Rapid Assessment of COVID-19 Impact on Family Planning Access and Use

DATA DOCUMENTATION

1. Introduction

Officially declared a pandemic by the World Health Organization (WHO) on March 11, 2020, coronavirus disease (COVID-19) continues to cause disruption around the world. Beyond COVID-19's direct toll on morbidity and mortality, the pandemic has placed a strain on essential health services, including family planning (FP) services, particularly in low- and middle-income countries (LMICs) where health systems are more fragile. While modeling exercises predicted a decline in contraceptive use and a rise in unintended pregnancies, evidence on the effects of the pandemic on contraceptive behaviors is still emerging. Governments and programs have turned to health system data to examine trends in FP services; however, such analyses are challenged by inconsistent reporting, especially during lockdown periods. Moreover, information on women's perspectives is lacking on challenges both in making contact with and using services and to assist countries to make decisions to ensure continuity of care.

Objectives

This study aims to expand evidence on women's experiences with contraceptive access and use in LMICs during the pandemic to identify potential gaps, and to inform programmatic and policy adjustments. Our focus is not on estimating the effects of the pandemic but on generating evidence from the perspectives of women to illustrate the various ways in which the pandemic may be affecting their journey as they attempt to access and use FP services. This assessment was conducted in Malawi, Nepal, Niger, and Uganda to assist these countries in meeting their commitment to ensure that the FP needs of women and couples continue to be met.

Specific study objectives to:

1. Document access-related reasons for not using contraceptive methods that led to unintended pregnancies;
2. Describe the use of modern contraception among women in potential need of contraception compared to before the pandemic started;
3. Examine women's ability to obtain their preferred method; and
4. Describe barriers to contraceptive access and use.

2. Study design

We conducted a prospective cohort study with 3 rounds of data collection to document women's experiences accessing contraception over the course of the pandemic. **This data documentation file covers the first round of data collection only, which consisted of a short opt in survey, followed by a longer linked survey among a subset of women.** The selection of countries included in this research was guided by research partner presence and available resources, with a desire to represent different geographic regions.

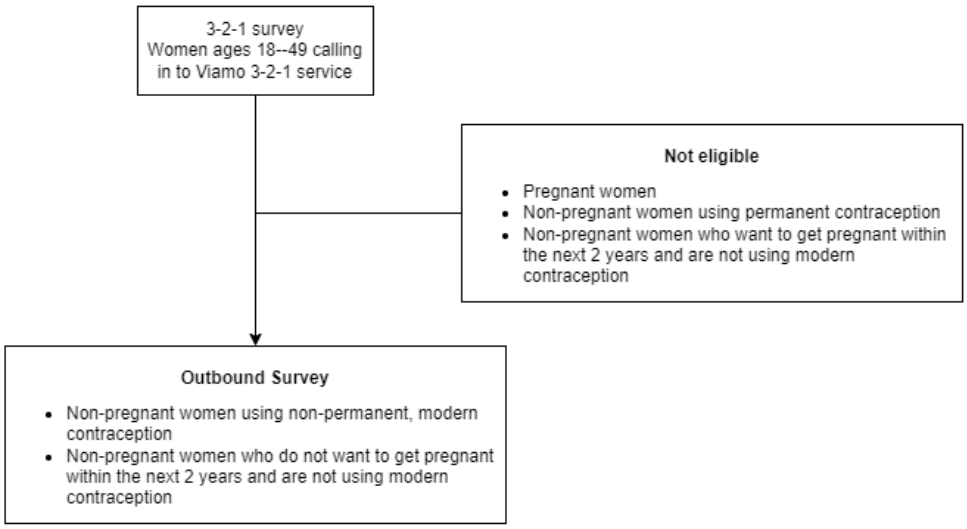
Research participants were recruited and surveyed through the Viamo 3-2-1 Platform (which has since been renamed the Viamo Platform[1]), which is a toll-free, interactive voice response (IVR) service allowing mobile phone callers to access voice messages on various topics that are organized into "channels" and presented in local languages. The platform also allows for short surveys to be conducted

[1] The Viamo Platform - Viamo [last accessed August 16, 2022]

after callers access their desired information. All callers accessing information through the 3-2-1 service (excluding the topics of news, agriculture, nutrition, malaria, and WASH in Niger due to contractual terms) heard a survey recruitment message followed by a consent statement. Participants were those who heard the recruitment message during the first round of data collection, consented to participate, confirmed that they met the study's eligibility criteria, and completed the entire survey. Participants were eligible if they were 1) a woman and 2) between the ages of 18-49 years.

