

Cognitive Interview Evaluation of the National Survey of Family Growth Life History Calendar

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Introduction

The National Center for Health Statistics' (NCHS) Collaborating Center for Questionnaire Design and Evaluation Research (CCQDER) conducted a cognitive interviewing study to evaluate the Life History Calendar (LHC) used by the Division of Vital Statistics on the National Survey of Family Growth (NSFG). The NSFG is a nationally representative household survey that gathers in-depth information on pregnancy, infertility, and reproductive health.¹ The NSFG is an approximately 75-minute, interviewer-administered survey that collects detailed information on respondent event histories, such as cohabitation and marriages, contraceptive use, and periods of sexual activity. Because recall can be challenging with this level of detail, a hard-copy calendar covering the time periods referred to in various sections of the survey is offered as an aid to respondents. The LHC is intended to help respondents organize key personal events, which are then used as landmarks to cue memories of the dates of other events measured in the survey.

Background

Early work has shown that the use of an LHC to collect retrospective life-course information in a survey context can improve recall accuracy.² However, the task of completing the calendar can be fairly complicated and potentially confusing. The NSFG previously evaluated the LHC for its usability. Debriefing questions during a field test assessed whether respondents could identify a specified timeframe on the calendar, and most (95%) could correctly do so.³ However, a qualitative evaluation of the thought patterns that respondents demonstrate when using the LHC and the extent to which the LHC assists with recall to answer fertility-related survey questions has not been done. For this reason, CCQDER was asked to cognitively test the functionality of the LHC in association with the relevant survey questions. This report documents the outcome of that study.

Methodology

The methodological design of the study is consistent with the design of most NCHS/CCQDER

¹ Information on the NSFG may be found at https://www.cdc.gov/nchs/nsfg/about_nsfg.htm.

² Freedman, D., Thornton, A., Camburn, D., Alwin, D., and Young-DeMarco, L. (1988). "The Life History Calendar: A Technique for Collecting Retrospective Data" *Sociological Methodology*, Vol. 18; pp. 37-68.

³ Plan and Operation of Cycle 6 of the National Survey of Family Growth. Series 1, Number 42.

cognitive interviewing studies. However, the main point of this evaluation was the functionality of the calendar in terms of the extent to which respondents believed it improved their recall and response accuracy. To this end, the entire NSFG survey was not administered. Only the most memory-intensive substantive areas associated with LHC use were covered in the cognitive interview. These sections included cohabitation and marriage partners, periods of sexual activity, and contraceptive use. The NSFG does not ask details on these topics with regard to a respondent's entire life. Rather, month-by-month sexual activity and contraceptive use are asked only for the past three years, that is, since 2017. However, other life events that occurred before 2017 (e.g., educational attainment, number of pregnancies) are also captured by the LHC. The survey test questions that accompany the LHC may be found in Appendix 1 and the LHC may be found in Appendix 2.

The interview process included three components. Interviewers began by providing respondents with a brief introduction to the NSFG, the purpose of the LHC, and the nature of the cognitive interview. Next, interviewers administered the survey questions and LHC in a manner consistent with NSFG field protocol. Lastly, the cognitive evaluation portion of the interview included follow-up probes designed to reveal the ways in which respondents made sense of the LHC. Respondent understandings of the substantive areas for which the calendar is utilized were examined to determine whether the LHC differed in function or value for different topics (e.g., marriage and cohabitation, periods of sexual activity, and contraceptive use) or for different groups of respondents. Interviews were a maximum of 60 minutes in length.

Analysis of the interviews included a three-stage process similar to the constant comparative method first developed by Glaser and Strauss (1967)⁴ and adapted to cognitive interviews by Miller et al. (2014).⁵ Data analysis was assisted by the use of Q-Notes, a software application specifically designed for cognitive interview studies. Analysis focused first on the ways in which memory was (or was not) improved by the LHC and second on constructs most salient to the survey, such as sexual intercourse.

Sampling and Respondent Demographics

As a qualitative evaluation, cognitive interviewing employs a purposive non-random sample. Rather than aiming for statistical representation, individuals are chosen on the basis of characteristics relevant to the questions under investigation. The initial goal for this project's sample was to recruit 20 English-speaking women ages 18 to 49 years from a variety of demographic backgrounds. Women with children less than four years old were prioritized during recruitment, as the questions required extensive detail on sexual partners, frequency of sexual activity, pregnancies, and contraceptive use month-by-month in the past three years.

⁴ Glaser, B. and Strauss, A. (1967) *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Hawthorne, NY: Aldine de Gruyter.

⁵ Miller, K., Willson, S., Chepp, V., & Padilla, J.-L. (2014) *Cognitive Interviewing Methodology: A Sociological Approach for Survey Question Evaluation*. Hoboken, NJ: Wiley.

Because recruitment was more challenging than expected, it was conducted in two phases in order to adapt to the difficulties in obtaining respondents. The first phase was implemented in the usual manner through a combination of advertisements, flyers, and word-of-mouth. However, because response to these methods was minimal, a second phase of recruitment was initiated whereby recruiters researched and contacted organizations that help mothers with young children, with the aim of posting flyers in these settings.

Just as the second phase of recruitment began producing results, the coronavirus pandemic forced a suspension of face-to-face interviews. Rather than prolong the project indefinitely, it was decided to end the project with the 17 interviews that had been completed up to that point. Table 1 summarizes the final demographic composition by age and race/ethnicity.

Table 1: Demographic Summary of Sample, n = 17

	Number	Percent
Age in Years		
Under 30	5	29.4
30 – 39	7	41.2
40 and Over	5	29.4
Race/Ethnicity		
Non-Hispanic Black	9	52.9
Non-Hispanic White	4	23.5
Non-Hispanic Asian	2	11.8
Non-Hispanic Multi-racial	1	5.9
Hispanic	1	5.9

An overview of findings is described next.

Findings

The Interview Process

For both interviewer and respondent, this was generally a challenging interview to complete. There are three reasons: Many of the topics are sensitive and personal, the process of completing the calendar and answering survey questions is a complex task, and the amount of recall is demanding for many of the questions.

1. Sensitive Topics: Topics associated with the calendar are sensitive for some respondents. Some are sensitive because they invoke unpleasant memories, others because they are personal and, therefore, embarrassing to discuss. In either case, it took much skill on the part of the interviewer to develop sufficient rapport to create an environment conducive to producing quality survey responses. Findings from the cognitive interviews are presented, but it should be noted that the probing associated with cognitive interviewing may increase

sensitivity. The follow-up conversation that is necessary to determine response accuracy involves deeper discussion than would be required in actual survey administration. Nevertheless, because some respondents expressed discomfort even before probing began, the findings are presented here.

