When do fertility expectations predict fertility?

Demographers have been measuring and analyzing fertility intentions and expectations for over half a century. As a field, we have found women's responses regarding their future childbearing to be useful both in predicting fertility and in understanding the psychological processes that lead to specific fertility outcomes. However, we have also exhibited some ambivalence about these reports and their performance in quantitative research. Individuals do not always carry out their stated intentions, and intentions may be more predictive of fertility outcomes at some points in the life course than in others.

Previous research has found that 'missing the target' of fertility intentions is quite likely at the individual level and is associated with marital status, education, postponement of births, and having unintended births (Morgan and Rackin 2010). However, very little research has examined the predictiveness of stated intentions across various points in the life course or how various life course transitions enhance or diminish the predictive value of women's reports.

We ground our analysis in theory (Bachrach and Morgan 2013) that suggests that responses to questions about fertility intentions and expectations may reflect different phenomena at different points in the life course. The theory suggests that a true fertility intention, reflecting a desire for an outcome, a belief that taking a particular action will lead to that outcome, and a conscious commitment to perform the action, is formed only in circumstances that demand or motivate it. In other words, women form intentions when their circumstances make the issue of childbearing salient to the self and urgent enough to draw the cognitive resources needed to make a conscious plan. Many survey respondents, especially early in the life course, have not actually formulated intentions. Nevertheless, in the context of an interview inquiring about fertility intentions, they provide the best answers they can. Often these are based on a prototypical image of a family or vague desires or images of future selves. As a woman's life course unfolds, she is more likely to encounter circumstances that prompt the formation of intentions. We posit that this occurs as women experience life course transitions that confer statuses normatively associated with childbearing – such as marriage, completion of education, and parenthood.[1] Because actual intentions are likely to predict fertility better than responses based on general desires or prototypes, we hypothesize that the reported intentions of women who have passed these life course milestones will be better predictors of their fertility.

We address these issues by measuring when fertility expectations are most predictive of final parity using data from the NLSY79 that measures expectations throughout the life course. The NLSY measures refer to expectations, not intentions. Expectations do not imply a commitment to act, but otherwise should follow the same logic suggested by our theory: women whose life circumstances make fertility decisions most salient should have the most predictive expectations.

The NLSY79 measures fertility expectations every two years until women have completed childbearing. We compare stated expectations at each of these points to completed fertility and examine how women's circumstances at these points in the life course (in relation to key

[1] Becoming a parent, either intentionally or unintentionally, makes choices about future childbearing more salient. Of course, those who have already become parents cannot miss their target by having 0 children, so comparisons must account for this inherent advantage enjoyed by parents.

transitions) influence the congruence between stated expectations and final fertility. Finally, we assess the extent to which accounting for these transitions explain the age pattern in the predictability of expectations.

Data & methods

In this abstract we use data from the 1979 National Longitudinal Survey of Youth (NLSY79) to examine the correspondence between women's completed fertility and the expected number of children reported at various points in the life course. The NLSY79 provides a rare opportunity to study the unfolding life course and fertility expectations of a representative sample of Americans born in the late 1950s and early 1960s. No other survey provides such abundant data on the parallel evolution of fertility expectations and life course events from the beginning until the end of the respondents' reproductive years (by 2010, the youngest respondents were 45 years old).

Specifically, we use time-series data that examines whether intentions match respondents' final parity every two years from 1982 to 2010. Our sample includes women who report fertility intentions every two years. We use multinomial logistic regression models to predict if women predict fewer, more, or exactly the number of children they ultimately have each time intentions are reported. We examine if the time varying covariates age, marital status, completion of education, and parity are associated with reporting accurate fertility expectations, expectations that fall short of actual fertility, or expectations that exceed final parity. We also control on race and education and cluster standard errors to account for multiple observations for each woman. We show our results graphically and display predicted probabilities of actually having the number of children reported as expected, having fewer, and having more over different life course time points.

To complement this between-persons analysis, we also compare how well intentions predict completed fertility of the same women before and after a major life event. We use data on women's intentions before either getting married for the first time or having a first child and compare how well intentions predict completed parity in the wave before the event and two years later.

