****VERY PRELIMINARY DRAFT—PLEASE DO NOT CITE**

Timing of Childbearing and Disability in Older Age

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INTRODUCTION

Increasingly, researchers are applying a life course approach to the study of health, examining how an individual's experiences earlier in life set into motion a range of events with long-term implications. Among women, fertility is a central element of the life course that shapes opportunities, attitudes, decisions, behaviors, and health. Much research has dealt with the impact of particular reproductive patterns on health outcomes immediately related to the process of childbearing (e.g., post-partum depression, pregnancy-induced hypertension, maternal mortality, or infant health and mortality). More recently, researchers have begun asking questions about the long-term consequences of women's reproductive patterns.

I draw on a life course theoretical perspective (Elder, Johnson, & Crosnoe, 2004; Kuh & Ben-Schlomo, 2004) to examine the relationship between fertility and later life well-being. Broadly, a life course approach suggests that women's childbearing experiences may have direct long-term implications or indirect effects through influences on social, economic, and health status mechanisms. However, the mechanisms linking childbearing—which may happen over a 30-year interval from the teenage years to early midlife—to health some 20 years later may vary according to reproductive patterns, comprised of factors such as: 1) when a woman began childbearing, 2) when a woman completed childbearing, and 3) how many children a woman had. Such factors may influence the extent to which childbearing interferes with the pursuit or the maintenance of social and economic status, and they may be associated with differential health implications in later life.

This paper utilizes data from a nationally representative cohort of women aged 30-44 years old in 1967 in the United States to investigate the relationship between women's reproductive patterns and later life well-being, with attention to influences of early life and adult

social and economic circumstances. Specifically, I examine the timing of first birth, parity, and age at last birth as they relate to physical disability among mothers in later life.

BACKGROUND

The timing of childbearing may relate to later life health outcomes through distinct etiologic pathways that may be social and/or physiological in nature with either positive or negative results. Negative social, rather than direct medical, costs to the mother are typically associated with teenage childbearing (Makinson, 1985; Menken, 1972). For example, giving birth early may lead to the truncation of educational attainment (McElroy, 1996; Waite & Moore, 1978) and subsequent socioeconomic disadvantage. With regard to delayed childbearing, the mechanisms are less clear. On one hand, postponed childbearing may allow a woman to attain her desired level of education, marry and establish a stable relationship and home environment, and improve financial security. However, having children late (ages 35 and older) is associated with negative health consequences during the time of pregnancy, such as pre-eclampsia, pregnancy-induced hypertension, and gestational diabetes (Ozalp, Tanir, Sener, Yazan, & Keskin, 2003; Prysak, Lorenz, & Kisley, 1995), with potential for long-term health consequences (Seely, 1999).

The timing of childbearing may also be related to health in later life via social pathways of support and care, although relatively little consideration has been given this in extant research (Smith, Mineau, & Bean, 2002). Mothers, particularly late childbearers among whom offspring are relatively young and able to provide care, may receive care in old age from their children (Yi & Vaupel, 2004). Indeed, Yi and Vaupel (2004) find positive health effects of having children after age 35 or 40 among the oldest-old (those surviving to at least age 85) in China. Contrary to

what we would expect if high parity women were receiving better care from their children, analysis of contemporary European women finds that those with higher parities fare increasingly worse as they age (Doblhammer, 2000), casting doubt on the notion that more children mean more and/or better care for the mother. One possibility is that the beneficial effect of care in older age cannot counterbalance the negative effects that high parities have on health. Another possibility is that high parity women have high parity kids, who are thus unable to support/care for their parents (Smith et al., 2002). Geographic proximity of children to their parents is also important (Yi & Vaupel, 2004), particularly among more contemporary populations among whom migration is relatively common. Thus, several such factors may prevent the expected care arrangements from working to benefit mothers.