Unpleasant memories

Unpleasant memories were associated with several different topics, including pregnancies, sexual partners, and sexual intercourse.

Pregnancies: For some respondents, talking about the number of times in their life they have been pregnant was unpleasant. One respondent was not forthcoming about discussing her pregnancies that did not end in a live birth. As a result, she was reluctant to provide an answer to the question, 'How many times have you been pregnant in your life?' Her answer was "Maybe five." Because it is unlikely that a woman would not know exactly how many times she had been pregnant, the interviewer tried to follow-up in order to understand the vagueness of "maybe" five. However, the respondent would not elaborate so the topic was dropped. Another respondent was more visibly upset at the prospect of discussing all her pregnancies. When asked the question she paused and said, "Okay. I didn't know these details [would be asked]. I've had some traumatic pregnancies. So I didn't know that we would be going like -- do I have to sit here and go through each pregnancy? Because I've had some stillborns and miscarriages that I really don't want to talk about."

Sexual partners: Unpleasant memories were also associated with past sexual partners. One respondent commented that this aspect of her past was not something she enjoyed thinking about. She said, "For my situation in particular, we ended up in a bad situation. So just being cognizant. It's [answering survey questions] like a trigger because you have to think about when. We ended up on bad terms. So that can bring triggers too. It makes you think about that person, you know?"

Sexual intercourse: Some sexual experiences are not pleasant memories. In these cases, some respondents resisted answering survey questions and engaging in discussion related to the experience. For example, when asked the date of first sexual intercourse, one respondent said she did not remember and could not answer. The interviewer (trying to establish what might prompt a memory) asked if there was anything about it she could remember and the respondent said, "Yes, it was not good. That was another question like, I don't know what to put for that. That's what I'm saying. Y'all are asking people about their first intercourse experience? What kind of survey is this?" The interviewer explained again the purpose of NSFG, which seemed to put the respondent more at ease. She said, "I do believe when a child is introduced to sex [is important]. Because I had my first child at 16. I had got raped at 9." She went on to explain how that first experience negatively influenced the trajectory of her life. Another respondent was similarly reluctant but not as direct in

her explanation. She said, "Doing things like this [taking a survey] makes you remember -- things you don't want to remember."

Some respondents with unpleasant memories provided answers but were not willing to put substantial effort into arriving at an accurate answer. For example, when asked to mark months of intercourse in the past three years on the LHC, one respondent was unwilling to search her memory in great detail because it was an unpleasant phase of her life. She said, "So it was only with my last partner and it was when I was pregnant. I don't remember, but I don't think we had too much sexual intercourse because he was cheating on me. So I don't really remember. I had a really difficult pregnancy, so maybe once in every month maybe, but I don't really remember."

Embarrassing topic

Some respondents were uncomfortable providing answers not because the memory was unpleasant, but because topics related to sexual activity were deemed personal and somewhat embarrassing to talk about. This also took a degree of skill on the part of the interviewer to create an atmosphere of normality around discussing personal details with a stranger. The following are examples of respondents' reactions:

They asking a lot of personal questions on this thing. Like first time and last time you had sex with this person? That's like a lot of personal questions.

So this information is going out to people? If a person has a very sexual life, what if they don't want to put all that information on there?

Like intercourse. [Nervous laugh] It's weird talking about it with anyone except the few friends I do talk about it with.

That's so funny. These questions are very...they make you blush.

In marking months of sexual activity on the LHC, one respondent said, "I'm feeling self-conscious right now [nervous laugh]. Looking at this calendar, this is upsetting." The interviewer asked how so. "Those are GAPS! Gap, gaps. So..." The respondent was embarrassed by her lack of sexual activity and explained to the interviewer how, after reading articles and talking to friends about the average number of times women in certain age brackets have sex per week, she believed she was much below average. This made her feel abnormal.

2. Complicated Survey Task: The survey portion of the NSFG that includes the use of the LHC requires two tasks of respondents. Respondents are asked to fill out the calendar and are then asked survey questions based on information they have recorded. The process of completing two side-by-side tasks was difficult. Even though the tasks are related, and one was designed to assist the other, respondents did not always understand this. Instead, it

was often a labor-intensive process on the part of the interviewer to ensure that respondents understood not only how to complete the calendar, but that its purpose was to assist them in answering questions with challenging recall, such as months of sexual activity and months of birth control use over the past three years. In other words, completing the calendar was often perceived as the primary task for respondents who thought their job was done once they filled it in. It took effort on the part of the interviewer to convey the purpose of the calendar regarding the survey questions. For example, as one respondent said, “Initially it was kind of confusing, what I was supposed to do with it. But after the first question I figured out, okay, this is what you want me to do.” This process was amplified when the LHC did not actually help with or improve memory. As a result, the LHC was more helpful to some respondents than others. This is discussed next.

3. **Recall Effort and the Calendar:** The amount of recall effort required for answering the various survey questions varies from easy to difficult to impossible. Respondents generally fell into three groupings, depending upon the question asked. Table 2 summarizes groupings of respondents based on the extent to which the calendar was helpful in assisting memories necessary for answering the survey questions.

Table 2: Memory Availability, Recall Effort, and Helpfulness of the LHC

	Specific Memory	Effort	Use of Calendar
Group 1	Immediately available	Minimal or none	Unnecessary
Group 2	Not available at all	Irrelevant	Unnecessary
Group 3	Not immediately available	Moderate to extensive	Essential

Group 1

Some respondents had immediate and specific memories of the survey topics. As such, it required little to no effort for them to answer the survey questions. In these instances the calendar was of no help and, in fact, introduced extra burden into the survey-taking process.

For example, one question asked how many weeks or months respondents had been pregnant when the pregnancy ended. Some respondents knew the answer immediately. This was often because the event was medically salient. One respondent answered 37 weeks without any reference to the calendar. When asked how she remembered this she said, “Because I had the date set and then I went to the doctor’s and I had to stay two extra days until I got to be exactly 37 weeks. And they took her via C-section. That’s why it was so easy to remember.” Another respondent also had medical issues and consequently remembered her pregnancy length of two months. She said, "I had an ectopic pregnancy in 2017 while I was on birth control. Weird how that happened. But it was ectopic so I had an abortion to get it off. And that's when I started realizing maybe I had some other health issues."

In giving answers for date of first intercourse, some respondents were able to remember the date with relative ease, even if the event was long ago. Those who experienced something

memorable about the event tended to need no recall assistance. For example, one respondent was asked how she was able to remember so easily. She said, "It was my first boyfriend. This happened around homecoming time. Basically our parents found out. There was a conference [between school and parents]; it was a traumatic experience. So it's very easy to remember." Another respondent explained, "I had already graduated high school and I was in my first semester of college – well, I was entering into my first semester. So that's why I remember."

