excellent for a phone survey

- Worldwide, respondents are less likely to participate in telephone surveys
- Those who cooperate tend to be more selective, so there could be a selection bias
- DCVTS was able to interview 77% of the DMAS sample of 2,274 households interviewed in November 2019-January 2020, a very good response rate for telephone surveys
  - Similar response rates across urban and rural areas
- High response rate may be due to:
  - Prior face-to-face contact with respondents
  - Respondents may have more time during the lockdown period
- The final sample is very similar to the original DMAS sample, suggesting low selection bias

NCAER | SINCE 1956 QUALITY. RELEVANCE. IMPACT

DCVTS sample very similar to DMAS parent sample

Sample characteristics	DMAS (face-to-face survey)	DCVTS (Telephone survey)
Rural Residence	52%	55%
Separate kitchen in the household	63%	63%
Toilet in the household	87%	87%
Piped water indoors	35%	34%
Uses LPG Gas	90%	90%
Average No. of consumer durables owned	18.3	18.3
Household Size	5.2	5.3
Household engages in farming	31%	34%
Household engages in casual labour	29%	29%
Household engages in salaried work	45%	45%
Household has a business	26%	25%
Any household member with college educ.	30%	30%
Any household member above age 60	39%	40%

NCAER SINCE 1956 QUALITY. RELEVANCE. IMPACT

1. Communications strategy seems to be working

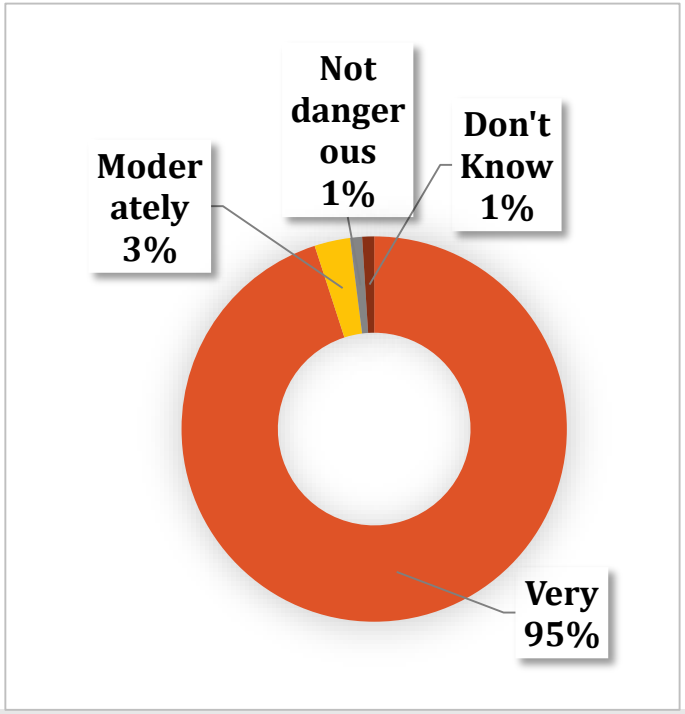
But some refinement needed

Excellent success in communicating overall danger posed by Coronavirus and importance of social distancing.

Next step requires sharpening of key communicating symptoms and distinction between COVID-19 and other respiratory illnesses and to educate people on ***when*** to seek help.

Knowledge of Coronavirus was universal and was considered highly dangerous

- Every single respondent had heard of Coronavirus. No probing was needed.
- It was universally considered highly dangerous
- There are few socio-economic or urban-rural differences in perceived danger of Coronavirus.