Results

Figure 1 shows that women who have married at some point had expectations that were much more predictive of their final parity compared to before they were married net of all time-varying covariates and controls. When women have never been married at the time intentions were measured, their predicted probability of having the number of children they expected they would have is only .56 compared to women who were married at the time intentions were measured, .82, or women who had previously been married but were not currently with a spouse, .86.

Next in Figure 2 we show results for women who have and have not completed their education, again net of controls. Women who have not completed their education are less likely to report accurate fertility expectations compared to those who have, with predicted probabilities of .59 and .80 respectively.

In Figure 3 we see that as parity increases women are much more likely to report accurate fertility expectations net of time-varying covariates and controls. When women have no children the predicted probability of reporting accurate fertility intentions is .51 and they are likely to have fewer children than they expected. However, once a woman has one child her fertility intentions are

much more likely to reflect the number of children she actually has. Once she has two children her fertility intentions are again more likely to be accurate. The likelihood of accurate fertility intentions increases at the third parity and then levels off.

Figure 1. Predicted Probability of having the number of children expected, more, or fewer by marital status

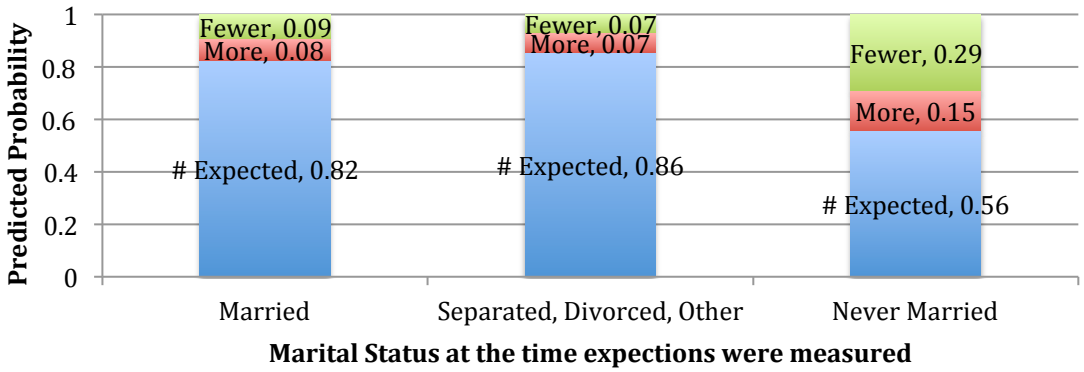


Figure 2. Predicted Probability of having the number of children expected, more, or fewer by completion of education

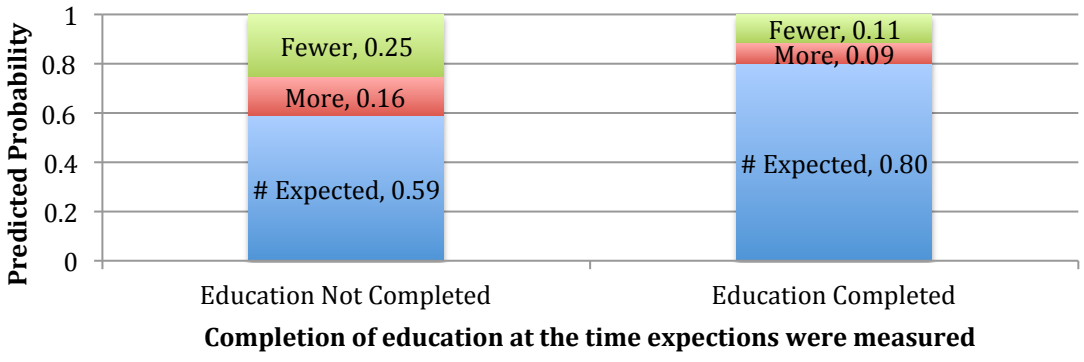


Figure 3. Predicted Probability of having the number of children expected, more, or fewer by parity