Some respondents had an easy time with marking months of intercourse in the past three years on the LHC. As such, the calendar was of no help. For example, for the year 2017 one respondent was able to say, "Every month. I had just gotten married the year before. Things were pretty happy. That was easy to remember because I was a newlywed."

Some respondents pay close attention to their sexual activity and use of birth control. Answering month-by-month questions on these topics was not difficult for them to begin with, so the calendar was unnecessary. For example, one respondent seemed to have an easy time identifying the months she used birth control in the past three years. When asked how she was able to remember such detail she said, "Oh, because I have a calendar. Any time I take a pill [emergency contraception] or have sex, I always mark it on my calendar. Like a little dot to say I messed up. I call it a mess-up. You know, a bump. And I don't want to over-take these pills. Because I used to have sex a lot [before 2017]...because I don't want any, you know, stuff that may happen if I do want to get pregnant. And so I mark it. I always track it." Similarly, another respondent found the calendar to be of no use because it was not difficult for her to remember this information. When asked if she could have answered the questions without using the calendar, she said, "It would actually have been easier. I was confused trying [to fill it out] because of how well I know my history, just talking to you would've been fine. It's just different from the way I normally think about it. If I think about it I would just be able to tell you." This respondent's experience, along with others like her, suggests that the format of the calendar might be detrimental to those who already know the answers to the questions because the calendar requires them to organize information in a way that is not intuitive or helpful to them.

Group 2

The respondents discussed above (Group 1) represent those who have specific memories that are easy to invoke in order to answer survey questions. However, this was not the case for all respondents. A second group had no memories of the events asked about in some of the survey questions, irrespective of the amount of effort put forth. For them the calendar was of no help and presented an unnecessary extra burden – an experience they shared with Group 1.

Remembering dates of birth control use was impossible for some respondents, regardless of discussion or calendar use. For example, when asked the date she first began using birth control pills, one respondent said, "My mom handles all that stuff [medical needs, including getting birth control pills]. I'm sorry, I don't know." Another respondent reported using withdrawal and when asked when she first began using it, she laughed. "I don't know. I can't

tell you. So we was doing that at one time and it wasn't working. That's how I got pregnant with [last child]. The pull-out method does not work! [laugh]" Another respondent also found it impossible to answer. She was older and had been on birth control for some time. She said, "I think asking us to recall something 20 years ago – what birth control, what month and date we had it – it's difficult. It's challenging. It's something I won't remember no matter how hard I try." Another respondent had the same reaction in trying to answer how many months she had been using contraception prior to January 2017. She stumbles over her words as she tries to explain the difficulty. She said, "I mean, for that question it's kind of just...because...I don't...because we've been using that - on-and-off - since the whole time we've been together. So I don't even know how to answer that question. [laughs] Okay, I'm confused." Another respondent had the same difficulty with this question and said, "I don't remember. I honestly don't. It's been such a long time. I started on it when I was really young."

Some respondents also had a difficult time with reporting individual months of birth control use in the past three years. For one respondent, no amount of discussion or calendar use could get her to an accurate answer. She said, "Right after I had my daughter, my husband and I started using condoms...I could not tell you the months. It was very short lived. Like October? I'm just going with October." The interviewer asked how confident she was in that answer. "It's not easy to remember...I'm just using short timeframes because I know it was short timeframes. It was just that period. I know for sure the first time after I had my daughter he tried to use condoms to prevent another pregnancy from happening. And then he tried the withdrawal method and that was also short because he's just used to certain things. So it was just short. I'm not sure if it's one month or two months. I'm just guesstimating."

Group 3

The first two groups either had specific memories that were easy to recall (Group 1) or had no memories, regardless of the amount of recall effort put forth (Group 2). A final group of respondents fell somewhere in the middle. Their memories could be recalled, but with varying degrees of effort. This is the group for which the calendar helped the most. There were two reasons. First, the task of completing the calendar primed their memories. Second, when this task was combined with a discussion with the interviewer, recall was augmented even further. The process of how this occurred is discussed next.

Completing the calendar: Completing the calendar requires thought and attention. One advantage to this effort is that it often sparks memories. For instance, one difficult piece of information for respondents to remember was the date when a pregnancy began (in order to answer a question about how long they had been pregnant when it ended). Most respondents did not have this date committed to memory, and instead had to think about the date of birth and work back from there. The calendar proved a useful tool for this. For example, when trying to remember the start and end date of each pregnancy since 2017, one respondent could not initially supply an answer for the start date. She said, "So my daughter was born in August [2017]." The interviewer instructed the respondent to mark this on her calendar. When the interviewer asked again about the start date, the respondent thought aloud and said, "When

did I find out I was pregnant..." Looking at the delivery date she then counted back nine months. She was able to arrive at the answer only with the help of the calendar because she had no specific memory of when she conceived. Another respondent with the same memory difficulty said, "I actually don't remember when I got pregnant with her." However, because she had marked the end date of the Cesarean delivery as May 2017, she was able to count back the months on the calendar and answer, "Probably September [2016]." Another respondent needed similar help from the calendar. When asked if the calendar was helpful she said, "On that one [what month did the pregnancy end], yes. It's a birthday, so I know his birthday. That's when the pregnancy ended. Then I just counted back [to get the start date]. Okay, September, that's nine [months]. So I had to get pregnant around December because you're pregnant almost 10 months. So that's how I calculated that back." Another respondent provided similar rationale. "I knew when I delivered the baby. So I was trying to figure out when I noticed that I got pregnant. So I worked backwards and I knew it was an eight month pregnancy."

Months of sexual activity was also often difficult to answer. Filling out the calendar helped some respondents remember. In marking months of sexual intercourse over the past three years on the LHC, one respondent commented that the calendar was of assistance. She said, "I think I would have been able to get to it [the answers], but it [the calendar] gave me more of a visual so I could see it."

Completing the calendar combined with discussion: The task of the LHC is also helpful for recall because it often creates discussion between the respondent and interviewer. NSFG field interviewers are provided a standardized script of instructions to read to respondents in order to help them use the LHC. However, in addition to this, they are also encouraged to assist respondents in any way necessary for the successful completion of the task. This procedure was replicated in the cognitive interviews, where it was found that this interaction between the interviewer and the respondent further primed respondents' memories. For example, talking to the interviewer one respondent was thinking aloud trying to remember when she got pregnant. She said, "She was born in June and I found out I was pregnant in October, so that would be October 2017. Was it October? Maybe it was November. Funny how you forget stuff [counts to eight on her fingers]. Yeah, it was around October. I remember it was around the holidays that I found out. Right before Thanksgiving."

