

The stability and predictive ability of fertility intentions in western Kenya

Jennifer Johnson-Hanks and Edward Miguel

Short abstract

This paper presents longitudinal data on fertility intentions from the Kenyan Life Panel Survey (KLPS), examining how stable these intentions are over time and the degree to which they predict subsequent reproductive behavior. The KLPS dataset contains unique educational, labor market, health, nutritional, demographic, and cognitive information for 6,800 people as they grew from children into young adults over ten years (1998-2008). The last two data collection rounds included modules on reproductive intentions and behavior, making it possible to track changes in stated intentions over time, and to identify the degree to which intentions predict outcomes over the subsequent three years. In addition, an experimental set of questions about the expected consequences of different life events on fertility intentions allows us to examine how these young adults think about the formation and meanings of fertility intentions. Preliminary analysis suggests that intentions are highly changeable and not strongly predictive, and that individuals with more normative intentions are less likely to change.

Long abstract

After decades of focusing on the large-scale socio-economic correlates of fertility rates, researchers are returning to the analysis of fertility intentions. However, most of the new research on fertility intentions has been conducted in rich countries, where excellent data collection infrastructures make such research easier. For example, Jennifer Barber and colleagues at Michigan are conducting a rich longitudinal study of fertility intentions and unintended pregnancy, and Corrine Rocca and coauthors report new data on the predictive ability and stability of pregnancy intentions among Latino/a adolescents in a forthcoming paper.

This lively new interest is refreshing, given that nearly all models of fertility outcomes (both diffusionist and rational choice) assume the causal importance of intentions, and yet over the past three decades, only some dozen papers have assessed the degree to which reproductive intentions predict subsequent behaviors at the individual level (Bankole and Westoff 1998; Campbell and Campbell 1997; Desilva 1992; Jones, Paul and Westoff 1980; Miller and Pasta 1995; Morgan 1982; 1982; Nair and Chow 1980; Quesnel-Vallee and Morgan 2004; Schoen et al, 1999, 2000; Symeonidou 2000; Tan and Tey 1995; Vlassoff 1990; Westoff and Ryder 1977).

The results of these studies have been mixed, in part due to their varying research methods and in part to the different socioeconomic contexts in which the studies were done.

Researchers have generally found statistically significant effects of prior intentions on subsequent behaviors; however, the proportion of inconsistent responses is always significant, and sometimes quite large. The lowest rates of inconsistency are found in the seminal 1977 publication by Westoff and Ryder, which used data from white American women, in the first 20 years of their first marriages, interviewed in 1970 and 1975. They found that 34% of women who had said that they wanted another child had not borne one in the intervening five years, while 12% of women who had said that they wanted no more had nonetheless given birth to an additional child. All together, the “inconsistency ratio” was 20.9% over the five-year period.

Research on reproductive intentions and outcomes in developing countries has been limited, and the results quite disparate. Campbell and Campbell (1997) argue that fertility intentions have a significant influence on future fertility behavior in Botswana, and that sex differences are small except in reference to desire for additional sons. Desilva (1992) found that nearly 30% of women in a Sri Lankan survey had outcomes discrepant to their stated intentions just three years later. In Taiwan, Nair and Chow (1980) found that couples who wanted no more children had significantly lower fertility than did couples who wanted more, although over 30% of the couples wanting no more did indeed bear a child over the 3 year interval. Tan and Tey (1994) argue that Malaysian women’s fertility is well predicted by their stated intentions, whereas Vlassoff (1990) found no relationship between Indian women’s reported desired family size and their fertility ten years later.

The findings of these studies are difficult to interpret, both because of the selection of samples and the structure of the questions. Most of the studies focus on young, fertile, married women—exactly those most able to achieve their fertility desires. But while sample selection might suggest an overestimation of the importance of intentions, the formulation of the questions might lead in the opposite direction. Most studies use a single question to assess intentions, asking: “Do you want another child?”, with no temporal referent, reference to the survival of the current child or sex of the future one, or mention of alternate potential futures in which childbearing might be more or less desirable. Thus, many of the women whose behaviors are apparently “inconsistent” may indeed be succeeding in fulfilling some set of reproductive intentions that are outside the frame of the researchers’ questions.