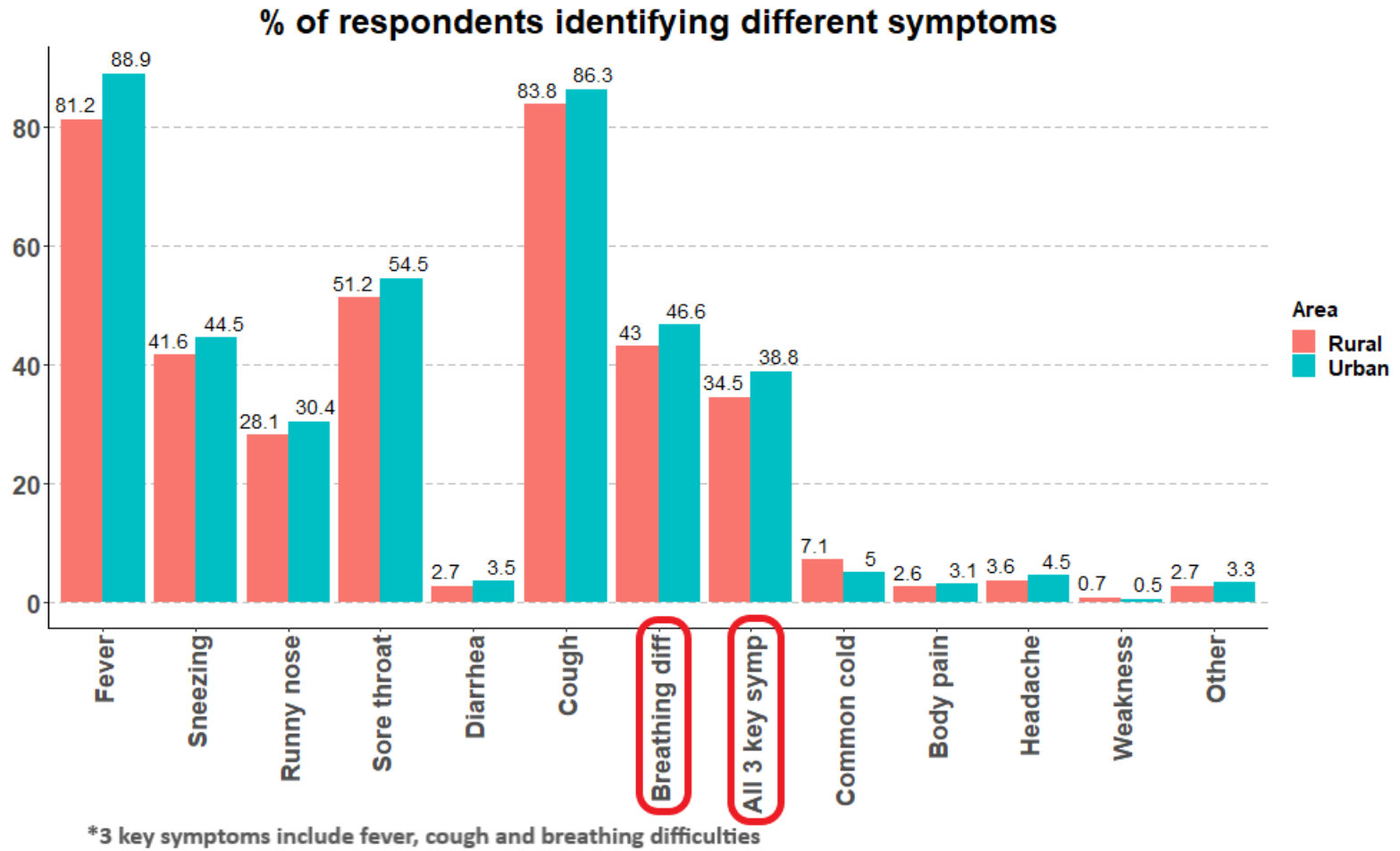


Q: Taking everything into consideration, do you think the Coronavirus is very dangerous, moderately dangerous or not dangerous?

NCAER SINCE 1956 QUALITY. RELEVANCE. IMPACT

Many respondents did not identify breathing difficulties as a symptom

- In last DMAS interview before the pandemic, nearly 11% of household roster members suffered from fever/cold/cough infection in a two week period.
- People's ability to distinguish COVID-19 from common cold or flu will not be easy in general, implying the critical need for more testing of symptomatic cases and cluster testing.



Q: What are the symptoms of a Coronavirus infection?
Interviewer instruction: Do not read out the responses. Check all that respondent mentions. If respondent mentions only one symptom, probe: are there any other symptom that you know of?

NCAER SINCE 1956 QUALITY. RELEVANCE. IMPACT

Educated individuals better able to identify 3 key symptoms but other socioeconomic differences not large

- Basic communication about the danger of a Coronavirus infection working but much more attention needed to convey knowledge of key symptoms and when to seek medical help.
- Percent of respondents able to identify all three key symptoms of COVID-19, *fever, cough and breathing difficulties*, was only 36%.
- Except for education socioeconomic differences in knowledge not significant.