Another respondent had difficulty remembering how long she had been pregnant. It was the interaction between her and the interviewer that allowed her to provide an answer. She said, "Umm...I was almost 9 months...I'm one of those people that don't keep [track]." Was it by a couple days or weeks? "I want to say days." So you were just a few days early of your due date? "Yes."

One respondent used both the calendar and discussion with the interviewer to provide answers to months of no intercourse in the past three years. She still had no specific memory of having sex on each month, but the calendar and discussion helped her arrive at an answer in which she was fairly confident. She said, "I'm pretty sure it was 6 weeks afterwards [after the C-section]."

The interviewer asked her about the months during the pregnancy. "Oh, yeah. That's a good point. You know what? [R thinks] I remember it wasn't super often, but I'm pretty sure it was at least once a month. That's like a long time [a month]. You kind of know if you have a dry spell for that long. But I would say the month of August too, just to be safe. I was super preggo [so no sex]." She studies the calendar. "Yeah, I'm just guessing here. We probably did bang [have sex], but I don't remember." When asked what months she had sex, another respondent had a reaction that initially suggested she would not be able to come up with an answer. She said, "Wow. You said 2019. Wow. I don't even know. Umm...I don't know. I'll just mark every box because my daughter was born in June. So by that time everything was back to normal." But as the interviewer asked what else was going on in her life that might help her remember, she changed her answer to omit October. She said, "Every month except October. And I know why – October is so stressful. At my job I get my evaluation. And that always stresses me out. It just stressed me out more last year since I had a baby with it. I remember that period and my husband making a comment about it." Completing the calendar *and* talking it out with the interviewer helped the respondent arrive at a more accurate answer.

Another respondent also improved accuracy of months of no sex by discussing it with the interviewer. She initially marked every month in 2017 and the interviewer asked how confident she was in that. She said, "Except for in these weeks [points to May]. Okay. I would say like between first and six weeks I did not have sex. Because I could not physically even tolerate the pain of it after a C-section. So I take it back. It was like six weeks in May [2017]. So I guess all of May and some part of June." This revision seems to be a more accurate answer.

Months of birth control use was a topic that was particularly difficult for some respondents to remember. They often needed both the calendar and a discussion with the interviewer in order to answer monthly use in the past three years. For example, it took work for one respondent to remember when she used birth control pills. She said, "I was on for a couple months. Let's think about this. I feel like I stopped taking it [thinks]...I'm going to throw a guess out. And I was on birth control for like six months, from October 2019 to March [2019]. That is a wild guess." To assist her memory, the interviewer asked what else was going on in her life and she recalled how her contraception use, menstrual cramps, and breast feeding were all interconnected. She explained:

I remember I went on it because I was having really bad cramps and it was like crazy periods. Very heavy. Because I was breastfeeding. She was born [studies calendar]...I feel like my period started in the Spring. It took a couple months and they got really heavy. And I went to the doctor and got birth control. And I didn't like how I felt [on it]. I gave it a little bit of time and I was like, yuck...I just stopped taking it and I didn't go back to the doctor...I was feeling a little kooky [from the pill]. And I had a six-month prescription.

Another respondent also demonstrates the amount of work it took to remember the start date and end date of her use of a hormone implant:

In January 2017 I know I didn't have anything then because I was pregnant. Then the months after...I'm trying to remember...I had the implant. I'm trying to remember when I got it and I'm trying to remember when I had it removed. It also drove me insane. I'm trying to think of other things that were going on at the same time to try and help get a timeline. [R thinks out loud] I was seeing Dr [X]. She suggested the implant. I know I had to wait a couple of weeks because she wanted to see my period and make sure that I had a negative pregnancy test before she implanted it. Um...I think it was April of that year [2017]. It was right after the miscarriage. I was very upset over it. I wanted to make sure we were ready the next time. Yeah, I think it was April. And I kept my implant for...I'm trying to remember...I want to say it was about six months. There was a time period that she [the doctor] gave me and I'm trying to remember what it was. She said wait this amount of time and if I didn't like it she would take it out. And it was a long period of time...It had to be somewhere around the end of the year...it was cold...so I'm thinking it was probably October or November [the respondent initially said September]. I'm going to go with November [thinks]. Thanksgiving. Did I still have it at Thanksgiving when we went to mom's house? Yeah. I'm going to go with November because it's around family time. My sister got hers very soon after I got mine [implant]. So implant until November. It was like a month of withdrawal and then right on the birth control pills, I'm thinking February 2018 because that was taking them regularly when we went on vacation.

This respondent was able to arrive at a better answer only after extensive discussion that allowed her to search her memory. As another respondent said when asked if the calendar assisted in birth control use recall, “I think having the calendar is very handy. I feel like there’s a couple months error.” You mean like plus-or-minus two months? “Yes, exactly.” While two months may seem like an unacceptable margin of error, without the calendar she would not have been prepared to answer monthly contraceptive use at all.

In sum, the LHC was an essential tool for helping some respondents (i.e., those in Group 3) arrive at more accurate answers because it provided a mechanism by which they put the work into remembering events that are not easily remembered. Without the LHC, satisficing would be an easier option, to the detriment of response accuracy. On the other hand, for those who can either remember easily (Group 1) or not at all (Group 2), the calendar was an unnecessary burden. For respondents in these groups, it may be beneficial to provide them the option of opting out of the calendar exercise.

Comprehension of Specific Concepts

Sexual intercourse: Because the focus of each 60-minute interview was on the calendar as a recall aid, concepts, words, and phrases in every question were not examined as they would be in a typical cognitive interview. However, because of the salience of the term ‘sexual intercourse’ to the entire survey, this concept was specifically discussed with respondents. Probing focused on the ways in which respondents thought of sex, understood the term ‘sexual intercourse’, and the extent to which they applied this interpretation to their answers.

Most respondents thought of sexual intercourse as intended (i.e., vaginal penetration by a penis). During probing, interviewers asked what kind of sexual activity respondents were thinking of and responses were consistent among most respondents. The following are examples of interpretations that were within scope of the intended meaning of the term:

Just sex. Penis and vagina. I mean, if you want to say other stuff, this chart [calendar] probably would've been X'd [laughs]! But when I thought of intercourse, I just thought of vaginal with the penis.

I think of vaginal. You know, I know exactly what you're talking about [by probing on what kind of sexual activity counts], but I think of vaginal...for straight people." So even for that first time you were thinking of vaginal, not..."The extras [laughs]. No. I was thinking of vaginal. I think for me, during intercourse those other things can happen. But for me it was vaginal and then those other things.

That was the first time I was penetrated. Penally -- is that even a word?