Beyond the processes set into motion by childbearing, apparent relationships between fertility and later life health may be due to lack of control for earlier life conditions that may influence both reproduction and health (cf. Rich-Edwards, 2002). In terms of health selection, frail or unhealthy women may have difficulty conceiving and giving birth and are also more apt to be ill. It has been also posited that innately robust women may age at slower rates and are therefore able to have children late in the reproductive cycle (Yi & Vaupel, 2004). With regard to social factors, young people from low socioeconomic status families are at a greater risk for teenage pregnancy and childbearing (McLanahan, 2004), and these same characteristics are shown to have an effect on health and mortality later in the life course (Gilman, Kawachi, Fitzmaurice, & Buka 2002; Hayward & Gorman 2004; Hertzman, Power, Matthews & Manor, 2001; Preston, Hill, & Drevenstedt, 1998). Several recent studies have recognized the potential of selection mechanisms driving this relationship (Doblhammer & Oeppen, 2003; Grundy &

Tomassini, 2005), though most studies in this area have been unable to evaluate the role of early life circumstances.

Existing research is ambiguous with regard to the relationship between disability and women's reproductive patterns, which may be attributable to differences in populations studied, measurement, and modeling. In recent research, Grundy and Tomassini (2005) look at the relationship between parity and early and late childbearing and limiting long standing illness, which is explained elsewhere to be "any long term illness, health problem or handicap, which limits his/her daily activities or the work, [*sic*] he/she can do" (Bartley & Plewis, 2002, 337). They find a higher likelihood of reporting a limitation among women who had at least five children compared to those with two children (Grundy & Tomassini, 2005). Their analyses of parity are conducted among all women and the timing of births is considered separately. In another study of older British women, having five or more children is associated with higher odds of having some disability, controlling for the timing of childbearing (Grundy & Holt, 2000).

Among women in the US, there is limited evidence for a parity-disability relationship. On one hand, Kington and colleagues (1997) find significant differences between women with six or more children compared to those with three to five children in rates of having some physical role limitation. However, they find no differences by parity when measuring disability as having limitations in activities of daily living (ADLs). Another study of older women in New York State does not find number of children to be associated with limitations in activities such as walking up and down stairs or doing heavy work around the house (Moen et al., 1992). Additional research is needed to understand the sources of these ambiguities and determine the extent to which the effects of the timing of first births and parity are confounded.

In a recent attempt to estimate pivotal and optimal ages of first birth among a nationally representative sample of adults in the US, Mirowsky (2002) supports the idea that early parenthood is detrimental to health in later life. He examines a number of measures of health, including physical impairments and finds that early parents are less healthy than their counterparts who delay childbearing beyond age 22. Results from multivariate models including possible confounders indicate that lower educational attainment, more children, and prolonged unemployment and economic hardship explain a portion of the association. Another study higher odds of disability among women who had children before age 23 at both time points, controlling for age, whether a woman had been married more than once, income, social class, death of a child, region of residence, educational qualifications, and home ownership (Grundy & Holt 2000).

Although there are no studies that I know of that examine non-marital childbearing in relation to later life disability, some research in this vein has been conducted looking at depression. When controlling for socioeconomic status and health, in addition to other measures of fertility, Mirowsky and Ross (2002) find a significant, positive association between premarital childbearing and depression. Kalil and Kunz (2002) compare depressive symptoms of teenage premarital childbearers with married adult (age 20+) childbearers. They suggest that premarital childbearing, more so than early childbearing, is implicated in higher levels of depression. To the extent that depression and disability are related, this evidence may have implications for research concerning disability.

A limited number of studies have examined the relationship between age at last birth and disability, with variation in the conclusions reached. Alonzo (2002) finds that having a child after the age of 35 is detrimental for the health of women in later life. More specifically, women

aged 50+ who gave birth after age 35 had higher odds of a clinical assessment of less than good mobility. However, older Chinese women having 3 or more births beyond age 35 and age 40 appear less likely to have ADL limitations (Yi & Vaupel 2004).

DATA AND SAMPLE

I utilize data from the National Longitudinal Survey of Mature Women (NLS-MW). Multistage probability sampling was used to draw a representative sample of 5,393 civilian, non-institutionalized women aged 30-44 years in 1967, with an oversample of Black women (see US Department of Labor 2005 for more detailed information). Of those women, 94 percent participated in the baseline (1967) interview (N=5,083). Since then, the cohort has been interviewed a total of 20 times through 2003, when 2,237 (44 percent) of the original respondents were surveyed. Most sample attrition is due to the death of the respondent (N = 1,485 of the original respondents or 52.2 percent of the attrition), with refusals (N=1,036 or 36.4 percent) and failure to locate (N=325 or 11.4 percent) making up the rest.