		95% Confidence interval	
	Percent	Lower	Upper
Total	36%	34%	39%
Residence			
Urban	39%	35%	42%
Rural	34%	31%	38%
Education			
Education < 12 class	33%	30%	36%
Education >= 12 class	43%	39%	47%
Asset Quintile			
Poorest	33%	29%	38%
2nd Quintile	32%	27%	38%
Middle	38%	33%	42%
4th Quintile	40%	34%	45%
Richest	42%	35%	50%

NCAER SINCE 1956 QUALITY. RELEVANCE. IMPACT

Message about social distancing largely understood

Preventive measure	%
Handwashing	87.5
At least one social distancing	85.9
Using mask	70.6
Avoiding contacts outside the household	63.2
Avoiding crowded places	46.5
Observing lockdown	35.0
Avoiding contact with infected person	26.7
Covering with handkerchief when coughing or sneezing	26.4
Covering with hand when coughing or sneezing	18.8
All three social distancing measures	12.2
Avoid touching nose, mouth, ear	10.3
Drinking hot water or tea	5.7
Maintaining cleanliness	2.4
Having medicine	1.8
Getting tested	1.2

- Respondents noted many preventive measures but 86% mentioned at least one *social distancing strategies*:
  - Avoiding contact with people outside the household
  - Avoiding crowded places
  - Observing lockdown
- 12% noted all 3, but this may be due to the way question was asked without prompting

Q: How can you protect yourself from the Coronavirus? Tell me about the ways you can protect yourself. Interviewer instruction: Do not read out the responses. Check all that respondent mentions.

NCAER SINCE 1956 QUALITY. RELEVANCE. IMPACT

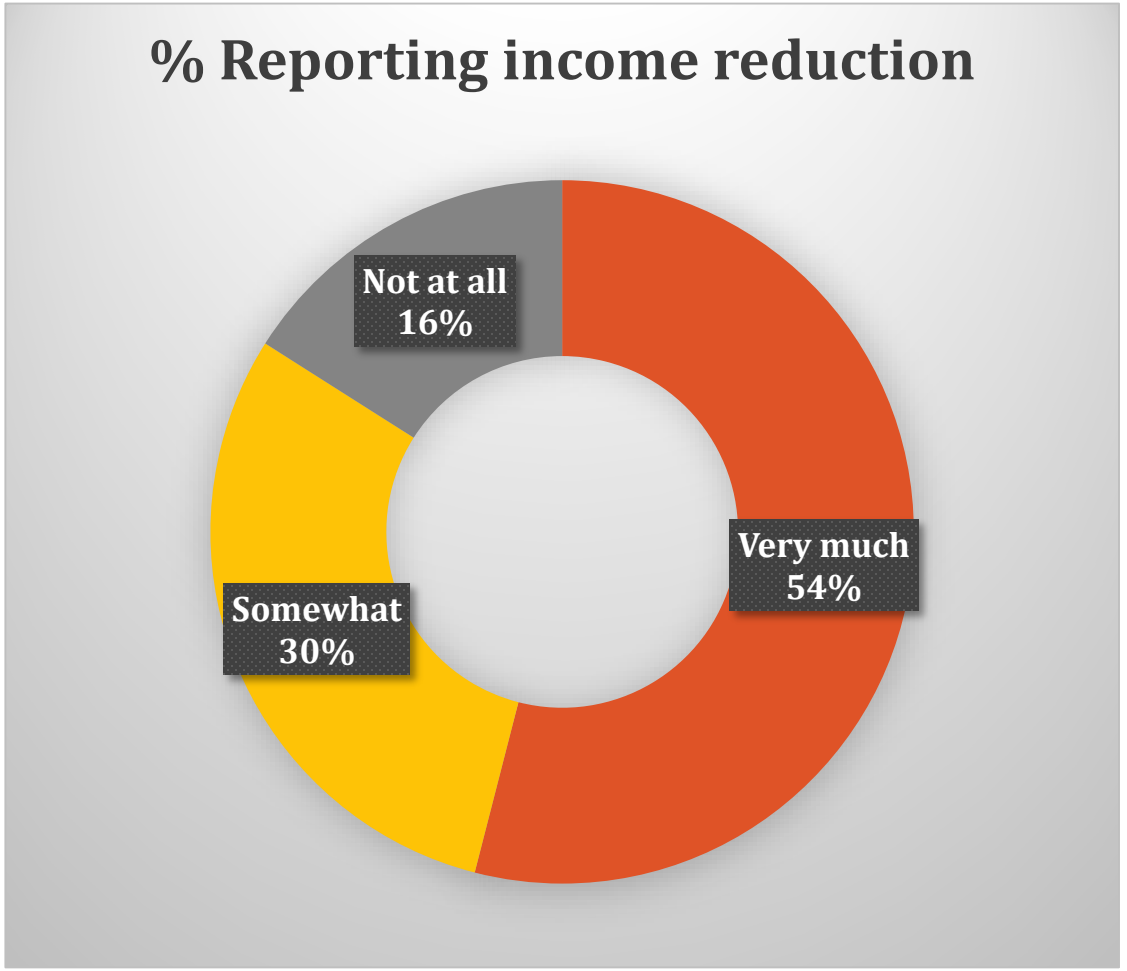
2. Lockdown is accompanied by reduction in income

Effects greater for informal sector workers

A vast majority of DCVTS respondents (84%) noted income or wage reduction in last two weeks; it was least for farmers and salaried workers and most for casual workers.

