

Running head: Socioeconomic Consequences of Childbirth

Socioeconomic Consequences of Childbirth for Men

Socioeconomic Consequences of Childbirth for Men

Interest in fatherhood has increased drastically over the past 30 years in conjunction with a rising number of policies targeting fathers. While early researchers faced a skeptical audience over whether fathers uniquely contribute to child development, there is now considerable consensus that fathering can influence the lives of children (Marsiglio, Amato, Day, & Lamb, 2000). However, we know very little about how becoming a parent affects the lives of fathers. Therefore, the present study aims to extend our knowledge of family systems by exploring how men's socioeconomic trajectories are affected by having a child, focusing on income, hours spent in employment, and hours spent in housework. In addition, this study examines whether men who become fathers at different ages are differentially affected by becoming a parent.

Glen Elder (1985; 1998) has theorized that a life course perspective is central in understanding human development, arguing that the proper study of developmental phenomena must consider all life stages. The life course perspective focuses on developmental trajectories and the life transitions that distinguish one person or group's trajectory from another. Such a perspective provides a theoretical rationale for studying the effects of childbirth on the socioeconomic trajectories of men. The life course perspective also puts forth several guiding principles, including the timing of lives and human agency. These principles suggest that in studying the consequences of childbirth for men, the age of the father at the time of the birth should be considered. In addition, the life course perspective suggests that fathers make choices about their lives based upon the opportunities and constraints present in their environments. This implies that the effects of having a child may vary according to the father's context and resources (e.g., income, education).

Socioeconomic trajectories are particularly relevant to men's lives due to socially constructed expectations that men must provide for their families and the negative psychological consequences that can result when men are unable to fulfill such expectations (Pleck, 1995). Therefore, when a child is born and more economic resources are needed to support the family, fathers may work to increase financial capital. Employed mothers often decrease hours spent working, adding to the pressure for fathers to supplement their incomes (Christiansen & Palkovitz, 2001). Some evidence supports the hypothesis that for certain groups of men and women, becoming a parent is related to negative economic consequences. Both teenage mothers and older single mothers fare worse economically than their middle-aged married counterparts (Foster, Jones, & Hoffman, 1998). Similarly, while teenage fathers initially earn more money than their peers, they eventually suffer relative economic consequences. Nock (1998), who investigated premarital fatherhood, found that men who father children before marriage "leave school earlier, have lower earnings, work fewer hours per week, and are more likely to live in poverty than comparable men who do not father children before marriage" (p. 250). On the other hand, contemporary fathering is acknowledged as a fluid role, with fathers in some demographic groups increasing their primary care of their children. Therefore, another possibility is that some fathers may decrease time in work in order to assist in other roles, such as parenting or assisting with housework. Since research to date has narrowly focused on specific populations and has furthermore been inconclusive, the socioeconomic consequences of childbirth for men must be explored in greater depth. This study builds upon previous literature on the socioeconomic consequences of becoming a father by investigating the developmental trajectories of men and

how these trajectories are altered when men become fathers using group-based trajectory analysis (Nagin, 1999).

Review of the Literature

While life course theory emphasizes the need to study trajectories and recognizes important factors to consider when doing so, other theoretical models and research offer explanations for how a father might be impacted by the birth of a child in terms of socioeconomic consequences. One such body of research regards gender role strain. The theory of gender role strain offered by Pleck (1995) incorporates the idea of gender role discrepancy. Gender role discrepancy occurs when men do not meet socially constructed standards for their gender, which can result in low self-esteem or other psychological consequences. For men who are fathers, a predominant role has historically been that of the financial provider (Brooks & Gilbert, 1995). These foundations of gender roles suggest that fathers may attempt to increase their time in employment and increase their income upon the birth of a child in order to fulfill the role of financial provider and avoid gender role discrepancy. On the other hand, the past decades have seen a surge in additional forms of father involvement with a greater value placed on fathers' nurturing and caring for their children (Cabrera & Tamis-LeMonda, 2002). Brooks and Gilbert (1995) suggest that in contemporary society, "the good provider has lost much of its social meaning" due to fewer opportunities for job mobility and an increase in dual-earner couples (p.273). However, others (e.g. Christiansen & Palkovitz, 2001) stress that because income and family processes are not viewed in concert by researchers, the provider role has merely become more elusive in discussions of father involvement even though the provider role is still salient in the lives of many men. They also note that fathers' investments in the provider

role may vary depending on father and family characteristics, such as income and race. If the provider role is still salient in men's lives, one hypothesis is that men will increase the amount of time they spend at work and increase their incomes in response to childbirth. However, they may not increase the time they spend in housework, since this goes against typical gender roles for men.

According to both the life course perspective and the theory of gender role strain, how men are impacted by the birth of a child may vary based on family characteristics and context. Research to date provides some evidence that specific characteristics are particularly relevant to a discussion of fathers and socioeconomic outcomes, including fathers' age, income, and race.