Although the NLS-MW was not explicitly designed to study the links between reproductive patterns and health, it is very well suited for the task. The initial purpose of the NLS-MW was to study the labor market experiences and ways in which this cohort of women balanced work and family roles, thus leading to the collection of data on several key factors. In particular, the NLS-MW gathered data on the timing of women's childbearing and family size, marriages, a wide range of socioeconomic status measures, and early life social circumstances that may be predictive of these other factors. In the later waves of the study, the scope of data collection was broadened to include more regular and varied questions on health. Finally, the NLS-MW is one of the most extensive, long-running data collection efforts carried out with a

cohort of Americans, providing a unique opportunity to study women at various life course stages with a sizeable sample to sustain multivariate analyses.

The analysis sample is limited to Black and White mothers who persist through the final wave of the study, when health outcomes are measured. Due in part to the race/ethnic composition of the U.S. population in 1967, there are too few respondents of other race/ethnic groups to analyze (87 of the 5,083 original respondents were coded as "Other"—non-White and non-Black) and were thus excluded from the analysis sample. A small number of women (N=27) who had an age of first birth less than 13 were excluded from the sample. Missing values of family income were imputed using multiple imputation hotdeck procedures in STATA version 9 (Mander & Clayton 2000), and missing values on variables where values could not be estimated with confidence, such as type of residence at age 15, were dealt with using casewise deletion. The final analysis sample is comprised of 1,773 mothers. To the extent that certain reproductive patterns are associated with greater risks of early mortality (i.e., during the reproductive years), our results may be conservative, or downwardly biased, estimates of the effects of fertility on women's health.

MEASURES

Disability: Measures of disability are drawn from the final, 2003, wave of the NLS-MW when respondents were 66-81 years old. I examine two measures of disability—activities of daily living (or ADL) limitations and functional activity limitations. *ADL limitation* is a dichotomous indicator of whether the respondent had difficulty carrying out five activities of daily living without assistance. These include: 1) transferring in and out of bed, 2) bathing or showering, 3) eating, and 4) dressing. Respondents reported difficulty with these activities on a

scale ranging from "not at all difficult" to "very difficult/can't do" and "don't do." Response categories were collapsed into "no difficulty" and "some difficulty" due to small numbers of individuals falling in some categories. Approximately three-fourths of the sample reported no difficulty with any activity and are coded 0. Those who are limited in their ability to conduct one or more ADL without assistance are coded 1.

In a recent paper using data from the NLS-MW, Long and Pavalko (2004) evaluate and compare numerous measures of functional limitations and discuss strategies effectively and efficiently measure physical disability. They recommend the use of parsimonious scales constructed of many, rather than few, measures to the use of single measures. Moreover, their results indicate no evidence that the use of multiple levels of severity (e.g., not at all difficult, a little difficult, somewhat difficult, very difficult) is more informative than considerations of whether a respondent can or cannot perform a functional activity. Following these recommendations, I employ a continuous measure of *functional limitations* representing the count of activities that the respondent reported having some difficulty doing. The following eight items comprise the scale of functional limitations: 1) picking up a dime from a table, 2) reaching or extending arm above shoulder, 3) sitting for two hours, 4) walking one block, 5) pushing or pulling large objects like a living room chair, 6) climbing one flight of stairs without resting, 7) stooping, kneeling, or crouching, and 8) lifting or carrying weights over ten pounds, like a heavy bag of groceries.

Timing of Childbearing: Measures of the timing of childbearing are based on fertility histories collected by 1982 when the sample was aged 45-59 years old. By these ages, almost all childbearing is complete. Therefore, estimates are not biased by the inclusion of mothers whose fertility may not be complete. The timing of first birth is a dichotomous variable indicating

whether the respondent had her first child as a teenager, compared to the reference category of those who first gave birth at the age of 20 or older. The analyses also include a measure of *non-marital first births*. This does not indicate whether a woman ever had a child out of wedlock, but rather is limited to the first-born child. Finally, *late childbearing* is measured using a dichotomous indicator coded 1 for mothers who completed childbearing at age 35 or older and 0 otherwise.