Data collection included a short survey (referred to as 3-2-1 survey) with Viamo 3-2-1 callers, followed within one week by an outbound survey with the subset of participants classified as having a *potential need for modern contraception*, which was defined as (1) nonpregnant women who reported using nonpermanent modern contraception, and (2) nonpregnant women who reported using a traditional method or not using any form of contraception, and that they did not want to get pregnant in the next 2 years (Figure 1). The outbound survey was the start of a panel survey with three rounds of data collection completed (only the first round is presented here). The 3-2-1 survey ascertained pregnancy and contraceptive use status, while the first outbound, panel survey assessed contraceptive use at the start of the pandemic, as well as access related barriers during the pandemic among eligible individuals. Based on consultations with country teams, we defined the beginning of the pandemic as March 2020 in Malawi, Niger, and Uganda and April 2020 in Nepal.

Figure 1: Eligibility for 321 and Outbound Surveys



Sample Size

Sample size calculations were driven by objective 3 and based on measuring the primary outcome of the study, which was *the proportion of current modern contraceptive users who have initiated or resupplied their method after the beginning of the COVID-19 pandemic (CUIR) who obtained their preferred method.* Sample size calculations for the target number of completed surveys with CUIR in the 3-2-1 survey are based on retaining enough CUIR in the sample after loss to follow-up (LTF) to achieve a 95% confidence interval with 5% precision for this proportion at the third-round panel survey. Results from the second and third rounds are not included, but latter was the basis for the sample size calculations.

In the absence of available information to estimate the proportion of CUIR in each country, we assumed this proportion would be 50%, requiring the largest sample size for estimates of our desired precision.

This provides the target number of 385 surveys to be conducted in round 3 to estimate the primary outcome. To be able to complete 385 surveys in round 3, we estimated that we would need to conduct approximately 760 surveys on the 3-2-1 platform among CUIR (we assumed 30% LTF between the 3-2-1 and first round panel, and 15% LTF between each panel survey[2]). Based on these calculations, it was intended that recruitment continue until we reached this target. We encountered difficulty reaching the sample size in some countries and therefore capped data collection at 100 days during the first round.

CALLING INSTRUCTIONS

3-2-1 survey

Participation was restricted to once per phone number. If women consented but did not complete the survey, they were not eligible to be contacted for the outbound survey. If they listened to part/all of the consent message, but did *not* select a response option for the consent question, they remained eligible for re-recruitment.