Research on adolescent fathers reveals that the age at which men become fathers may be relevant in considering the socioeconomic consequences of fatherhood. Findings from recent research suggest that while adolescent fathers initially have higher employment rates than their peers, they fall behind their peers in employment by the time they reach their mid to late twenties (Pirog-Good, 1996). One explanation for this is that adolescent fathers initially have a greater incentive to work than their childless peers; however, since they often take on early employment at the cost of education, their peers typically surpass them in the long-term. Qualitative studies confirm that a lack of employment is a common barrier for adolescent fathers (Dallas & Chen, 1998) and that even when steady employment is desired, it is often difficult to obtain (Sullivan, 1993). All in all, men who become fathers during adolescence have lower academic achievement, higher drop-out rates, and make less money than their peers who do not have children during adolescence (Fagot, Pears, Capaldi, Crosby, & Leve, 1998; Lerman, 1993; Pirog-Good, 1996). While these studies show that having a child may have unique effects on

adolescent males' economic trajectories, we know little about how age matters for men who have children after adolescence. Similarly, little is known about how having a child affects other roles that adolescent fathers may take part in, such as helping with housework. Therefore, the age at which men become fathers is considered and explored in the present study.

Changes in fathers' socioeconomic outcomes in response to a child may vary depending on the family's socioeconomic status. Cazenave (1979) theorizes that the relationship between income level and provider role saliency is curvilinear, with poor fathers having little to no expectancy to provide, middle or working class fathers having high expectancy to provide, and upper-class fathers having a decreased expectancy to provide. Others (Christiansen & Palkovitz, 2001) have suggested that low-income or working class fathers may experience a greater association between the fathering role and the provider role since low-income and working class families often struggle to meet the basic financial needs of their children and must sacrifice more to fulfill these needs. In contrast, fathers in higher income families may associate employment more with the worker role and not the fathering role since occupation is often chosen for intrinsic value versus financial necessity. These fathers are more likely to seek out other forms of involvement since they do not face the same economic barriers as lower income fathers. The theories of Cazenave (1979) and Christiansen and Palkovitz (2001), in combination with several research studies (e.g. Cohen, 1993, Zussman, 1987), lend support to the hypothesis that social class is related to the weight fathers place on the role of financial provider. Therefore, fathers' socioeconomic trajectories and education level prior to having a child will likely influence how their trajectories change after having a child.

Similarly, provider role saliency may differ by a father's race or ethnicity. In a study of Black, White, and Hispanic fathers, Shelton & John (1993) found that when Black fathers were employed they spent more time in household labor. On the other hand, for White and Hispanic fathers, increased time in work was related to decreased time spent on household tasks. They suggest that Black men may place more of an emphasis on the provider role; therefore, if they are unable to provide they disengage from the family as a whole. Others have suggested that low-income African American men, in the face of discrimination and disproportionate experiences of poverty, have sought out recognition through a dedication to work (Duneier, 1992). Unfortunately, many minority men desiring to work have been met with limited opportunities in both education and employment. Due to a combination of cultural values, social policy, and societal discrimination, a fathers' race or ethnicity may be related to how the birth of a child impacts their socioeconomic trajectories.

Limitations of Existing Research on Men's Socioeconomic Outcomes

Research to date examining men's socioeconomic outcomes leaves room for further analyses. First, although previous studies have contributed to our understanding of the consequences of becoming a parent, many have tended to focus predominately on mothers (e.g. Foster, Jones, & Hoffman, 1998). With an increased focus on fatherhood and a rise in the implementation of policies enforcing child support, understanding how fathers make decisions about income and employment is central. Furthermore, expectations of fathering have undergone a transformation in recent decades, with a great deal of research focusing on the new "culture of fatherhood" (La Rossa, 1988), including fathers' nurturance and involvement in childcare. This transition in expectations for fathering has taken place at a time when the good

provider role remains salient for many men (Lamb, Pleck, & Levine, 1987). With such changes in the culture of fatherhood, more insight is needed into how men are negotiating their family roles with their role as the financial provider. Therefore, the present study on socioeconomic consequences focuses specifically on fathers.

Second, even when prior research studies have examined fathers, they have only narrowly focused on particular types of fathers. For example, studies on fathers' socioeconomic outcomes have typically focused on unmarried fathers (Nock, 1998) or adolescent fathers (e.g. Pirog-Good, 1996). Similarly, research on provider role saliency has offered valuable insight into how the provider role may be viewed differently by families depending on socioeconomic status or race and ethnicity. Research that focuses only on specific populations limits the generalizability of the results and neglects to provide a complete picture of fathers' socioeconomic outcomes. The present study uses a nationally representative sample that includes fathers from diverse backgrounds. This is especially important to consider in light of the guiding principles of life course perspective highlighting the influences of individual characteristics and contextual factors. The present study also considers group divergence and how various age groups are differentially impacted by the birth of a child.