Coronavirus associated with substantial wage & income reduction

- Nearly half the respondents said Coronavirus outbreak had reduced their incomes very much



Q: Did Coronavirus outbreak reduce the income or wages of your household in the last two weeks? Options: 1. Very much, 2. Somewhat, 3. Not at all

NCAER SINCE 1956 QUALITY. RELEVANCE. IMPACT

Income reduction for most people but greater for informal workers and for poorest households

Casual workers and businesses* most affected by loss of income

Extent of income drop	Very much	Some what	Not at all
Total	55	30	15
Urban	57	28	15
Rural	53	31	16
Farmer	42	38	20
Casual worker	75	20	5
Business	65	25	10
Salaried worker	47	31	22
Other	51	32	17

* Chi-square association test comparing income drop across different occupation categories significant at 0.001 level

Poorer households* are affected more

Extent of income drop	Very much	Somewhat	Not at all
Poorest	64	25	11
2nd Quintile	58	30	12
Middle	54	33	13
4th Quintile	49	28	22
Richest	42	32	26

* Chi-square association test comparing income drop across different asset quintiles significant at 0.001 level

NCAER SINCE 1956 QUALITY. RELEVANCE. IMPACT

Migration not large in this sample but may be a function of the sample

- Only 3.4% respondents (3.7% in rural and 3% in urban area) reported migration in their household in response to the Coronavirus.

Q: In the last two weeks, have you or any members of your household, had to move from one place to another due to the situation arising from the Coronavirus outbreak?

- A vast majority of households did not report any migration in the last two weeks
- 3.4% of Delhi NCR region is still a very large number

NCAER SINCE 1956 QUALITY. RELEVANCE. IMPACT

3. Supply shortages reported by nearly a third of all households

Some households reported inability to obtain essential items

Shortages in supply of food, cooking fuel or medicine affected about 29% households.

This may get worse over time.

NCAER | SINCE 1956 QUALITY. RELEVANCE. IMPACT

Shortages experienced most in certain segments of the society

- Supply shortages were most common in rural areas and among the poorest and less educated households.

Q: Anytime in the last two weeks, did your household experience any shortages of food items, cooking fuel or medicines?

		95% Confidence interval	
	Percent	Lower	Upper
Total	29%	27%	31%
Residence*			
Urban	25%	22%	28%
Rural	33%	30%	36%
Education*			
Education < 12 class	31%	29%	34%
Education >= 12 class	26%	22%	29%
Asset Quintile*			
Poorest	40%	35%	45%
2nd Quintile	31%	26%	36%
Middle	29%	25%	33%
4th Quintile	22%	18%	27%
Richest	15%	10%	21%

* Chi-square association test comparing experience of shortage across different Socio-demographic and economic variables significant at 0.001 level