When asked what she was thinking of for 'sexual intercourse', one respondent laughed and then said, "Wait. What do you mean?" The interviewer gave examples of different kinds of sexual activity such as making out, oral sex, or vaginal sex and then asked the respondent what kind of activity defined the first time for her. "Umm...vaginal intercourse." The interviewer asked if those other activities count as sex. She said, "Yes. But all of these times [points to her Xs on the calendar months] were vaginal. Everything on the calendar."

Those who thought only of vaginal intercourse were sometimes influenced by the context of the survey in general, that is, as a survey about fertility and sexual activity that potentially results in pregnancy. For example, when asked what kind of sexual activity she was thinking of, one respondent understood the point of the probe and said, "Right. Because the first time you have oral sex could probably be a lot earlier." The interviewer asked if she was thinking of oral sex when answering, but she said, "Oh, I was thinking about vaginal. Just from the context [of the survey]."

Another respondent gave a similar answer during probing on this subject. She said, "I was thinking penetration." When asked, she said that other activity does count as sex but, "That's not what I thought you meant for this question [date of first sex]." She thought for a moment and said, "And that also contributed to what I was thinking. Like, how would you get pregnant." Another respondent also said, "I assumed that you probably meant, like, penis in vagina because it's about pregnancies." When asked what she was including in her answer, one respondent talked about how she focused on the word 'intercourse' and the topic of fertility. She said, "I was thinking about that the word [intercourse] because I had...intercourse to get pregnant. Previously [before husband] I was with somebody. We never had intercourse but we were sexually involved." When asked why she did not include that in her answer she said, "That wasn't anything that had to do with fertility."

Despite the fact that most respondents interpreted 'sexual intercourse' as intended, two respondents included additional sexual activities when answering questions about months they had sex. For example, after one respondent checked off months of sexual intercourse on her calendar, the interviewer probed what type of sexual activity she included in those months. She said, "Intercourse. I'm counting foreplay. Oral." This respondent was not thinking of the purpose of the survey, only her understanding of sexual relations, which included a variety of activities. Another respondent answered in a similar manner but acknowledged that what she included was not necessarily 'sexual intercourse' as intended by the question. She said, "The majority of the people I had sex with weren't all completely sex [from] 2018 to 2020. We did it [intercourse], but not for that long. Or it was just head or it was oral. It wasn't sex completely...Or if we did it, we did it from the back, so it wasn't technically sex." Even though the respondent was able to discern the intent of the question during probing, she did not limit her answers to sexual intercourse when completing the calendar or answering the questions about months of no sex.

That two respondents included sexual activity outside the act of vaginal intercourse highlights a potential limitation of the sample. More diversity is required to understand the variety of ways in which women think about sex. For example, sexual identity likely has an influence on sexual activity and understandings of that activity. This points to the need for recruiting women of different sexual identities in order to assess the extent to which all groups understand as intended any question with the term 'sexual intercourse'. Because recruitment for this project did not include screening by sexual identity, this report cannot draw specific conclusions in this regard.

Cohabitation: Interviewers did not set out a priori to examine the meaning of cohabitation among respondents. However, it emerged as a concept that was not entirely clear to some respondents. For example, one respondent had such a short stint of cohabiting that she was not sure it should be included in the question. She said, "We made it two weeks. That's why I was like, does that qualify? We signed the lease together. We had plans. Everything was moved in. Everything was just moved out [two weeks later]."

Another point of possible confusion lies in the legal aspect of cohabiting. One respondent said, "Like shared rent, shared a place? I've never lived with anyone like cohabitated. But I may have stayed some days so I don't know if that counts. I don't know how specific. I've never had a lease with anyone." She did not include this experience, but her confusion does point to the nebulous legal nature of the term when applied to real-life relationships. Cohabitation is not as easily defined as marriage because it is not as discrete a phenomenon. What is considered cohabitation for one person might not count for another. The question, therefore, may invoke a range of answers from respondents where some would exclude experiences that others include and vice versa.

APPENDIX 1

Life history calendar questions

{Ask all

1. How old are you? _____ *Age in years*

{Ask all

2. The next questions are about marriage and cohabitation. Are you now married, living with a partner together as an unmarried couple, or neither?

- Married*
- Living with a partner together as an unmarried couple*
- Neither*

{Ask if married or living with a partner

3. Is your spouse/cohabiting partner male or female?

- Male*
- female*

{Ask if not currently married

4. What is your current legal marital status? [READ CATEGORIES]

- Married*
- Widowed*
- Divorced*
- Separated*
- Never married*

{Ask all

For some questions on this survey, I'll ask you to look at numbered cards that list answer choices. After you've read the choices on the card, you can tell me your answer or, if you prefer, you can just tell me the number next to the answer you choose.

5. Looking at **CARD 1**, what is the highest grade or level of school you have completed or the highest degree you have received?

- 0. *NEVER ATTENDED/KINDERGARTEN ONLY*
- 1. *1ST GRADE*
- 2. *2ND GRADE*
- 3. *3RD GRADE*
- 4. *4TH GRADE*
- 5. *5TH GRADE*
- 6. *6TH GRADE*
- 7. *7TH GRADE*
- 8. *8TH GRADE*
- 9. *9TH GRADE*
- 10. *10TH GRADE*
- 11. *11TH GRADE*
- 12. *12TH GRADE, NO DIPLOMA*
- 13. *HIGH SCHOOL GRADUATE*
- 14. *GED OR EQUIVALENT*
- 15. *SOME COLLEGE, NO DEGREE*
- 16. *ASSOCIATE DEGREE: OCCUPATIONAL, TECHNICAL, OR VOCATIONAL PROGRAM*
- 17. *ASSOCIATE DEGREE: ACADEMIC PROGRAM*
- 18. *BACHELOR'S DEGREE (EXAMPLE: BA, AB, BS, BBA)*
- 19. *MASTER'S DEGREE (EXAMPLE: MA, MS, MEng, MEd, MBA)*

20. PROFESSIONAL SCHOOL DEGREE (EXAMPLE: MD, DDS, DVM, JD)

21. DOCTORAL DEGREE (EXAMPLE: PhD, EdD)

{Read to all; hand R the Life History Calendar

This is a calendar to help you remember when things happened, when they come up in the interview. We will be talking about dates during the interview, and getting accurate dates is very important. At times I will ask you to enter specific events on the calendar. The boxes are small but you can use abbreviations that are meaningful to you. You may also wish to draw a line between the beginning and end of an event, such as a pregnancy.

Notice that the calendar's boxes start with January 2017. Some things that I ask about will have happened since then and others will have happened longer ago. The column labeled "Before January 2017" is for you to note things that happened before January 2017.