Early life social and economic status measures come from retrospective data collected in the baseline survey (1967) on the respondent's life when she was 15 years of age. Mother's completed education is measured with a dichotomous indicator of 8th grade or less in reference to higher levels of educational attainment. I also control for family structure (two-parent vs. other), type of residence (rural vs. other), and mother's employment (employed vs. not). Dummy indicators for missing data is on mother's education and employment are also included in the model.

Current social and economic status is measured at last interview. Educational attainment is measured as a continuous variable in number of years. I control for *family income* (in logged dollars), *employment status* (working for pay=1, not employed=0), *housing tenure* (respondent owns home=1, does not own home=0), and *marital status*. Marital status is measured using a series of dummy variables representing never married, widowed, and divorced or separated, with married as the reference category.

Proximity to and support from children is measured at last interview from a series of questions about the respondent's children. Proximity is measured as whether 1) the respondent co-resides with at least one of their biological children compared to those who do not and 2) the respondent has at least one child that lives nearby (within 10 miles of her residence but not with

her) compared to those who do not. Support is measured as whether the respondent has a child that helps her with chores, errands, and/or personal care.

Health status is measured as depressed mood, body mass index, and self-rated fair or poor health. Depressed mood is a continuous variable measured using a 20-item version of the Center for Epidemiological Studies' Depression Scale (CES-D; Radloff, 1977). Responses indicate the frequency with which respondents experienced a given feeling and range from 0 to 3, where 0 is rarely or none of the time and 3 is most or all of the time, with positively worded items reverse coded. Responses are summed, producing a possible range of 0-60. A higher score on the index denotes higher levels of depression. The scale is highly reliable (alpha=.88).

I distinguish between four categories of BMI: 1) underweight, or BMI of 18.5 or less, 2) normal or average BMI of 18.5-24.9 (reference group), 3) overweight, or BMI of 25-29.9, and 4) obese, or BMI 30 and greater (Centers for Disease Control and Prevention, 2006). Self-rated health is measured using women's responses to the question "Would you rate your health, compared with other women about your age, as excellent, good, fair, or poor?" Responses are dichotomized such that fair or poor are coded one (referred to as "poor health" from here on) and excellent or good make up the reference category.

Controls Variables include race to control for population composition and age to account for the 15-year difference between the oldest and youngest women in the sample. As noted earlier, the sample is limited to black and white women with white women comprising the reference category. Age in 2003, the last survey year, is a continuous variable based on year of birth. Finally, the analyses control for possible confounding effects of parity. Parity is classified into four groups: 1) one child (low parity), 2) 2-3 children (average parity, reference group), 3) 4-5 children, and 4) 6 or more children (high parity).

ANALYSIS

The first set of multivariate analyses examines the relationship between timing of childbearing and more severe forms of disability. Using a series of logistic regression models, I examine the roles of early life and current SES, proximity to and support from children, and other health statuses in linking teenage childbearing, non-marital first births, and late childbearing to ADL limitations in later life. I first estimate a baseline model (Model 1) that incorporates all three measures of childbearing timing[1], controlling for age, race, and parity. Model 2 adds measures of early life SES, Model 3 looks at current SES independently, and Model 4 combines early life and current SES. Model 5 considers the unique contributions of proximity to and support from children. Other health status characteristics are added to the baseline model to form Model 6. Finally, I present a full model (Model 7) that incorporates all covariates.

The second set of multivariate analyses employs negative binomial regression models to estimate the effects of timing of childbearing on functional activity limitations, following the same modeling sequence described for the analysis of ADL limitations. These models are appropriate for the analysis of count data when over/underdispersion is a factor. The log of the dispersion parameter (alpha) for this analysis equals -1.586. Because this value is less than zero, there is evidence that the response variable is under-dispersed. Thus, the negative binomial regression model is more appropriate than the Poisson regression model for the analysis of this count outcome.