NCAER SINCE 1956 QUALITY. RELEVANCE. IMPACT

Shortages seem to affect a third of the households

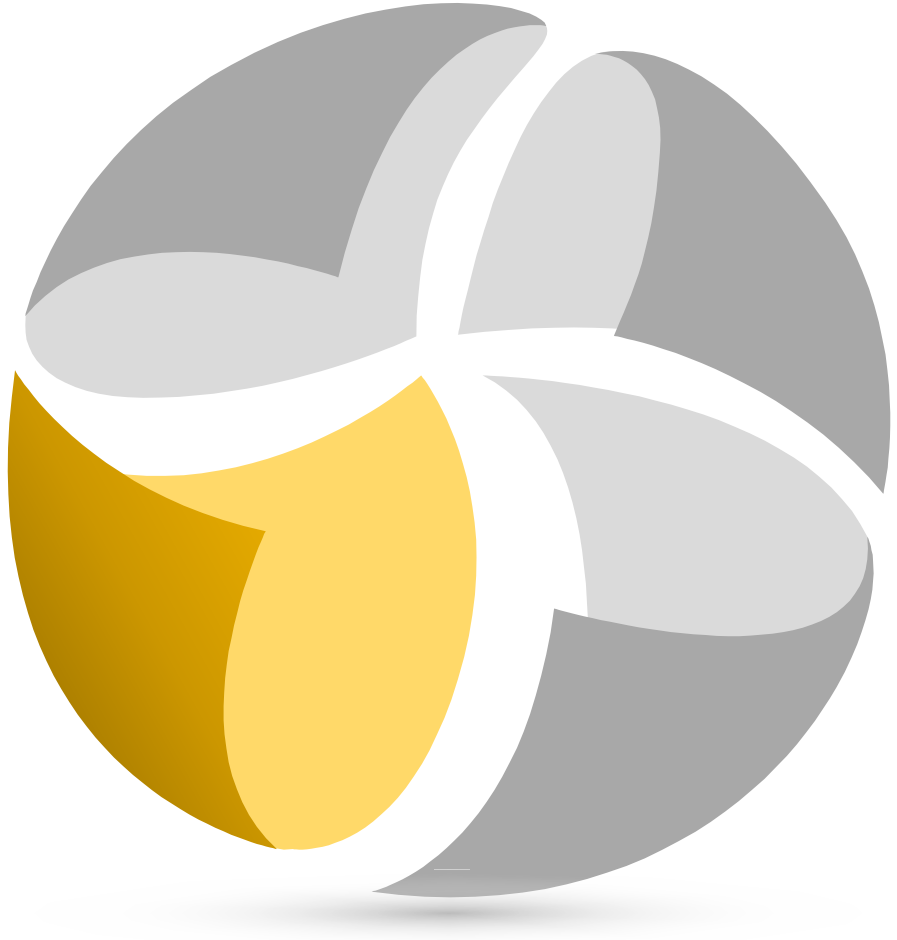
- Shortages in supply of food, cooking fuel or medicine affected about 29.3% households
- There were significant rural (32.6%) and urban (25.3%) differences in experiencing supply shortages
- Due to the lockdown, households experienced supply shortages mostly in accessing vegetables and fruits, followed by cereals

Shortages in....	% of households experienced supply shortages
Vegetables & Fruits	21
Grains	14
Medicine	9
Cooking Fuel	8
Milk	6
Eggs, Meat & Fish	2
Other	1

Q: In the last two weeks, which were the items that you wanted to buy but could not buy because of short supply?

