The impact of COVID-19 on reproductive health care use in India and the US: recruiting a cohort using Facebook Ads.

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Background

COVID-19 and reproductive and maternal health

- COVID-19 and its associated lockdowns and restrictions on movement may be impacting women and men's access to and use of health care services including family planning, prenatal and postnatal care
- Yet we know little of its impact to date, especially in low and middle income countries (LMICs), like India, but even in the US
- Additionally, we do not know how the impact of COVID-19 on access to reproductive and maternal health services will change over time as the pandemic changes

Social Media for recruitment

- Social media, such as Facebook Ads, are a ethical and feasible way of recruiting respondents during a pandemic when other methods, such as in person surveys, are not feasible
- While this approach has been used in more developed regions, such as the US, it has to date not been used much in LMICs like India.
- Additionally, few studies have tried to recruit cohorts using social media to follow over time

This poster presents findings from two studies that used Facebook Ads to recruit cohorts during COVID-19 to understand the impact of the pandemic on maternal and reproductive health

Aims

The aims of these two studies were

1. To describe the impact of COVID-19 on access and use of family planning, prenatal and postnatal care and how these change over time as the pandemic and associated lockdowns shift
2. To add to our knowledge about using social media platforms for recruitment in two understudied areas:
    1. Low and middle income countries, namely, India
    2. For the recruitment of cohorts

Methods

Facebook Ad recruitment approach

- A number of visual ads with images of women (and men in India) at different stages of their life-course were sent out using Facebook ads.
- Ads would appear in someone's Facebook news feed stream, with a link for respondents to click on to learn more.
- If respondents clicked on the link, they were directed to a webpage with information about this study and an informed consent.
- If they consented to participating in the survey, they were then fed the survey questions. Data was collected using a survey programmed into Qualtrics survey software (Provo, Utah, USA)

India

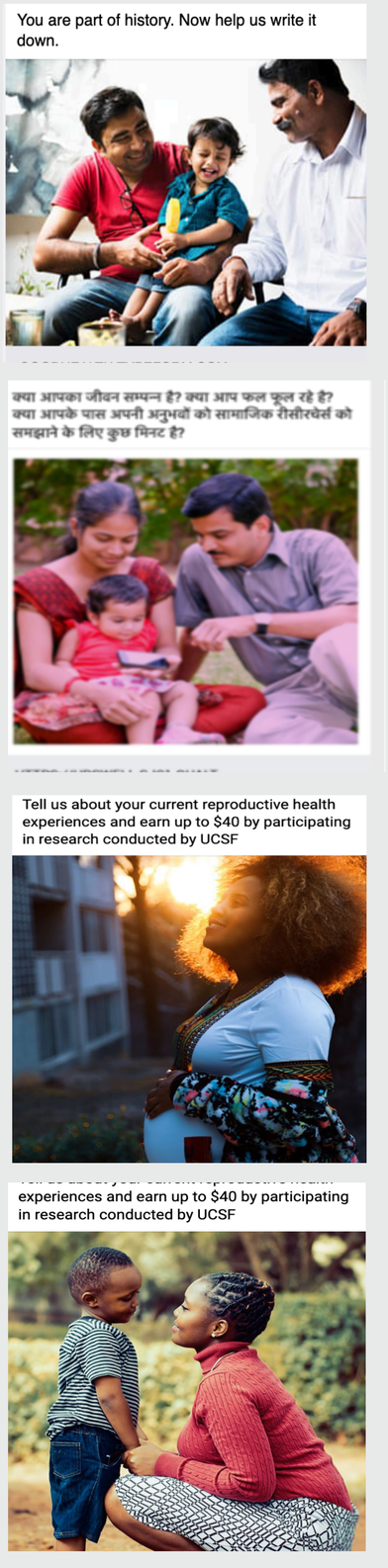
- Online survey data was collected at four timepoints: mid-April, mid-May, mid-June and mid-July, 2020.
- Men and women living in any part of India were recruited for the survey using Facebook advertisements (ads).
- We attempted to oversample women of reproductive age since there are more men on Facebook in India in general and we were interested in reproductive and maternal health outcomes.
- Respondents could take the survey in either Hindi or English. Eligibility criteria included being over 18 years old and living in India.
- Respondents could send the survey link to their family and friends either living in India or outside India. However, analysis was restricted to only respondents living in India.

US

- Online survey data was collected in July, 2020, and women will be followed up in December, 2020
- We recruited English- or Spanish-speaking women living in the US ages 18-45 through Facebook and Instagram Ads
- We aimed to oversample women who were non-white and lived in the South or Midwest, as we hypothesized these women would be most at risk of having their reproductive health access negatively impacted by COVID-19.