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[1] Preliminary analyses examined the effects of each measure of the timing of childbearing independently and found that the same overall patterns exist, though there were some differences in the magnitude of effects. The effects of teenage childbearing, when estimated without control for non-marital first births and late childbearing, were slightly stronger than those presented here. The effect of non-marital first births was not accounted for in full models of functional activity limitations when considered alone, and the coefficients for late childbearing attained statistical significance in models that control for other health statuses in the prediction of functional activity limitations.

Both sets of multivariate analyses are weighted using a custom weight generated by the NLS to account for the complex sampling design, use of multiple waves of data, and attrition (National Longitudinal Survey Custom Weights, n.d.).

RESULTS

Teenage Childbearing

Women who transitioned into motherhood when they were teenagers are more likely to be disabled in later life. The baseline model, Model 1, controls for race, age, and parity, as well as the two other measures of the timing of childbearing—non-marital first birth and last birth at age 35 or older. In this model, we see that teenage childbearers are about 80 percent more likely (OR=1.80, significant at $p< .01$) to have ADL limitations and are expected to have a rate 1.3 times greater (IRR=1.30, significant at $p< .001$) for number of functional activity limitations than those who experienced the transition into motherhood when they were at least 20 years old.

In terms of ADL limitations, baseline effects are slightly attenuated by controls for SES (Model 4), with current SES (Model 3) mattering more than early life SES (Model 2); however, this group is still 1.4 times more likely to suffer from ADL limitations later in life. While SES controls decrease the health differential associated with teenage childbearing, we see in Model 5 that the consideration of proximity to and support from children does not have the same effect on the link between teenage childbearing and ADLs. Moreover, the independent effect of having assistance from a child with chores, errands, or personal care on ADL limitations is positive (OR=1.61, significant at $p<.01$). It makes sense that this type of instrumental support would be positively correlated with disability since greater support is needed by the less healthy, but if

levels of support were equal across groups, teenage mothers would nearly twice as likely to suffer from ADL limitations than those who had children later.

The relationship between teenage childbearing and more severe disability (ADLs) is accounted for by other health statuses (Model 6)—body mass, depression, and self-rated poor health. More detailed analyses (not shown) indicate that no one measure of other health conditions. In other words, it is the combination of these factors that serves to account for the effect of teenage childbearing on ADL limitations later in life. Model 7, the full model, reflects this mediational effect.

In terms of functional limitations, the overall patterns are the same those as found for ADL limitations. However, adding health to the model (Model 6) we see that the relationship between teenage childbearing and functional activity limitations becomes less pronounced, though these covariates do not fully account for difference between teenage childbearers and mothers who began childbearing when they were at least 20 years old. Rather, we find a moderately significant increase in the number of functional activities for which limitations are reported, until SES and other health statuses are controlled together (Model 7). As with models of ADL limitations, indicators of proximity to and support from children contribute little to the explanation of differences across these groups. Thus, SES appears to matter more for less severe forms of disability, whereas mental and subjective health and weight are key mediators in the relationship between teenage childbearing and more severe levels of disability.

Non-marital First Births

Overall, results suggest that initiating childbearing before marriage is detrimental for later life well-being, though this effect is more consistently found for less severe types of distress.

Models 1, 2, and 5 of Table X suggest that women who begin childbearing before marriage are one and a half times more likely to have ADL limitations later in life than those who were married first. However, it appears that current SES (Model 3) and other health statuses (Model 7) significantly attenuate this effect.

Unlike ADL limitations, the relationship between non-marital first births and functional activity limitations is not fully accounted for by the sets of covariates considered independently. Mothers who had their first child before marriage are expected to have a rate approximately 1.2 times greater for number of functional activity limitations than those who were married when they transitioned into motherhood. This differences is no longer evident in the full model (Model 7). A more detailed examination (results not shown) indicates that the combination of current SES and other health statuses (rather than other combinations of these sets of covariates) fully account for the effect of non-marital first births on later life functional limitations. These findings parallel those for the effects of teenage childbearing.