Now I'd like you to write your date of birth on the calendar on the line marked "Your Date of Birth". Then, find the month and year of your last birthday and write your age in the box right underneath it [READ IF NECESSARY: the row labeled "Your Age"]. Now, please write your age under your birth month for the other years on the calendar. **[INTERVIEWER: Demonstrate, monitor, and help when needed.]**

Now let's continue with the interview.

Education Dates

{Ask if HS graduate, GED, or higher; else go to 8

6. In what month and year did you get your high school diploma or GED?

_____ *Month/year*

Please record this on your calendar in the row marked "Education", in the box for the month and year that it happened. Remember, if you received your diploma before January 2017, please record this in the "Before 2017" space in the "Education" row. You might write "HS" or some other abbreviation that you will recognize later.

{Ask if Bachelor's degree or higher; else go to 8

7. In what month and year did you get your Bachelor's degree?

_____ *Month/year*

Please record this on your calendar in the row marked "Education", in the box for the month and year that it happened. [READ IF NECESSARY: Remember, if you received your diploma before 2017, please record this in the "Before 2017" space in the "Education" row.] You might write "Coll" or some other abbreviation that you will recognize later.

Pregnancy Section

{Ask all

8. How many times have you been pregnant in your life?

_____ *number*

{Ask if ever been pregnant; else go to 13

9. How many of those pregnancies started or ended since January 2017?

_____ *number*

{Ask if any pregnancies since January 2017; else go to Sexual Activity, Q13

Please look at the calendar and think of pregnancies that have ended since January 2017, including those that ended in a birth, stillbirth, miscarriage or ectopic pregnancy or an abortion. Please record the pregnancy ending date in the “Birth or Pregnancy Ending Dates” section below the calendar.

Now please record each pregnancy in the “Births & other pregnancies” row in the calendar. Start by marking the month the year the baby was born or the pregnancy ended and draw a line back to the month the pregnancy began. If you are pregnant now, please record the month when this pregnancy began in the appropriate box on the “Births & Other Pregnancies” row of the calendar.

10. [HARD **CARD 2 TO R**] Starting with the first pregnancy since January, 2017, in which of the ways shown on **Card 2** did this pregnancy end?

1. Miscarriage
2. Stillbirth
3. Abortion
4. Ectopic or tubal pregnancy
5. Live birth by Cesarean section
6. Live birth by vaginal delivery

11. In what month and year did this pregnancy end?

_____ month/year

12. How many months or weeks had you been pregnant when [the baby was born/the pregnancy ended]?

_____ number of months or weeks

[REPEAT QUESTIONS 9-11 FOR EACH PREGNANCY SINCE JANUARY, 2017. ELSE GO TO SEXUAL ACTIVITY, Q13]

10a. Now think about the second pregnancy since January, 2017. In which of the ways shown on **Card 2** did this pregnancy end?

1. Miscarriage
2. Stillbirth
3. Abortion
4. Ectopic or tubal pregnancy
5. Live birth by Cesarean section
6. Live birth by vaginal delivery

11a. In what month and year did this pregnancy end?

_____ month/year

12a. How many months or weeks had you been pregnant when [the baby was born/the pregnancy ended]?

_____ number of months or weeks

10b. Think about the third pregnancy since January, 2017. In which of the ways shown on **Card 2** did this pregnancy end?

1. Miscarriage
2. Stillbirth
3. Abortion
4. Ectopic or tubal pregnancy
5. Live birth by Cesarean section
6. Live birth by vaginal delivery

11b. In what month and year did this pregnancy end?

_____ month/year

12b. How many months or weeks had you been pregnant when [the baby was born/the pregnancy ended]?

_____ number of months or weeks

10c. Now think about the fourth pregnancy since January, 2017. In which of the ways shown on **Card 2** did this pregnancy end?

1. Miscarriage
2. Stillbirth
3. Abortion
4. Ectopic or tubal pregnancy
5. Live birth by Cesarean section
6. Live birth by vaginal delivery

11c. In what month and year did this pregnancy end?

_____ month/year

12c. How many months or weeks had you been pregnant when [the baby was born/the pregnancy ended]?

_____ number of months or weeks

Sexual Activity Section

{Ask if not already known that R has had sexual intercourse; else go to Q14

13. At any time in your life, have you ever had sexual intercourse with a man, that is, made love, had sex, or gone all the way?

- Yes
- No

{Ask if R was ever pregnant, is currently married/cohabiting, or has ever had sexual intercourse

14. Please look at the calendar and think back to the very first time in your life that you ever had sexual intercourse with a man. In what month and year was that?

_____Month/year

Please record your date of first intercourse in the "Date of First Intercourse" section *below* the calendar.

Marriages, Cohabitations, and Sexual Partners Section

{Ask if legal marital status is any category except never married (wording variant based on marital status)

15. (Including your present marriage) how many times have you ever been married?

_____number

{Ask if marital status is married or ever married

16. [(How many of these marriages started or ended)/(Did this marriage start or end)] since January 2017? [READ IF NECESSARY: Please also include your current marriage.]

_____number

{Ask if at least 1 marriage since January 2017

For each marriage mentioned above since 2017 ask:

17. In what month and year were you and your [current] spouse married?

_____Month/year

Please record your spouse's initials in the box for this month and year on the "Marriages, Cohabs, Partners" row of your calendar. [READ IF NECESSARY: If this happened before January 2017, please write the date and their initials in the "Before January 2017" column.]

{Instruct if marital status is anything other than currently married

Next record something in the appropriate box on the "Marriages, Cohabs, Partners" row to indicate when this marriage ended.

{Ask if R reported more than one marriage since Jan 2017; else go to 18

17a. In what month and year were you and your previous spouse married?

_____Month/year

Please record this spouse's initials in the box for this month and year on the "Marriages, Cohabs, Partners" row of your calendar. [READ IF NECESSARY: If this happened before January 2017, please write the date and their initials in the "Before January 2017" column.]

Next record something in the appropriate box on the “Marriages, Cohabs, Partners” row to indicate when this marriage ended.

{Ask all (wording varies if currently cohabiting or married)}

18. [Including your current cohabiting partner (and any partners you later married)] h/How many times have you ever lived with a sexual partner as an unmarried couple?

_____ number

19. How many of these times started or ended since January 2017? [READ IF NECESSARY: Please also include your current cohabiting union.]

_____ number

{Read for each cohabitation mentioned since Jan, 2017; if none, go to Q21}

Please record your partner’s initials in the box for this month and year on the "Marriages, Cohabs, Partners" row of your calendar. If this happened before January 2017, please write the date and their initials in the "Before January 2017" column.