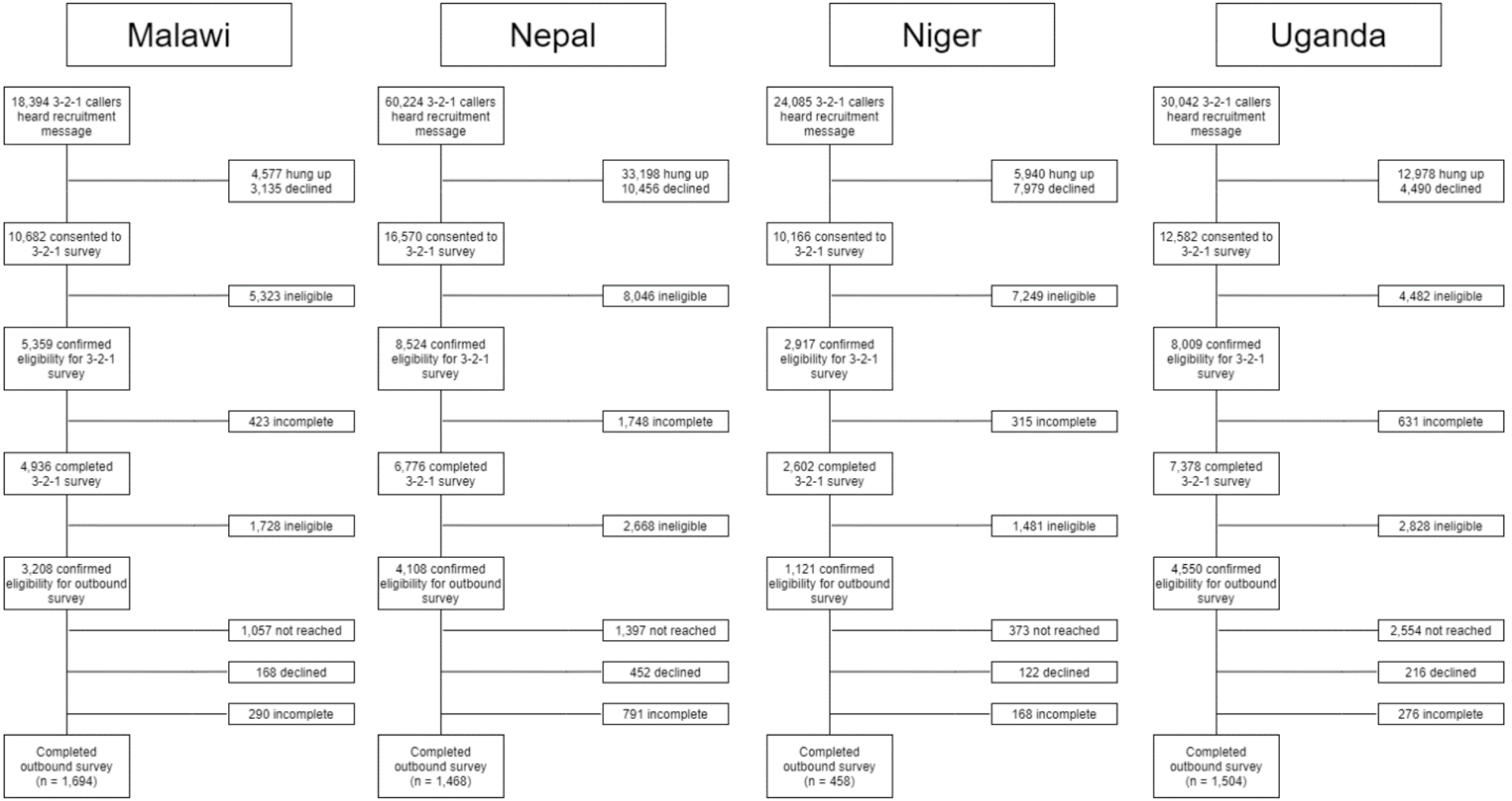
Outbound survey

Participants were called within a week of responding to the 3-2-1 survey to request participation on the outbound, first round panel survey. The call times were varied to occur in morning, afternoon, and evening times for each recruit. Up to four recruitment calls were made for each recruit, and calls were spaced over two days (twice per day) until they responded to the consent statement or reached the maximum number of attempts. Respondents were allowed to select the following options for consent: 1) Consent to participate, 2) Call back later, or 3) Decline. If they selected "Call back later", they were eligible to be recontacted (assuming that was not their 4th call attempt).

The following figure (figure 2) shows the actual sample sizes and response rates by country.