Last Birth at Age 35 or Older

Turning to a consideration of mother's ages as they transition out of childbearing, we find very few effects long term effects of advanced maternal age. That is, mothers who complete childbearing at age 35 or older do not differ significantly across measures of disability from mothers who did not have children at these ages. In Table X, we find no significant associations between late childbearing and ADL limitations. Model 6 of Table X suggests the possibility of a suppressed effect, wherein late childbearing may be negatively associated with functional activity limitations. However, the difference only attains marginal significance ($p=.06$). It should be noted that in analyses not shown of the effects of late childbearing without controls for

teenage childbearing and non-marital first births, this effect is statistically significant (IRR=0.89, p=.03).

CONCLUSION

Using data collected from a sample of women in the United States over a 35-year period, I have examined the relationship between the timing of childbearing and disability in later life to answer questions about the long-term implications of fertility. The analyses presented here also address the extent to which early life social and economic status, as well as more proximal mechanisms, influence observed relationships between reproductive patterns and poor health in later life. Overall, this study shows that the timing of childbearing does matter for their well-being in later life, though late childbearing shows little to no affect on later life disability.

Our analyses suggest that teenage childbearing has negative health consequences, with few differences between more severe forms of disability (ADL limitations) and less severe forms (functional activity limitations). Thus, although there are social costs of having children early in life and young women from poor socioeconomic backgrounds may be selected into teenage childbearing, the results suggest that these factors are less central for the health over the long-run. Although some are independently predictive of later life health, the indicators of background characteristics examined here do not explain differences in health among women with different reproductive patterns.

In recognition of the multidimensionality of health processes in older age (Kelley-Moore & Ferraro 2005), I also control for other health statuses that may demonstrate the spuriousness of an observed relationship between the timing of childbearing and disability, and the results

suggest that these health factors largely account for these relationships. This is particularly so in the case of teenage and non-marital first births as they related to ADL limitations.

I believe that the research presented here provides a relatively comprehensive assessment of the relationship between the timing of childbearing and health in later life by examining theoretically important predictors of disability across the life course. Nonetheless, two limitations are important to keep in mind. First, we have not been able to examine the effects of early life health. The NLS-MW does not include measures of early life, or even pre-childbearing, physical or mental health status. Second, there is a notable absence of direct measures of the health impacts of pregnancy, health risk factors (e.g., exercise), and other social and economic correlates of mortality (e.g., religion). Future research will need to identify new datasets equipped and/or develop creative ways to address these issues.

Finally, a life course theoretical perspective highlights the dynamic interplay between personal biographies and the social and historical context in which people are born and develop throughout their lives (Elder, 1998, 1994). Thus, it is important to consider these findings in historical context. The women of the NLS-MW did not delay childbearing or remain childless at the same rates that we see in more recent cohorts. Moreover, these women were either children of the Great Depression or coming of age during that time, and the early life experiences with this historical event leave ample reason to believe that the women studied in the present analyses may be unique compared to other cohorts, particularly their children who were born and raised during the post-war boom of the 1950s. Future research should examine later cohorts of American women to provide greater insight into the influence of the nutrition and health environment during childhood and the generalizeability of our findings to the experiences of

other cohorts. Research in this vein will further our understanding of the influences of cohort and period influences on the fertility-mortality relationship.

This paper emphasizes the need to understand the mechanisms linking reproductive patterns to later well-being. Such an understanding is important from a demographic perspective for the advancement of research and the implications for population projections. From a public health perspective, it is crucial to know what may be done to overcome disadvantages in health through policies and interventions targeted at overcoming health disparities among women. The salience of questions about the relationship between reproductive patterns and later well-being can be expected to persist as social and economic conditions encourage women to delay marriage, pursue higher education, and participate in the paid labor force more and with fewer periods of intermittency.