NCAER SINCE 1956 QUALITY. RELEVANCE. IMPACT

4. Continued Support for a Lockdown



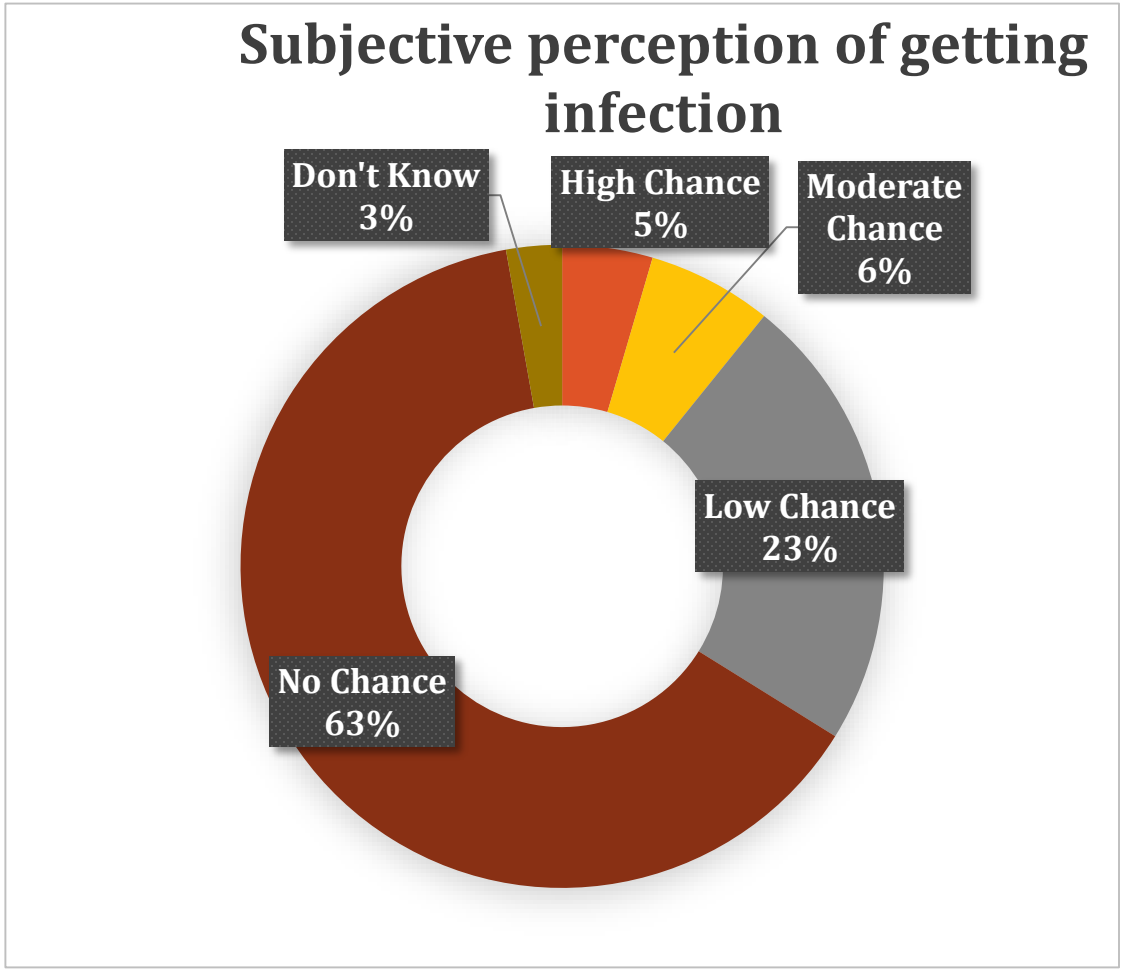
Notably…

In spite of difficulties, respondents were supportive of continuing the lockdown for an additional 2 weeks if necessary

Although almost everyone understood the gravity of Coronavirus infection, few expect to get infected themselves

- As of April 3-6, 2020, almost two-thirds of the respondents saw no chance of getting infected themselves or their families getting infected

Q: According to you, what is the chance that you and your household members will get infected with the Coronavirus?



NCAER SINCE 1956 QUALITY. RELEVANCE. IMPACT

Social distancing not easy for Indian households

Q: Please think about the people you were in contact with yesterday from when you woke up in the morning till when you slept. A contact is defined as:

- *a **two-way conversation** in the physical presence of another person or*
- *a **physical presence** of another person within 6 feet or*
- ***direct physical contact** (for example hand holding, sharing a motorcycle or bicycle ride, or holding a baby).*

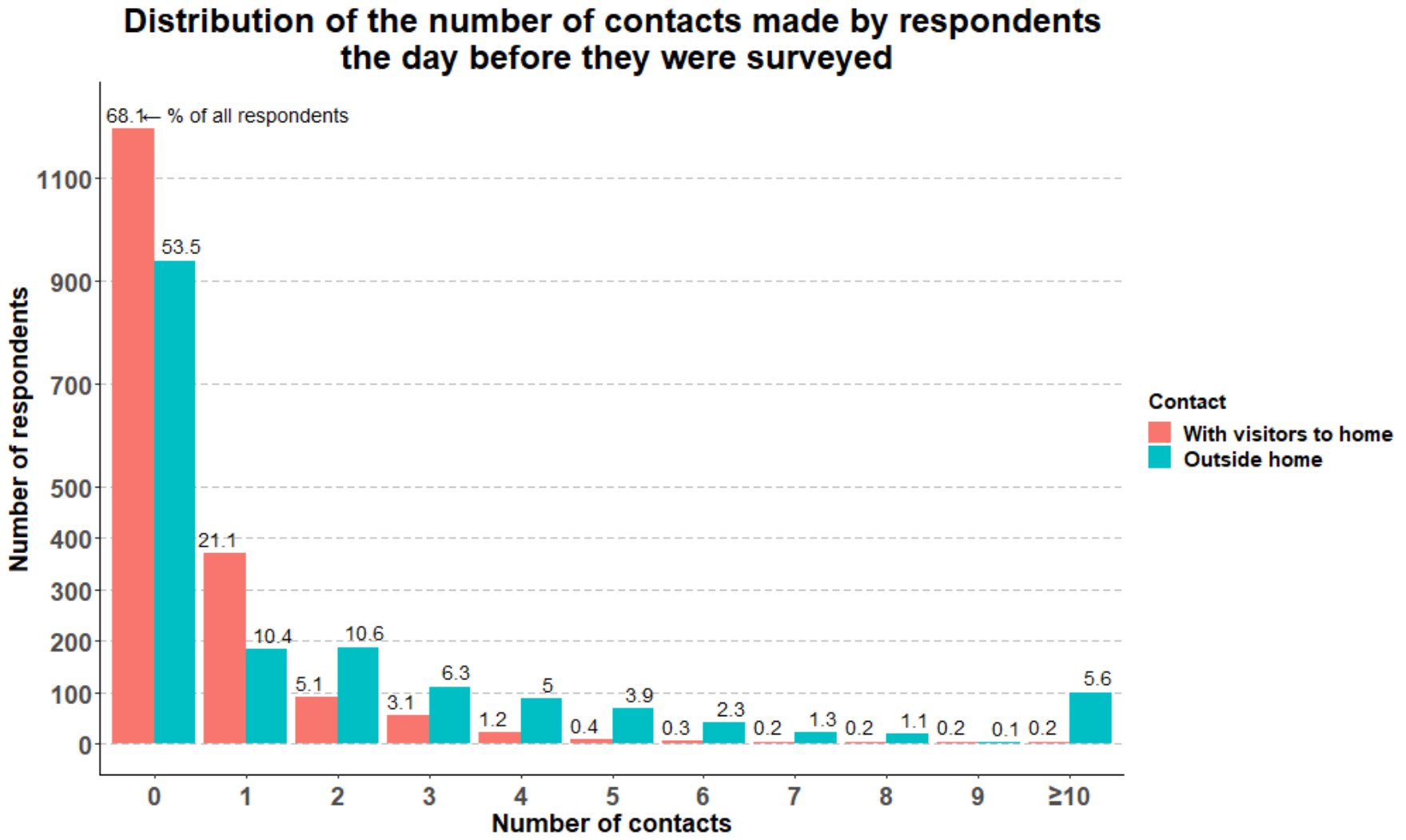
A. How many people did you come contact with yesterday within your house? This includes people currently residing in your house and people who might have come to your house yesterday such as neighbours, relatives, milkman, servants, etc..