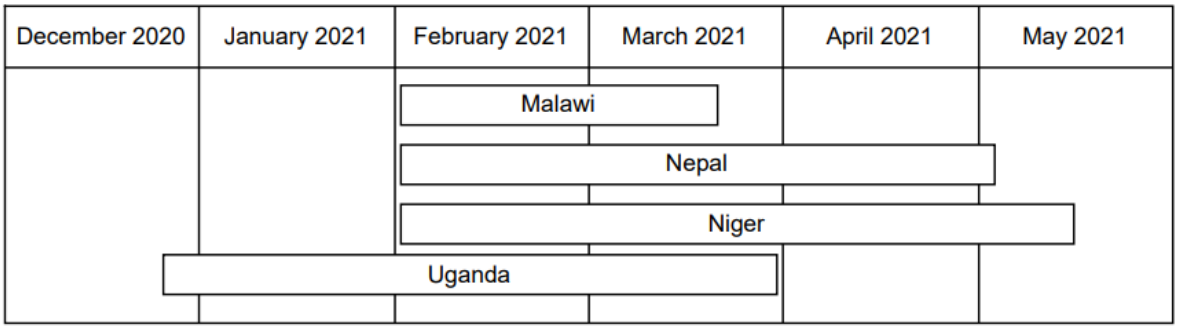
[2] LTF takes into account attrition as well as the fact that some women will report they are pregnant or that they have adopted a permanent contraceptive method, and therefore no longer be eligible for subsequent rounds.

Figure 2: Recruitment and Participation for Each Country



3. Data collection

The figure and table below show the data collection timeline. Data were collected until the sample size was met.



Country	3-2-1 start date	3-2-1 end date	Outbound start date	Outbound end date
Malawi	February 3, 2021	March 18, 2021	February 4, 2021	March 18, 2021
Nepal	February 3, 2021	May 4, 2021	February 4, 2021	May 4, 2021
Niger	February 3, 2021	May 14, 2021	February 4, 2021	May 14, 2021
Uganda	December 22, 2020	March 31, 2021	December 23, 2020	March 31, 2021

4. Data management

Viamo collected the data from their IVR service and removed participants' phone numbers. They assigned a unique ID to join the 3-2-1 data with the outbound survey data.

Data were cleaned in Stata version 17. We received all recruitment data from Vimao, which is how figure 2 was prepared. However, only data from survey participants has been included here. As such each row in the dataset represents one survey response for a participant (i.e. only the call data that resulted in the respondent consenting to participate and completing the survey). Each respondent was only able to complete each survey once, so there are no duplicates in the dataset.

For each country, there is 1 dataset per survey (3-2-1, outbound) for a total of 8 datasets. The filenames are listed in the table below.

Country	Survey	CSV filename
Malawi	3-2-1	Malawi 3-2-1.csv
Malawi	Outbound	Malawi Outbound.csv
Nepal	3-2-1	Nepal 3-2-1.csv
Nepal	Outbound	Nepal Outbound.csv
Niger	3-2-1	Niger 3-2-1.csv
Niger	Outbound	Niger Outbound.csv
Uganda	3-2-1	Uganda 3-2-1.csv
Uganda	Outbound	Uganda Outbound.csv

3-2-1 and Outbound survey datasets by country can be merged 1:1 using the uid variable. If one wants to combine datasets from multiple countries, the datasets can be appended.

Missing data

There were no issues with missing data, since all questions asked to participants were required. However, not all questions were asked to all respondents. Those skip patterns are shown in the data collection forms.

Variable Naming Conventions

Variables were named for the question number (ex. Question 101 is variable q101), with the prefix “q” used in for the 3-2-1 survey and “p” used for the outbound survey. Non-question variables, such as calldate and callstarttime contain the suffix “321” for the 3-2-1 survey and “panel” for the outbound survey.

5. Definition of variables and calculations

Unique identifiers

uid (continuous) uid is the participant identification number

Definition of key calculations and outcomes

This section explains how we created the eligibility, method, and main outcome variables for this study. The datasets available on the Dataverse and the Development Data Library **do not** include these variables.