This paper presents data from the Kenyan Life Panel Survey (KLPS), a unique longitudinal dataset with rich educational, labor market, health, nutritional, demographic, and cognitive information for 6,800 people as they grew from children into young adults over ten years (1998-2008). The last two data collection rounds included modules on reproductive intentions and behavior, making it possible to track changes in stated intentions over time, and to identify the degree to which intentions predict outcomes over the subsequent three years. In addition, an experimental set of questions about the expected consequences of different life events on fertility intentions allows us to examine how these young adults think about the formation and meanings of fertility intentions. The KLPS also contained an experimental intervention component related to deworming, but we did not anticipate, nor do we find, any direct effects of this health intervention on either fertility intentions or outcomes.

The 2005 round included a lengthy module on fertility intentions and related ideas and ideals about family formation, fertility timing, and other aspirations. These data were elicited using a combination of pre-coded questions and open-ended responses. We experimented with a range of ways of asking questions about fertility intentions, notably including asking whether the subject thought that specific life events would change her subsequent fertility intentions (see appendix for the fertility module). In the 2008-2009 wave, we asked a more limited set of fertility questions, focused on current intentions, recall of past intentions, and marriage and fertility events over the intervening three years. Elsewhere in the survey we asked a range of questions about other kinds of change, particularly including work and school, which mirror the kinds of life changes listed in the expected intentions change module.

Preliminary analysis suggests that intentions are not very stable over this three year period, and that intentions do a poor job of predicting outcomes. Some of the change in stated intentions can be accounted for with changing life events, such as finding a partner with different (perceived) fertility intentions. Indeed, our preliminary analysis suggests that these events change intentions more, and more predictably, than the students anticipated in 2005. In addition, those young people with the most normative intentions (postpone childbearing and have 3 or 4 children overall) are the least likely to change their intentions between waves, but are not more likely than others to correctly predict their own behavior over the three year period.

Appendix: KENYAN LIFE PANEL SURVEY REPRODUCTIVE INTENTIONS MODULE (F)

1. Household Identification & Control Information

Fill in this information before the interview:

1. Pupil ID (TARGET)
2. Pupil Family Name
3. Pupil (A) Name 2 / (B) Name 3 /
4. Pupil Gender: _2_ (1 = Male, 2 = Female)
5. 1998 Pupil School ID / Name: /
6. 1998 Pupil Standard:

Fill in this information at the beginning of the interview:

7. Date of interview: (DD/MM/YY) |__|__|/|__|__|/|__|__|
8. Time start interview: (24 hr clock) |__|__| : |__|__|

9. If respondent **REFUSES TO RESPOND**: Why? _____

10. Interviewer ID / name: |__|__|__| / _____
11. Supervisor ID / name: |__|__|__| / _____

To be completed at the time of data entry:

12. Data Entry Person name: _____
13. Data Entry Person ID: |_|_|_|
14. Comments on data entry: _____

2. Confirmation of student identity and introduction

Confirm the following information with the respondent:

1. What is your current full name?

| | | | / | | | | | | /
| | | |

(Family name)

(Name 1)

(Name 2)

2. What is your date of birth?

| | | | / | | | | / | | | | | |

DD

MM

YYYY

We want to understand the role of marriage and childbearing in the lives of young women today. We are interested both in the experiences of young women, and in their hopes or plans for the future. This section will take about 30 minutes, and I will ask you about what has happened in your life regarding marriage and childbearing, and about your opinions and ideas for the future. As with the rest of this survey, your answers will be kept confidential, and you are free not to answer. Are you willing to participate?

Field Officer: Initial to indicate pupils' acceptance _____

3. Marriage

Refer to section 18 of Module H, and say: You said that you have been married (once/___ times). I would like to ask you some additional questions about (this/each) marriage.

	(A) First Marriage	(B) Second Marriage	(C) Third Marriage
1. At what age did you start co-residing with this husband? (98=Never, 99=DK)			
2. Were you married in a religious ceremony (in the church or mosque)? (1=Yes, 2=No, 99=DK)			
3. If YES , at what age? (99=DK)			
4. Were you married in a civil ceremony (with a legal paper)? (1=Yes, 2=No, 99=DK)			
5. If YES , at what age? (99=DK)			
6. Did you ever have a co-wife? (1=Yes, 2=No, 99=DK)			
7. If YES , how many senior co-wives? (99=DK)			
8. If YES , how many junior co-wives? (99=DK)			

4. Fertility History

Refer to section 19 of Module H and say: You said that you have been pregnant (once/___ times) and that you are currently (pregnant/not pregnant). I would like to ask you some additional questions about (this/each) pregnancy:

	(A) 1st Pregnancy	(B) 2 nd Pregnancy	(C) 3rd Pregnancy	(D) 4th Pregnancy
1. Just before you became pregnant, did you want to have a baby? (1=Yes, at that time; 2=Yes, but later; 3=Yes, but earlier; 4=No, not at <i>any</i> time; 99=DK)	__	__	__	__
2. And the father of the pregnancy, did he want to have a baby with you? (Codes as above)	__	__	__	__
3. If the baby was born living: Was the pregnancy easy or difficult? (i.e. were you sick a lot, had a lot of problems? 1=Easy, 2=Difficult, 99=DK)	__	__	__	__
4. If the baby was born living: Where did you give birth? (1=Home, 2=Hospital or clinic, 3=Other (specify), 99=DK)	__	__	__	__
5. If the baby was born living: What was the baby's weight as soon after birth as possible? (99=DK)	____g twin: ____g	____g twin: ____g	____g twin: ____g	____g twin: ____g
6. At what age was the weight listed above measured?	_____	_____	_____	_____
7. If the weight is unknown: At the birth was the baby small, average, or large? (1=Small, 2=Average, 3=Large, 99=DK)	__	__	__	__

5. Reproductive Intentions

Now I would like to ask you some questions about your hopes for the future, the children you would like to have, and the kind of family that you envision for yourself.

1. Are you trying now to become pregnant? (1=Yes, 2=No)
2. ***If No:*** Do you want to have (any more) children someday, (*if currently pregnant:* in addition to the one you are currently expecting)? (1=Yes, soon; 2=Yes, later; 3=No, 99=DK)
3. Do you think that you might change your mind? (1=Yes, 2=No)
4. If "Yes": Under what circumstances do you think you might change your mind?
5. If you could choose exactly, to how many children would you like to give birth? (98=As many as possible, 99=DK)
6. If you were forced to chose between (Number given in Q5 + 1) and (Number given in Q5 - 1), which would you prefer?
7. ***If chooses Q5 - 1:*** Why not more? OR ***If chooses Q5 + 1:*** Why not fewer?
8. And if you could choose the number of sons, how many sons would you like? (98=As many as possible, 99=DK)
9. And if you could choose the number of daughters, how many daughters? (98=As many as possible, 99=DK)

Questions 9-12, ask only of married women. Otherwise, skip to question 13.

10. And your husband/partner, how many children would he like to have with you? (98=As many as possible, 99= DK)
11. And how many would he like in all, including with your (future) co-wife/co-wives? (88=Not applicable, will never have more wives, 98=As many as possible, 99=DK)
12. How many sons would he like to have with you? (98=As many as possible, 99= DK)
13. How many daughters would he like to have with you? (98=As many as possible, 99= DK)

14. You said before that you would like to give birth to a total of ____ children. Now I would like to propose some situations that could happen to someone. In each situation, I would like to know would you then still like to bear ____ children, or a larger number, or a smaller number?
(Check box for: Same number; More, Fewer, or DK)

	Same Number	More	Fewer	DK
<i>For unmarried women only:</i>				
You become a junior co-wife				
You marry soon				
You are unable to find a husband				
<i>For all women:</i>				
All the ____ are girls				
Your finances get worse				
One of your children dies as an infant				
Someone sends you a teen-aged foster child who stays				
Your daughter gives birth before you complete the births				
The pregnancies are very difficult for you				
All the ____ are boys.				
You no longer get along with your husband				
Your finances improve				
Your co-wife has a lot of children				
Someone sends you three very young foster children				
Your daughter-in-law gives birth before you complete the births				
Your husband wants more children than you do				
Two of your children die as infants				
Your co-wife leaves/you are alone with your husband				
Your husband takes another wife				
One of your children is fostered somewhere else				

15. Why would a husband take another wife? (Don't read, just mark all that apply, 1=Yes, 2=No)

- A. Conflicts with the first wife ☐
- B. The first wife cannot conceive ☐
- C. The first wife is too old/too tired ☐
- D. He loves the new wife very much ☐
- E. Other (specify) _____ ☐

16. Sometimes it happens that a woman would like to postpone for a while before getting pregnant. According to what you have seen and heard, would a woman likely to wait a while before getting pregnant in the following situations? (1=Yes, 2=No, 3=Depends, 99=DK. ***If "depends": on what?***)