{Instruct if cohabitation is not current}

Please mark the appropriate box on the “Marriages, Cohabs, Partners” row to indicate when this cohabitation ended.

20. Please tell me in what month and year since Jan, 2017 did you and your [current/2nd/3rd] cohabiting partner begin living together?

_____ month/year current cohab

_____ month/year 2nd cohab

_____ month/year 3rd cohab

{Ask if R ever had sexual intercourse; else go to Contraceptive Use section}

Please look at the calendar and think of all of your sexual relationships since 2017. This includes spouses, cohabiting partners, and other sexual partners, if any.

Please record the month of first and last sexual intercourse of each relationship in the “Marriages, Cohabs, Partners” row in the calendar. You might use “LSEX” and their initials or some other abbreviation you will recognize later to mark the month of last sexual intercourse with this partner. You might use “FSEX” for the month of first intercourse with this partner. If first intercourse with this partner occurred before January 2017 please record this in the “Before 2017” space in the “Marriages, Cohabs, Partners” row. You may want to draw a line from the month of first and last intercourse with each partner.

Monthly Sexual Activity Section

{Ask if R was ever pregnant, is currently married/cohabiting, or has had sexual intercourse}

21. Have you had sexual intercourse since January 2017?

Yes

No [go to calendar instruction after Q22]

Many women have times when they are not having intercourse at all, for example, because of pregnancy, separation, not dating anyone, illness, or other reasons.

22. Since ([DATE OF FIRST SEX]/ January 2017), have there been any times when you were not having intercourse at all for one month or more?

Yes

No

{IF R had intercourse every month, go to Contraceptive Use Section, otherwise ask next series

Start with the current month, [MONTH OF INTERVIEW], and think about each month one at a time, going back to (January 2017/[DATE OF FIRST SEX]). On the row labeled "Intercourse", please mark an "x" in the box for each month during which you had intercourse at least once. So the boxes in this row that are blank will be the ones during which you did not have intercourse at all for the whole month.

Now think about last year, 2019. Start with December, and think about each month one at a time, going back to (January 2019/[DATE OF FIRST SEX]). Please mark an "x" in the box for each month during which you had intercourse at least once.

Finally, start with December 2018, and think about each month one at a time, going back to January 2017/[DATE OF FIRST SEX]). Please mark an "x" in the box for each month during which you had intercourse at least once.

The next questions are about the dates you've had sexual intercourse since January, 2017.

23a. First think about the year 2020. Please tell me which months you had sexual intercourse at least once in 2020. [READ IF NECESSARY: If it's easier, you can tell me the months in which you did NOT have sexual intercourse.]

Jan

Feb

March

April

May

June

July

Aug

Sept

Oct

Nov

Dec

23b. Now think about the year 2019. Please tell me which months you had sexual intercourse at least once. [READ IF NECESSARY: If it's easier, you can tell me the months in which you did NOT have sexual intercourse.]

Jan

Feb

March

April

May

June

July

Aug

Sept

Oct

Nov

Dec

23c. Think about the year 2018 and tell me which months you had sexual intercourse at least once. [READ IF NECESSARY: If it's easier, you can tell me the months in which you did NOT have sexual intercourse.]

- | | |
|--------------------------------|-------------------------------|
| <input type="checkbox"/> Jan | <input type="checkbox"/> July |
| <input type="checkbox"/> Feb | <input type="checkbox"/> Aug |
| <input type="checkbox"/> March | <input type="checkbox"/> Sept |
| <input type="checkbox"/> April | <input type="checkbox"/> Oct |
| <input type="checkbox"/> May | <input type="checkbox"/> Nov |
| <input type="checkbox"/> June | <input type="checkbox"/> Dec |

23d. Finally, think about the year 2017 and tell me which months you had sexual intercourse at least once. [READ IF NECESSARY: If it's easier, you can tell me the months in which you did NOT have sexual intercourse.]

- | | |
|--------------------------------|-------------------------------|
| <input type="checkbox"/> Jan | <input type="checkbox"/> July |
| <input type="checkbox"/> Feb | <input type="checkbox"/> Aug |
| <input type="checkbox"/> March | <input type="checkbox"/> Sept |
| <input type="checkbox"/> April | <input type="checkbox"/> Oct |
| <input type="checkbox"/> May | <input type="checkbox"/> Nov |
| <input type="checkbox"/> June | <input type="checkbox"/> Dec |

Contraceptive Use Section

{Ask all; hand **CARD 3** to R

CARD 3 lists contraceptive methods that some people use to prevent pregnancy or to prevent sexually transmitted diseases. Please circle each of these methods, if any, that you have ever used for any reason, even if you have only used the method once.

1. Birth control pills
2. Condoms or rubbers
3. Female sterilizing operation (such as tubal sterilization and hysterectomy)
4. Partner's vasectomy
5. Depo-Provera[®] injectables (shot given every 3 months)
6. Withdrawal, pulling out
7. Calendar rhythm method
8. Standard Days or CycleBeads method
9. Safe period by temperature or cervical mucus test (for example: Two Day Method, Billings Ovulation Method, Symptothermal Method)
10. Contraceptive patch (for example: Ortho-Evra[®] or Xulane[™])
11. Vaginal contraceptive ring (for example: NuvaRing[®])
12. Emergency contraception (for example: Plan B[™], Preven[™], Ella[®], Next Choice[™])
13. Hormonal implant
14. Diaphragm
15. Female condom, vaginal pouch
16. Foam
17. Jelly or cream
18. Cervical cap
19. Suppository, insert

- 20. Intrauterine device (IUD) (for example: Copper-T™, Paragard™, Mirena™, Skyla™, Liletta™, Kyleena™) sometimes called "coil" or "loop"
- 21. Lunelle™ (once-a-month shot)
- 22. Other method

{Ask if R ever used any method of contraception; else end interview

24. Now I need to ask about the very first time in your life that you used a birth control method for any reason. In what month and year did you first use a method [*READ IF NECESSARY*: for any reason].

_____ *Month/year*

Please write this on your calendar on the "Birth Control Methods" row, in the box for this month and year. You can use an abbreviation for the method, or anything that you'll recognize later. If this date is before January 2017, write the date and method in the "Before January 2017" box.

The next questions are about birth control methods you may have used between January 2017 and now. Remember that this also refers to methods men use, such as condoms, vasectomy, and withdrawal.

If you used more than one method in the same month, it's important for me to record both or all of them.

Earlier you indicated you had used [*METHOD*]. If you have used this method at any time since January 2017, please indicate that in the box for each month that you used it, going back to January 2017, on the birth control methods row.

Now write any other methods you have used since January 2017 on the calendar, even if you did not mention earlier that you had used it.