OUTBOUND ELIGIBILITY CALCULATION

Description	Calculation
Nonpregnant women who reported using nonpermanent modern contraception	q103 = 2|3 & q110 = 1|2
Nonpregnant women who reported using a traditional method or not using any form of contraception and that they did not want to get pregnant in the next 2 years	q103 = 2|3 & q109 = 2 & q108 = 2|3|4|5
Eligible for outbound survey	Meets 1 of the above criteria

OUTCOMES

Outcome	Measures	Data Source	Calculation
Unintended pregnancy	Pregnant women reporting that their pregnancy was planned at a later time (mistimed) or not planned at all (unplanned)	3-2-1 survey	q105 = 2|3
Contribution of COVID-19 pandemic to unintended pregnancy	Women with an unintended pregnancy who responded "yes" when asked if the COVID-19 pandemic and the coronavirus social restrictions had affected their ability to avoid or delay getting pregnant	3-2-1 survey	q106 = 1|2
Pre-pandemic modern contraceptive use	Women who reported they were using an implant, IUD, injectables, pills, emergency contraception, condoms, Standard Days Method, or Lactational Amenorrhea Method when the COVID-19 restrictions began in March 2020 (Malawi, Niger, Uganda) or April/May 2020 (Nepal)	Outbound survey	p102 = 1|2|3
Current modern contraceptive use	Women who reported they were using an implant, IUD, injectables, pills, emergency contraception, condoms, Standard Days Method, or Lactational Amenorrhea Method at the time of the survey	3-2-1 survey	q110 = 1|2
Method choice	Current modern method users who said "yes" when asked if their current method was the method that they wanted to use. The question was only asked of current method users who were using a short-term method (injectables, pills, emergency contraception, condoms, Standard Days Method, or Lactational Amenorrhea Method) and current LARC users who said their method had been inserted after the COVID-19 restrictions began in March 2020 (Malawi, Niger, Uganda) or April/May 2020 (Nepal). *Note: This calculation includes women who said "no" to getting their preferred method initially but who later said their preferred method was the same as their current method.*	Outbound survey	p110 = 1 & p110 = 2 & p115 = p116
Barriers to use	Proportion of nonusers of modern contraception who said "yes" when asked if they had wanted to obtain a method since the COVID-19 restrictions began in March 2020 (Malawi, Niger, Uganda) or April/May 2020 (Nepal) and who said "yes" when asked if they had tried to obtain a method	Outbound survey	p118 = 1 & p119 = 1

6. LIMITATIONS

Results are only applicable to users of the Viamo 3-2-1 service who opted into the survey. Mobile subscriber penetration is 38% in Malawi, 63% in Nepal, 38% in Niger, and 51% in Uganda. The proportion of women ages 18–24 years in this assessment is higher than the overall population.

We experienced sizable attrition between the 3-2-1 and outbound surveys. This was hard to anticipate as this was the first instance of Viamo combining a survey on its 3-2-1 platform with an outbound survey. However, the typical completion rate Viamo has encountered on stand-alone outbound surveys is considerably lower than the ones in this assessment (about 10%). Although our comparison of eligible women who completed the outbound survey to those who did not complete it did not reveal major differences between the limited number of variables collected in the 3-2-1 survey, unmeasured differences cannot be ruled out.

The classification of women as "in need of contraception," which was the basis for inclusion in the outbound survey, was made from measuring contraceptive use and fertility intentions 1 year into the pandemic. Sample selection and analyses do not account for changes in need of contraception from before the start of the pandemic. Due to this limitation, estimates such as modern contraceptive use should not be directly compared to pre and post-pandemic national estimates for women of reproductive age.

We only examined adoption and discontinuation based on a comparison of nonpermanent modern contraceptive use pre-pandemic and at the time of the survey. Thus, those who have switched to permanent methods were not examined in this study.

In addition, our results do not necessarily imply continued use/nonuse between these 2 time points for women categorized as consistent users or nonusers. Survey questions were administered using interactive voice response, with limited response options.

Due to the rapidly evolving nature of the pandemic, the data collection period extending over several weeks allowed for shifts in the epidemiological context and response measures, complicating the interpretation of some findings.

Pre-pandemic data were obtained retrospectively. While the beginning of the pandemic may be considered a memorable event and facilitate recollection, the possibility of recall bias exists.

Lastly, the design does not systematically allow differentiation between COVID-19-related challenges and preexisting weaknesses of health systems.