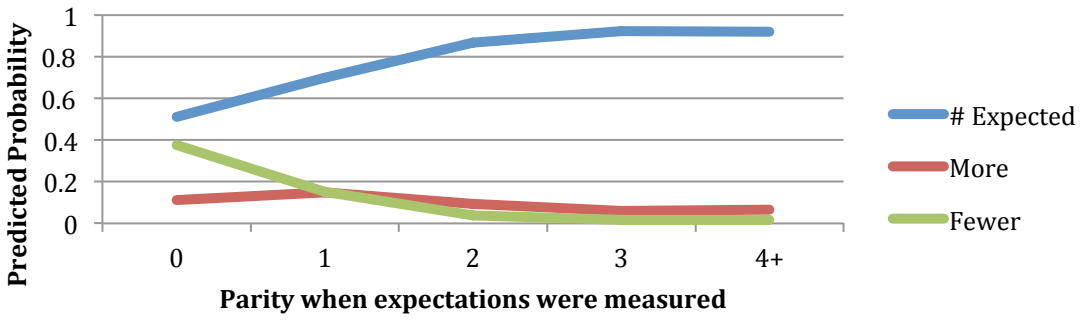
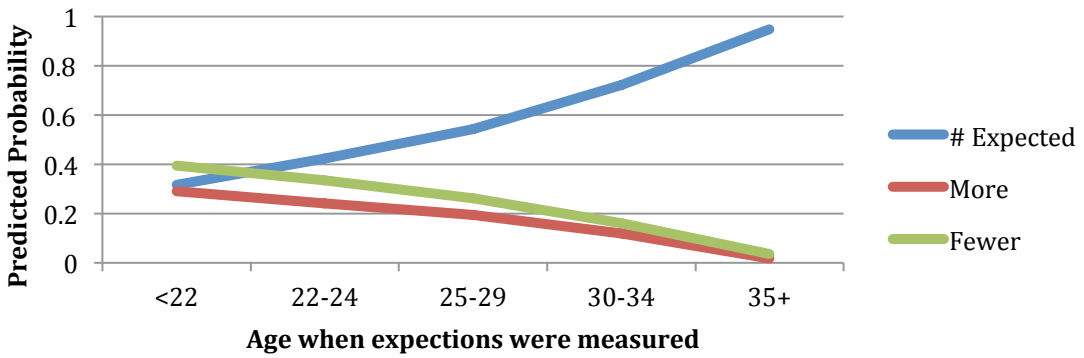


Figure 4 clearly shows that as respondents age their intentions become much more predictive of their final parity net of other factors. When women are under age 22 they are much less likely to report accurate expectations of their final parity. The predicted probability of actually having the number of children expected when they are less than 22 years old is only .32. However, as women age they become increasingly more likely to expect the number of children they actually have. By the mid-to-late 20s women have a predicted probability of .5 of having fertility expectations that are consistent with their final parity; whereas they have about a 25% probability of having fewer children than they expected and about a 20% probability of having more. By the time women are 35 or older, their expectations are highly predictive of their final parity.

Figure 4. Predicted Probability of having the number of children expected, more, or fewer by age



Preliminary results suggest that the life course transitions of marrying, completing education, and having children explain a substantial portion of the age effects on fertility intentions that fall short of completed fertility but do not help to explain age effects on predictions that exceed completed fertility. More specifically, after these life course transitions were taken into account they explained the age effect of women under age 30 having fewer children than expected compared to having the number expected. This may be because experiencing these transitions makes the issue of childbearing more salient and thus women devise a conscious plan that they can then enact.

Finally, we compared how well fertility intentions predicted completed fertility for the same women in the wave before and wave after first marriage and childbirth. Here we only examine women that are younger than 28 and control on age and race. When using a continuous measure of reported intentions to predict final parity, we found that in the wave before women got married, the R-squared value was .08. However, in the wave after these same women married their intentions were much more predictive of their final parity; the R-squared value rose over three times to .25. In the wave before women had their first child their intentions had an R-squared value of .09 when predicting final parity and after having this child their R-squared value rose to .15. In sum, marriage greatly improved predicting final parity and childbearing had less of an effect but after both transitions intentions became much more predictive of completed parity.

References

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Morgan, S. P. and H. Rackin (2010). "The Correspondence Between Fertility Intentions and Behavior in the United States." Population and Development Review **36**(1): 91-118.