Now I'll ask about the dates you have used birth control methods since January, 2017. [**INTERVIEWER: Confirm that methods were used since January 2017 and ask only about those.**]

25a. First think about the year 2020. Please tell me which months you used [*METHOD 1*] in 2020.

- | | |
|--------------------------------|-------------------------------|
| <input type="checkbox"/> Jan | <input type="checkbox"/> July |
| <input type="checkbox"/> Feb | <input type="checkbox"/> Aug |
| <input type="checkbox"/> March | <input type="checkbox"/> Sept |
| <input type="checkbox"/> April | <input type="checkbox"/> Oct |
| <input type="checkbox"/> May | <input type="checkbox"/> Nov |
| <input type="checkbox"/> June | <input type="checkbox"/> Dec |

25b. Now think about the year 2019. Please tell me which months you used [*METHOD 1*].

- | | |
|--------------------------------|-------------------------------|
| <input type="checkbox"/> Jan | <input type="checkbox"/> July |
| <input type="checkbox"/> Feb | <input type="checkbox"/> Aug |
| <input type="checkbox"/> March | <input type="checkbox"/> Sept |
| <input type="checkbox"/> April | <input type="checkbox"/> Oct |
| <input type="checkbox"/> May | <input type="checkbox"/> Nov |
| <input type="checkbox"/> June | <input type="checkbox"/> Dec |

25c. Think about the year 2018 and tell me which months you used [*METHOD 1*].

- | | |
|--------------------------------|-------------------------------|
| <input type="checkbox"/> Jan | <input type="checkbox"/> July |
| <input type="checkbox"/> Feb | <input type="checkbox"/> Aug |
| <input type="checkbox"/> March | <input type="checkbox"/> Sept |
| <input type="checkbox"/> April | <input type="checkbox"/> Oct |
| <input type="checkbox"/> May | <input type="checkbox"/> Nov |
| <input type="checkbox"/> June | <input type="checkbox"/> Dec |

25d. Finally, think about the year 2017 and tell me which months you used [METHOD 1].

- | | |
|--------------------------------|-------------------------------|
| <input type="checkbox"/> Jan | <input type="checkbox"/> July |
| <input type="checkbox"/> Feb | <input type="checkbox"/> Aug |
| <input type="checkbox"/> March | <input type="checkbox"/> Sept |
| <input type="checkbox"/> April | <input type="checkbox"/> Oct |
| <input type="checkbox"/> May | <input type="checkbox"/> Nov |
| <input type="checkbox"/> June | <input type="checkbox"/> Dec |

26a. Now think about [METHOD 2]. Please tell me which months you used [METHOD 2] in 2020.

- | | |
|--------------------------------|-------------------------------|
| <input type="checkbox"/> Jan | <input type="checkbox"/> July |
| <input type="checkbox"/> Feb | <input type="checkbox"/> Aug |
| <input type="checkbox"/> March | <input type="checkbox"/> Sept |
| <input type="checkbox"/> April | <input type="checkbox"/> Oct |
| <input type="checkbox"/> May | <input type="checkbox"/> Nov |
| <input type="checkbox"/> June | <input type="checkbox"/> Dec |

26b. Now think about the year 2019. Please tell me which months you used [METHOD 2].

- | | |
|--------------------------------|-------------------------------|
| <input type="checkbox"/> Jan | <input type="checkbox"/> July |
| <input type="checkbox"/> Feb | <input type="checkbox"/> Aug |
| <input type="checkbox"/> March | <input type="checkbox"/> Sept |
| <input type="checkbox"/> April | <input type="checkbox"/> Oct |
| <input type="checkbox"/> May | <input type="checkbox"/> Nov |
| <input type="checkbox"/> June | <input type="checkbox"/> Dec |

26c. Think about the year 2018 and tell me which months you used [METHOD 2].

- | | |
|--------------------------------|-------------------------------|
| <input type="checkbox"/> Jan | <input type="checkbox"/> July |
| <input type="checkbox"/> Feb | <input type="checkbox"/> Aug |
| <input type="checkbox"/> March | <input type="checkbox"/> Sept |
| <input type="checkbox"/> April | <input type="checkbox"/> Oct |
| <input type="checkbox"/> May | <input type="checkbox"/> Nov |
| <input type="checkbox"/> June | <input type="checkbox"/> Dec |

26d. Think about the year 2017 and tell me which months you used [METHOD 2].

- Jan
- Feb
- March
- April
- May
- June

- July
- Aug
- Sept
- Oct
- Nov
- Dec

27a. Now think about [METHOD 3]. Please tell me which months you used [METHOD 3] in 2020.

- Jan
- Feb
- March
- April
- May
- June

- July
- Aug
- Sept
- Oct
- Nov
- Dec

27b. Now think about the year 2019. Please tell me which months you used [METHOD 3].

- Jan
- Feb
- March
- April
- May
- June

- July
- Aug
- Sept
- Oct
- Nov
- Dec

27c. Think about the year 2018 and tell me which months you used [METHOD 3].

- Jan
- Feb
- March
- April
- May
- June

- July
- Aug
- Sept
- Oct
- Nov
- Dec

27d. Finally, think about the year 2017 and tell me which months you used [METHOD 3]

- Jan
- Feb
- March
- April
- May
- June

- July
- Aug
- Sept
- Oct
- Nov
- Dec

{Ask if any method reported *specifically* in January 2017}

28. For how many months altogether had you been using [METHOD1-n IN January 2017], without a break before January 2017? If it is easier to recall, you can tell me the month and year you started. [ASK FOR EACH METHOD REPORTED IN JAN, 2017]

_____ *Number of months OR month and year started using METHOD1*

_____ *Number of months OR month and year started using METHOD2*

_____ *Number of months OR month and year started using METHOD3*

Appendix 2

Life History Calendar

		2017												2018												2019												2020													
Before 2017		Ja	Fe	Ma	Ap	My	Jn	Jl	Au	Sp	Oc	Nv	Dc	Ja	Fe	Ma	Ap	My	Jn	Jl	Au	Sp	Oc	Nv	Dc	Ja	Fe	Ma	Ap	My	Jn	Jl	Au	Sp	Oc	Nv	Dc	Ja	Fe	Ma	Ap	My	Jn	Jl	Au	Sp	Oc	Nv	Dc		
	Your Age																																																		
	Education																																																		
	Births & Other Pregnancies																																																		
	Marriages, Cohabs, Partners																																																		
	Intercourse																																																		
	Birth Control Methods																																																		

Your Date of Birth: _____ Date of First Intercourse: _____

Birth or Pregnancy Ending Dates:
 1st: _____ 2nd: _____ 3rd: _____ 4th: _____ 5th: _____