B. Besides the members residing in your house, how many people did you come contact with yesterday outside your house?

- Although most people understood and tried to follow social distancing, it was not easy
- Contacts on the day before the survey were divided into contacts inside the house (including household members) and those outside the house
- Median number of visitors *inside the house* is 0
- Median number of contacts *outside the house* is 0
- A minority of individuals (99 out of 1756 respondents) had ***10 or more contacts outside the house***, possibly includes people in occupations like shopkeeper or social worker that did not allow them to distance themselves
- Because of the lockdown, about **36%** respondents answered that the members of their household ***curtailed visiting health facilities when there was a need*** related to medical condition other than Coronavirus infection

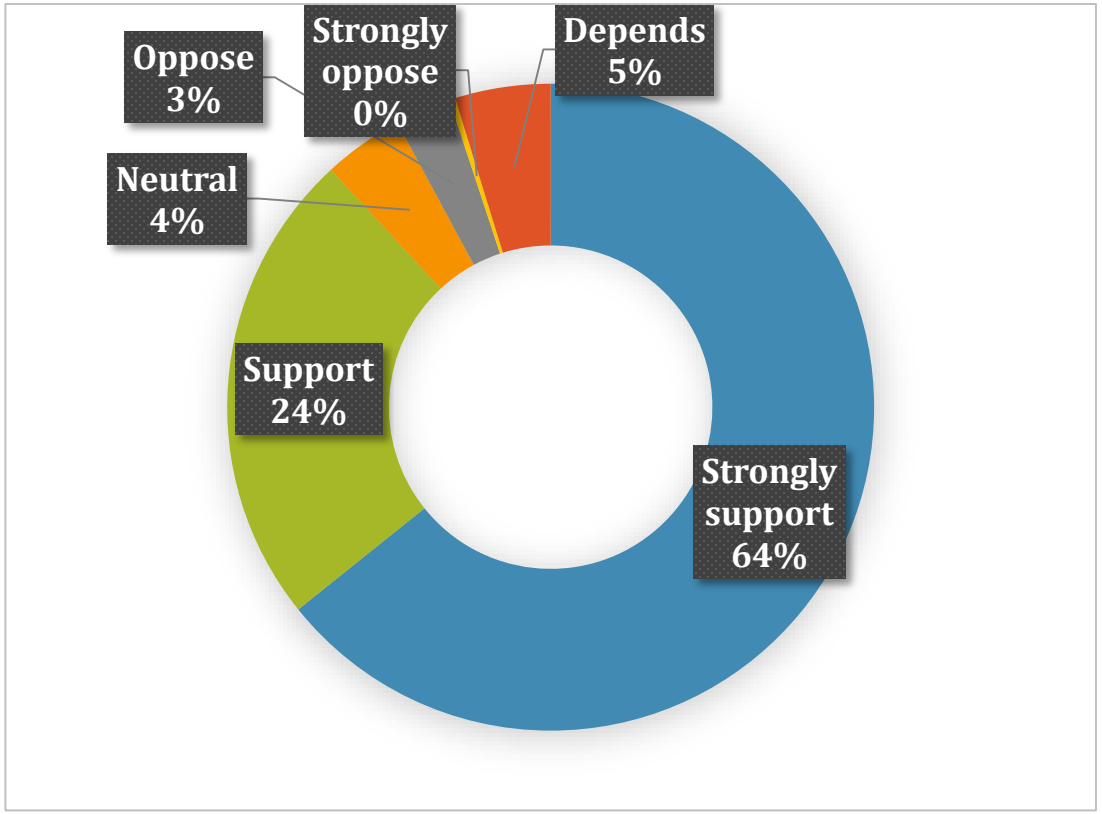
NCAER SINCE 1956 QUALITY. RELEVANCE. IMPACT