Both studies received Human Subjects Approval from the University of California, San Francisco.

Fig 1-4: Sample of Facebook Ads in India (first two) and the US (second two)



Results for India

Recruitment

- While over 50 million ads were shown over time, about 1.6% clicked on it in total (almost 800,000 people). Of those, again about 1.6% started the survey

Table 1: Number of people shown the Facebook Ad, who clicked on the add and who started the survey, by round, April-July 2020, India

	Number fed the Ad, N (%)	Number clicked on Ad, N (%)	Started survey, N (%)
Round 1: (April 14)	3,653,633	63,392 (1.7%)	6,063 (9.6%)
Round 2: (May 15)	21,437,430	332,850 (1.6%)	2,408 (0.7%)
Round 3: (June 18)	11,077,620	159,783 (1.4%)	2,936 (1.8%)
Round 4: (July 17)	14,307,319	237,790 (1.7%)	1,491 (0.6%)
TOTAL	50,476,002	793,815 (1.6%)	12,898 (1.6%)

- The total number of people who completed the survey, after cleaning for suspicious data, dropped from almost 6000 in round 1 to just about 700 in round 4. The population was fairly well distributed and did not change too much over time, with the exception of a much higher proportion of women in Round 2.
- Only 53 people completed all 4 rounds of the survey, but about 250 completed at least 2 rounds.

Table 2: Demographics of the India sample, by round.

	Round 1	Round 2	Round 3	Round 4
Total N	5,980	620	1,881	659
Age Ranges				
<20	335 (5.7%)	22 (3.6%)	52 (3.0%)	14 (3.0%)
20-29	2,985 (50.8%)	316 (51.1%)	423 (24.7%)	100 (21.4%)
30-39	1,683 (28.6%)	138 (22.3%)	495 (28.9%)	93 (19.9%)
40-49	548 (9.3%)	86 (13.9%)	348 (20.3%)	136 (29.1%)
50-59	209 (3.6%)	52 (8.4%)	398 (23.2%)	125 (26.71 %)
Over 60	121 (2.1%)	4 (0.7%)	0 (0.0%)	0 (0.0%)
Female	2,455 (41.8%)	484 (78.3%)	624 (50.5%)	124 (46.8%)
Married	3,410 (58.0%)	412 (66.7%)	965 (78.5%)	214 (81.4%)
Region of India				
North	2,908 (52.2%)	343 (55.5%)	628 (53.9%)	127 (51.8%)
South	610 (10.9%)	39 (6.3%)	70 (6.0%)	19 (7.8%)
East	1,053 (18.9%)	107 (17.3%)	234 (20.1%)	53 (21.6%)
West	1,005 (18.0%)	110 (17.8%)	211 (18.1%)	41 (16.7%)
Pregnancy Status				
Pregnant	198 (6.0%)	25 (7.9%)	38 (6.7%)	7 (6.3%)
Postpartum 1 month	97 (3.0%)	22 (7.0%)	15 (2.7%)	7 (6.3%)
Not pregnant, not sterilized	1,346 (41.0%)	146 (46.2%)	201 (35.6%)	35 (31.5%)
Sterilized/wife sterilized	613 (18.7%)	100 (31.7%)	188 (33.3%)	36 (32.4%)

Reproductive Health findings

Family Planning:

- The majority of both men and women said that their access to family planning had not been affected by COVID-19 (74%)
- Lack of time due to childcare/housework and not being able to go outside due to restrictions were more frequently mentioned than fears or facility closures. Two percent of both men and women said they had stopped their method due to COVID-19 and a handful said they had switched. Also, 2% of respondents said that it had become easier for them to obtain their method.
- The odds of reporting barriers to family planning increased overtime in a steady manner, with people reporting 4.41 times the odds (95% CI=2.14 – 9.08) by July compared to April. People living in urban areas, who had a higher income and who were more educated reported lower odds of facing barriers compared to rural, poorer and less well educated people.

Prenatal care:

- Almost half (49%) of respondents reported no impact of COVID-19 on prenatal care
- Fear of going to the facility was the most commonly mentioned reason care was affected (20%) over all, Women, compared to men, more commonly reported being unable to go to appointments because of lockdowns/restrictions on movement (21% vs 12%) and because the facility was closed (7% vs. 2%). More respondents mentioned fears as a reason they were not planning to deliver at a facility, compared to lockdowns/restrictions
- 7% of women mentioned being more likely to deliver in a facility because of COVID-19.