- A. Dowry has not yet been paid for her ☐

 - B. She has a small baby (still breastfeeding) ☐

 - C. Her co-wife has a small baby ☐

 - D. She is feeling weak ☐

 - E. She is still in school ☐

 - F. She has a salary job ☐

 - G. She receives some young foster children ☐

 - H. Her finances are limited ☐

 - I. There is conflict in her marriage ☐

 - J. Her recent pregnancies have been difficult ☐

 - K. Her husband takes another wife ☐

 - L. Her husband prefers one of her co-wives ☐

 - M. Other (Specify) ☐

-

16. If a woman would like to wait a while before getting pregnant, what do you think it would be good for her to do? (**Don't read, just indicate all that apply; 1=Yes, 2=No**)

- | | |
|---|--------------------------|
| F. (Male) Condoms | <input type="checkbox"/> |
| G. Pills | <input type="checkbox"/> |
| H. Norplant | <input type="checkbox"/> |
| I. IUD (or "Coil") | <input type="checkbox"/> |
| J. Injectibles | <input type="checkbox"/> |
| K. Herbs (e.g. Aloe vera) | <input type="checkbox"/> |
| L. Avoid sexual intercourse | <input type="checkbox"/> |
| M. Have intercourse only on "safe" days (or "Calendar") | <input type="checkbox"/> |
| N. Female Condoms | <input type="checkbox"/> |
| O. "Something," but not specified | <input type="checkbox"/> |
| P. Nothing | <input type="checkbox"/> |
| Q. Other answer (specify) _____ | <input type="checkbox"/> |

17. And sometimes a woman may want to stop childbearing altogether. According to what you have seen and heard, would a woman probably want to stop bearing children altogether if the following things occurred? (1=Yes, 2=No, 3=Depends, 99=DK; **If "depends": On what?**)

- | | | |
|---------------------------|--|--------------------------|
| A. children | Her husband dies when she has few | <input type="checkbox"/> |
| B. _____ | Her finances are very poor | <input type="checkbox"/> |
| C. _____ | Her husband abandons her | <input type="checkbox"/> |
| D. _____ | She is feeling weak or sick | <input type="checkbox"/> |
| E. _____ | She has very difficult pregnancies | <input type="checkbox"/> |
| F. daughters, all healthy | She has three sons and three | <input type="checkbox"/> |
| G. children | Her daughter has begun bearing | <input type="checkbox"/> |
| H. house | She already has grandchildren in the | <input type="checkbox"/> |
| I. _____ | She receives several orphans to care for | <input type="checkbox"/> |

J.

Other (specify)

| |

18. And if a woman wants to stop bearing children altogether, what do you think it would be good for her to do? **(Don't read, just indicate all that apply; 1=Yes, 2=No)**

- | | |
|-------------------------------------|----------------------|
| A. | Sterilization (Tubal |
| ligation) | __ |
| B. | Male Condoms |
| | __ |
| C. | Pills __ |
| D. | Norplant __ |
| E. | IUD (or "Coil") |
| | __ |
| F. | Injectibles __ |
| G. | Herbs (e.g. Aloe |
| vera) | __ |
| H. Avoid sexual intercourse | __ |
| I. | Have intercourse |
| only on "safe" days (or "Calendar") | __ |
| J. | Female Condoms |
| | __ |
| K. | Something, but not |
| specified | __ |
| L. | Nothing __ |
| M. | Other answer |
| (specify) _____ | __ |

19. Have you ever used any method of avoiding getting pregnant? (1=Yes, 2=No, 99=DK)

|__|

20. What method did you use? **(Don't read, just indicate all that apply; 1=Yes, 2=No)**

- | | |
|-----------|----------------------|
| N. | Sterilization (Tubal |
| ligation) | __ |
| O. | Male Condoms |
| | __ |
| P. | Pills __ |
| Q. | Norplant __ |
| R. | IUD (or "Coil") |
| | __ |
| S. | Injectibles __ |

T.	Herbs (e.g. Aloe
vera)	__
U. Avoid sexual intercourse	__
V.	Have intercourse
only on "safe" days (or "Calendar")	__
W.	Female Condoms
	__
X.	Something, but not
specified	__
Y.	Nothing __
Z.	Other answer
(specify) _____	__

21. In the next *two* years, do you expect to have a(nother) child (***if currently pregnant:*** in addition to the one you are currently expecting)? (1=Yes, 2=No, 3=Depends, 99=DK; ***If "depends": on what?***) |__|

22. ***If No:*** In the next *five* years, do you expect to have a(nother) child (***if currently pregnant:*** in addition to the one you are currently expecting)? (1=Yes, 2=No, 3=Depends, 99=DK; ***If "depends": on what?***) |__|

Time end interview: (24 hr clock) |__| : |__|