Although over 50% of respondents refrained from coming in contact with anyone outside their home, this distancing was not perfect



Respondents strongly supported the idea of extending the lockdown period if needed

Support for extending lockdown by 2 weeks post April 14



Q: In order to limit the spread of the Coronavirus, if the lockdown phase is extended for another two weeks after 14th April, would you support that or oppose that?

NCAER SINCE 1956 QUALITY. RELEVANCE. IMPACT

Ongoing plans to study short- and longer-term pandemic impact

DCVTS

- We plan to repeat this survey every 3 weeks with a different sample from the Delhi NCR region

DMAS

- When feasible to restart field operations and face-to-face longer interviews, we hope to look at:
  - Impact of Coronavirus on health outcomes and expenditures
  - Impact of lockdown on financial status of households
- With before and after data, we will be uniquely placed to evaluate changes in lifestyles of DMAS sample households due to the pandemic

NCAER SINCE 1956 QUALITY. RELEVANCE. IMPACT

About NCAER and NCAER NDIC

NCAER

Established in 1956, NCAER is India's oldest and largest independent, non-profit, economic policy research institute. NCAER's work cuts across many sectors, including growth, macro, trade, infrastructure, logistics, labour, urban, agriculture and rural development, human development, poverty, and consumers. The focus of NCAER's work is on generating and analysing empirical evidence to support and inform policy choices. It is also one of a handful of think tanks globally that combine rigorous analysis and policy outreach with deep data collection capabilities, especially for household surveys.

More on NCAER is available on www.ncaer.org

NCAER National Data Innovation Centre

The NCAER National Data Innovation Centre was set up in December 2017 to promote innovation and excellence in data collection and build research capacity to strengthen the data ecosystem in India. The NDIC is envisaged as a hub for providing expertise to policymakers, government statistical agencies and private data collection agencies. NDIC is pursuing three primary goals: [1] To pilot innovative data collection methods and mainstream successful pilots into larger data collection efforts; [2] To impart formal and informal training to a new generation of data scientists; and [3] To serve as a resource for data stakeholders, including Government data agencies and ministries.

NDIC is experimenting with survey instruments and modes of data collection to address shortcomings in existing approaches. The DCVTS is an example of our rapidly building a quick response telephone survey on top of our existing Delhi Metropolitan Area Study, which is a panel study.

NCAER SINCE 1956 QUALITY. RELEVANCE. IMPACT

Acknowledgements

- **NCAER National Data Innovation Centre Team**
  - **Concept, study design, analysis and report:** Sonalde Desai and Santanu Pramanik
  - **Questionnaire design:** Santanu Pramanik, Sonalde Desai, Ruchi Jain, Manjistha Banerji, Reem Ashraf, Pallavi Choudhuri, Debasis Barik, Neerad Deshmukh, Om Prakash Sharma, Abhinav Motheram
  - **Training and field management:** Dinesh Tiwari, Gurpreet Singh, Bijay Chouhan, Arpita Kayal, Sreejith Karunakaran
  - **Quality control and remote monitoring:** Santanu Pramanik, Dinesh Tiwari, Gurpreet Singh, Arpita Kayal, Jaya Koti, Deepa S., Sumiran Chandra, Sreejith Karunakaran, Neeraj Kumar
  - **Preload preparation and data cleaning:** Bijay Chouhan, Jaya Koti, Om Prakash Sharma, Dinesh Tiwari
  - **CATI programing:** Abhinav Motheram and Bijay Chouhan
- **NDIC field team**
- **NCAER Management:** Shekhar Shah, Shashanka Bhide, Anil Sharma, G. C. Manna
- **External advisors:** Sekhar Bonu, Manju Rani, Suneeta Krishnan, Sanjeev Sridharan, Lalit Dandona, Supriya Kumar

NCAER SINCE 1956 QUALITY. RELEVANCE. IMPACT