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Table 1. Odds Ratios (OR) from Logistic Regressions of Number of Functional Activity Limitations on the Timing of Childbearing and All Covariates, NLS-MW

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Age	1.082**	1.074**	1.054**	1.052**	1.075**	1.085**	1.071**
	(0.018)	(0.018)	(0.019)	(0.019)	(0.018)	(0.021)	(0.022)
Black (ref=White)	1.788**	1.547*	1.577**	1.536*	1.689**	1.415+	1.460+
	(0.295)	(0.276)	(0.273)	(0.280)	(0.285)	(0.275)	(0.307)
Teenage Childbearer	1.799**	1.657**	1.432*	1.435*	1.815**	1.323	1.244
	(0.282)	(0.266)	(0.234)	(0.238)	(0.285)	(0.242)	(0.242)
Non-Marital 1st Birth	1.504*	1.566*	1.295	1.327	1.520*	1.276	1.170
	(0.283)	(0.299)	(0.255)	(0.261)	(0.288)	(0.277)	(0.259)
Age 35+ at last birth)	1.101	1.104	1.069	1.080	1.082	0.785	0.785
	(0.189)	(0.191)	(0.188)	(0.191)	(0.188)	(0.153)	(0.156)
1 Child	1.429	1.426	1.233	1.244	1.496+	1.795*	1.605
	(0.344)	(0.353)	(0.309)	(0.314)	(0.365)	(0.487)	(0.463)
4-5 Children	1.280	1.328+	1.297	1.322+	1.233	1.360+	1.395+
	(0.209)	(0.217)	(0.217)	(0.220)	(0.203)	(0.254)	(0.263)
6+ Children	1.649*	1.609*	1.420	1.420	1.578*	1.849*	1.688*
	(0.350)	(0.346)	(0.317)	(0.319)	(0.344)	(0.457)	(0.441)
Mother's Educ.--Less than 8th Grade		1.434*		1.088			0.962
		(0.259)		(0.198)			(0.200)
Mother's Educ.--missing or unknown		1.280		1.012			0.782
		(0.253)		(0.214)			(0.190)
Two Parent Family at Age 15		1.202		1.284			1.312
		(0.240)		(0.266)			(0.292)
Rural Residence at Age 15		1.377*		1.174			1.244
		(0.198)		(0.177)			(0.215)
Mother Employed at Age 15		1.170		1.169			1.068
		(0.182)		(0.184)			(0.193)
Mother Employed at Age 15--missing		1.256		1.181			0.887
		(0.347)		(0.339)			(0.311)
Education			0.870**	0.875**			0.941+
			(0.024)	(0.025)			(0.031)
Never Married, 2003			0.362+	0.381			0.134*
			(0.209)	(0.224)			(0.117)
Divorced or Separated, 2003			1.208	1.237			0.987
			(0.299)	(0.306)			(0.276)
Widowed, 2003			1.269	1.266			0.988
			(0.199)	(0.199)			(0.179)
ln(Net Family Income), 2003			0.935	0.938			0.945
			(0.052)	(0.054)			(0.067)
Home Owner, 2003			0.539**	0.534**			0.513**
			(0.090)	(0.090)			(0.099)
Employed, 2003			0.746	0.732			1.173
			(0.191)	(0.188)			(0.338)
Child Lives in Household					1.210		1.257
					(0.209)		(0.244)
Child Lives within 10 Miles					0.965		0.808
					(0.140)		(0.138)
Child Helps with Chores, Errands, and/or Personal Care					1.608**		1.074
					(0.229)		(0.181)
CES-D, 2003						1.090**	1.090**
						(0.009)	(0.010)
BMI <18.5						1.472	1.438
						(0.711)	(0.726)

Table 1 continued. Odds Ratios (OR) from Logistic Regressions of Number of Functional Activity Limitations on the Timing of Childbearing and All Covariates, NLS-MW

BMI 25-29.99						1.546*	1.601*
						(0.320)	(0.346)
BMI 30+						2.246**	2.164**
						(0.454)	(0.455)
Fair/Poor Self-Rated Health, 2003						4.238**	4.234**
						(0.672)	(0.696)
Observations	1778	1778	1778	1778	1778	1778	1778
Log Likelihood	-840.27	-833.28	-800.51	-798.31	-831.90	-647.64	-628.04

Robust standard errors in parentheses
+ p< .10; *p< .05; ** p< .01

Table 2. Incident Rate Ratios (IRR) from Negative Binomial Regressions of Number of Functional Activity Limitations on the Timing of Childbearing and All Covariates, NLS-MW