Postnatal care:

- A little over half (52%) respondents reported no impact of COVID-19 on postnatal care
- Similar to for prenatal care, fear of going to the facility was a primary barrier (16%). Lockdowns and restrictions were also frequently mentioned (12%).
- Postnatal respondents reported fewer impacts on actual place of delivery than prenatal respondents, although a roughly similar percent (3% for postnatal and 4% prenatal) said they were more likely to deliver in a facility because of COVID-19.
- The odds of reporting barriers to prenatal or postnatal care increased in a consistent manner over time, with people in June having increased odds times of reporting barriers compared to people in the first month of data collection (OR=2.73, 95% CI 1.29 – 5.75). No other socio-demographic factors were significantly associated with barriers.

Results for the US

Recruitment

- We recruited 5,535 women in July 2020, of which 4,746 women were eligible. Of these, 96% (N=4,531) provided their email for a follow-up contact.
- Respondents were spread fairly well across the US, considering the population distribution of the US
- The sample was fairly well educated, few were under 20, and about 1/3 were pregnant
- While the sample was still predominately white, we roughly replicated the racial heterogeneity of the US itself and did not substantially underrepresent any subgroups
- Almost half reported loosing income, 20% loosing a job, and almost 10% suffered food insecurity because of COVID-19

Table 3: Demographics of US sample

	Total N=4860
Age	
<=20	257 (5.01%)
21-29	2,062 (40.19)
30-39	2,307 (44.97)
40+	504 (9.82)
Education	
Less than high school	101 (2.08)
High school/GED	548 (11.29)
Technical or at least 1 year of college	1,319 (27.16)
4 years of college	1,451 (29.88)
More than college	1,437 (29.59)
Race	
Black	291 (6.02)
Asian	465 (9.62)
Hispanic/Latina	607 (12.55)
Native American	25 (0.52)
Pacific Islander	8 (0.17)
White	2,924 (60.48)
Mixed Race	475 (9.82)
Other	40 (0.83)
Pregnancy status	
Pregnant	1,442
Gave birth since July 1, 2020	358
Not pregnant and did not give birth since July 1, 2020	2894
Unsure if pregnant	166

Fig 5: Geographic distribution of respondents

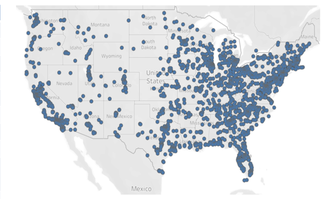


Table 4: Impact of COVID-19 on economic and food security

Experienced the following due to COVID-19	N (%)
Income Loss	2,292 (47.2)
Job Loss	933 (19.3)
Food insecuirty	458 (9.5)

Reproductive Health Findings

Family Planning:

- Among those who did not say that they were not interested in birth control, did not need birth control at this moment, and that they had not tried to make an appointment, about half (N=267, 48.5%) said that they did not face any barriers.
- Of those that reported a barrier, the most common was not being able to have a support person with them (22%). The clinic being closed, being afraid to go to the clinic or not having time due to childcare/household responsibilities were the next more frequently cited reasons.

Prenatal care:

- More pregnant women reported barriers, with only about 20% reporting no barriers (N=263, 19.6%).
- 64% of women reported that not being allowed a companion was a barrier. Fear of going to the clinic, household responsibilities and shelter in place were the most commonly cited other reasons.

Postnatal care:

- About 20 % of postnatal women (N=72, 20.3%) reported no barriers. Similar to for prenatal care, fear of going to the facility was a primary barrier (16%, more for women, 20%, compared to men, 10%). Lockdowns and restrictions were also frequently mentioned (12%).
- 53% reported that not being allowed a companion was a barrier. Household responsibilities, fear of going outside in general, and shelter in place were the next most common barriers.

Factors associated with facing barriers

- Experiencing food insecurity was associated with barriers to family planning
- Being a woman of color, loosing a job, loosing income or food insecurity were all associated with barriers to prenatal care
- Loosing a job or loosing income were associated with barriers to postnatal care
- After controlling for age, income, education, being a woman of color, , loosing a job, loosing income and food insecurity:
- Nothing was significantly associated with barriers to family planning
- Being a woman of color and income loss were associated with barriers to prenatal care
- Only income loss was associated with barriers to postnatal care.

Conclusions

- Facebook Ads hold potential for recruiting large samples quickly in both the US and India
- Recruiting a cohort seems more challenging at least in India, still don't know about the US
    - Different approaches to follow up (not only email) might help
- COVID-19 appears to be affecting reproductive and maternal health care access and use in both India and the US
    - Barriers got worse over time in India, still need to see in the US
- While in India socioeconomic factors were associated with barriers to Family planning, this was not the case in the US
- Economic impacts of COVID-19 were associated with barriers to pre and postnatal care in the US, as was being a woman of color