Third, prior studies examining consequences of becoming a parent have used limited analysis techniques, neglecting a developmental perspective. Many of the studies are cross-sectional, and other studies conduct comparisons at a limited number of time points. A developmental perspective is especially useful in studying socioeconomic outcomes given that men's opportunity and desire to work may change over time as life events such as childbirth occur. Research also suggests that factors present prior to childbirth, such as income, may

impact later developments in men's socioeconomic trajectories. Therefore, studying men's income, employment, and housework over time is essential. Due to advances in methodology, the present study explores the course of socioeconomic outcomes over an extended period of time using a semi-parametric, group-based approach (Nagin, 1999).

Methodology

Data

Data for this study come from the Panel Study of Income Dynamics (PSID). The PSID is a longitudinal study that began in 1968 as a nationally representative sample of households and the families (men, women, and children) that resided in them. Data were collected annually until 1996, at which time the PSID switched to biannual collection. The PSID primarily focuses on aspects of economic behavior. The original cohort began with 4,800 households, and the PSID has continued to follow these individuals since that time, even as individuals have left households and started families of their own. During each data collection period, information has been gathered about the original sample members as well as their co-residents, even if these co-residents were not part of the original sample (Hill, 1992). This unique design makes the PSID a fitting dataset for examining developmental trajectories and socioeconomic outcomes.

Sample

The original PSID sample consisted of 4,800 households. This core sample was composed of a cross-sectional national sample and an additional national low-income sample of families. In 1990, 2,000 Latino families were added to the sample in order to capture major groups of immigrants who were not part of the original sample. In 1997, another sample of 441 immigrant families was added to the PSID. Because additional members were also added to the

PSID as original sample members formed new households, by 2001, the original sample of 4,800 families had grown to include over 7,000 families, and by 2003, the PSID had collected information spanning up to 36 years of the lives of 36,000 individuals. Annual response rates have ranged from 98.5 to 96.9 percent. However, since attriters from previous years were not followed up in following years, the cumulative response rate since 1968 is 56.1 percent (Hill, 1992).

The present study uses a subset of this sample. Analyses using the PSID follow men from age 16 to 46. Because information on socioeconomic outcomes such as income and employment was not collected on sample members until they were 16 years of age, this is the starting age for the study, and trajectories are followed for 30 years of data collection. However, subjects do not need to have data collected at all time points since the method of analyses allows for missing time points on the dependent variable. To be included in the present study, men must have valid data at a minimum of 5 time points for the dependent variable of interest. It should be noted that the sample for this study includes both men who become fathers and men who do not. Such a sample is necessary for examining the effects of the birth of a child.

Measures

Socioeconomic outcomes. In order to understand the consequences of having a child on fathers' socioeconomic outcomes, this study analyzes men's developmental trajectories regarding three key socioeconomic variables: income, number of hours working, and number of hours spent on housework. These variables are all measured as continuous variables. Income is defined as annual, taxable labor income, or income obtained specifically from employment. Income was adjusted for inflation to year 1990, the last year that extensive income data was

collected for the entire sample. Hours in employment was originally measured in hours worked per year. For the ease of interpretation, this number was converted into hours per week. Finally, for housework, men were asked, “how much time do you spend on housework in an average week, meaning time spent cooking, cleaning, and doing other work around the house?”

Birth of child. A central focus of the present study is to examine how the birth of a child alters men’s socioeconomic trajectories. This study focuses on the birth of the first child. To document the birth of the first child, a dichotomous variable is coded 1 in the first time point in which a man has a child and in every wave thereafter.

Characteristics of group memberships. In the present analyses, “controls” are not used since the primary interest is exploring various trajectories that are present in the data. Rather, variables are used to describe the characteristics of each trajectory group (group profiles). Demographic characteristics that are used to explore characteristics of men in trajectory groups include time in housework, hours worked, income, whether or not men become fathers, number of births, and number of marriages. In addition, education is conceptualized as a categorical variable capturing whether men had less than a high school education, only a high school education, or more than a high school education during the year when they first became the head of a household. Men’s ethnicity is also used to describe trajectory groups and is broken down into the categories of Black, Hispanic, White, and “other”. For men who become fathers, additional descriptive characteristics include the age at which they become fathers and whether they are married or not when they become fathers. Household characteristics that are included in group profiles are family income and minors in the household. Finally, a set of men’s parents’

characteristics are included: whether or not their mother was married at the time of their birth, mother's education, and father's education.