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Teenage Childbearer	1.295**	1.242**	1.150*	1.152*	1.299**	1.096+	1.079
	(0.075)	(0.073)	(0.067)	(0.068)	(0.075)	(0.053)	(0.053)
Non-Marital 1st Birth	1.221**	1.234**	1.160*	1.163*	1.233**	1.123*	1.084
	(0.078)	(0.079)	(0.074)	(0.075)	(0.081)	(0.062)	(0.061)
Age 35+ at Last Birth	1.035	1.031	1.011	1.011	1.031	0.906+	0.909+
	(0.063)	(0.062)	(0.060)	(0.060)	(0.063)	(0.048)	(0.047)
Age	1.042**	1.038**	1.027**	1.026**	1.037**	1.035**	1.026**
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.005)	(0.005)
Black (ref=White)	1.268**	1.164*	1.149*	1.113+	1.238**	1.081	1.046
	(0.075)	(0.075)	(0.066)	(0.069)	(0.074)	(0.056)	(0.058)
1 Child	1.069	1.083	0.994	1.003	1.106	1.112	1.070
	(0.095)	(0.097)	(0.085)	(0.086)	(0.099)	(0.086)	(0.082)
4-5 Children	1.104+	1.121+	1.108+	1.117+	1.089	1.099+	1.111*
	(0.066)	(0.066)	(0.065)	(0.065)	(0.065)	(0.055)	(0.055)
6+ Children	1.119	1.101	1.043	1.044	1.112	1.103	1.099
	(0.087)	(0.085)	(0.080)	(0.080)	(0.089)	(0.075)	(0.072)
Mother's Educ--Less than 8th Grade		1.246**		1.091			1.045
		(0.081)		(0.071)			(0.058)
Mother's Educ--missing or unknown		1.250**		1.107			1.014
		(0.089)		(0.080)			(0.061)
Two Parent Family at Age 15		1.030		1.051			1.075
		(0.072)		(0.072)			(0.061)
Rural Residence at Age 15		1.058		0.993			0.964
		(0.055)		(0.052)			(0.044)
Mother Employed at Age 15		1.085		1.076			0.997
		(0.059)		(0.057)			(0.046)
Mother Employed at Age 15-missing		1.078		1.050			0.999
		(0.110)		(0.107)			(0.090)
Education (in years)			0.940**	0.945**			0.979*
			(0.009)	(0.009)			(0.009)
Never Married, 2003			1.253+	1.254+			1.022
			(0.165)	(0.164)			(0.141)
Divorced or Separated, 2003			1.098	1.098			0.999
			(0.091)	(0.090)			(0.072)
Widowed, 2003			1.147*	1.147*			1.045
			(0.062)	(0.063)			(0.050)
ln(Net Family Income), 2003			0.985	0.986			0.999
			(0.023)	(0.023)			(0.024)
Home Owner, 2003			0.778**	0.777**			0.811**
			(0.042)	(0.042)			(0.039)
Employed, 2003			0.728**	0.723**			0.912
			(0.066)	(0.066)			(0.076)
Child Lives in Household					0.960		0.918
					(0.064)		(0.050)
Child Lives within 10 Miles					0.999		0.935
					(0.052)		(0.042)
Child Helps with Chores, Errands, and/or Personal Care					1.441**		1.219**
					(0.072)		(0.053)
CES-D, 2003						1.024**	1.020**
						(0.002)	(0.002)
BMI <18.5						1.534**	1.492**
						(0.248)	(0.223)

Table 2 continued. Incident Rate Ratios (IRR) from Negative Binomial Regressions of Number of Functional Activity Limitations on the Timing of Childbearing and All Covariates, NLS-MW

BMI 25-29.99						1.217**	1.195**
						(0.068)	(0.066)
BMI 30+						1.521**	1.479**
						(0.078)	(0.075)
Fair/Poor Self-Rated Health, 2003						2.144**	2.073**
						(0.096)	(0.093)
Observations	1773	1773	1773	1773	1773	1773	1773

Robust standard errors in parentheses
+ p< .10; *p< .05; ** p< .01