Analytic Strategy

Traditional methodologies employed to study trajectories, such as hierarchical linear modeling (HLM) and latent growth curve analysis, assume a continuous distribution of trajectories within the population and are interested in how the population varies around this distribution. However, many phenomena may actually have subpopulations that follow distinctive developmental trajectories. Research suggests that this is likely the case for men's socioeconomic trajectories. In studying such phenomena, researchers have often attempted to create their own subpopulations based on subjective analyses and insight, which can end in misleading results.

The present study uses an alternate approach that is based on a formal statistical model. In order to understand the consequences of having a child on men's socioeconomic outcomes, a semi-parametric group-based approach is utilized (Nagin, 2005). Three key variables are examined as trajectories: income, number of hours working, and number of hours spent on housework. For each trajectory, rather than assuming a specific path of development, a group-based approach has the capability to identify meaningful groups based on the data. Once groups are formed, distinctive characteristics of trajectory groups can be identified. Furthermore, an extension of this modeling technique is the capacity to study contemporaneous factors and how these factors affect pre-existing developmental trajectories (Nagin, 1999). In sum, models in this study address several questions: 1) What distinct trajectories exist within the sample? 2) What individual characteristics and circumstances describe distinct trajectories? 3) How does having a

child alter these trajectories? 4) Are the trajectory groups differentially impacted by having a child? and 5) Are different age groups differentially affected by having a child?

The first step is to determine distinct trajectories for each dependent variable (income, number of hours working, and number of hours spent on housework). Group trajectory models are an application of finite mixture modeling, a method of analyses that relies on maximum likelihood estimation and assumes the population of interest contains a mixture of unobserved groups (Nagin, 2005). The general form of the likelihood is as follows:

$$P(Y_i) = \sum_j^J \pi_j P^j(Y_i)$$

where $P(Y_i)$ represents the unconditional probability of observing the outcome of interest, Y_i , over time for individual i . The unconditional probability is equal to the probability of Y_i given the membership of individual i in group j , summed across the J number of groups.

In the PSID, income, number of hours working, and number of hours spent on housework are each classified as a count variable; therefore, the main models used for the study build on the Poisson distribution, with the following link function connecting the trajectory with age:

$$\text{Log}(\lambda_{it}^j) = \beta_0^j + \beta_1^j \text{Age}_{it} + \beta_2^j \text{Age}_{it}^2$$

In this equation, λ_{it}^j represents the expected amount of the variable of interest (e.g., number of hours working) of subject i at time t given membership in group j . The coefficients in the model determine the shape of the trajectory and are not constrained to be equivalent across the j groups. Therefore, each group has its own set of coefficients (Nagin, 1999).

The optimal model for each outcome is selected using the Bayesian Information Criteria (BIC):

$$\text{BIC} = \log(L) - .5 * \log(n) * k$$

where L is the log likelihood, n is the sample size, and k is the number of parameters. BIC is an especially appropriate criterion to use for large samples. Application of BIC requires estimating models with a varying number of groups and varying orders of trajectories, and then selecting the model with the largest BIC score (Nagin, 2005).

Once the number and order of trajectories are determined, profiles of the groups are created to describe the characteristics of each group (using measures described under the previous heading, “Characteristics of group memberships). The first step in creating such profiles is to calculate posterior probabilities of group membership. A posterior probability is different than the probabilities estimated in the main analyses. While the previously discussed probability estimates the proportion of the population that belongs to each group, a posterior probability estimates the likelihood that a particular individual with certain characteristics belongs to a specific trajectory group. The calculation of the posterior probability of group membership is:

$$P(\text{group}_j|\text{data}_i) = \frac{p(\text{data}_i|\text{group}_j)\pi_j}{\sum_j p(\text{data}_i|\text{group}_j)\pi_j}$$

This calculation measures an individual i 's probability of membership in group j given his behaviors at each t time point. Once posterior probabilities are calculated, each individual is assigned to the trajectory for which they have the largest probability. Profiles of groups are then created (Nagin, 2005).

The last step in these analyses is determining whether, and if so how, having a child alters the trajectories. The effect of the covariate (having a child) is calculated by adding a covariate into the original equation, which results in the following equation:

$$\text{Log}(\lambda_{it}^j) = \beta_0^j + \beta_1^j \text{Age}_{it} + \beta_2^j \text{Age}_{it}^2 + \alpha_1^j \text{Birth}_{it}$$

While the covariate can be defined in several ways, in the present study, the birth variable is coded as “1” for the year in which a man has first become a biological father. The variable is also coded “1” for every year thereafter in order to model the long-term effects of having a child.

Once the parameters are estimated, differences across trajectory groups and over time can be tested. A Wald-based chi-squared test is used to determine whether the groups are differentially impacted by the birth of a child. Since literature has suggested that the timing of birth may be important in determining the consequences of childbirth for men (e.g., Lerman, 1993), differences in the timing of childbirth are also investigated in the present study. It is investigated whether there are differences between three groups: 1) having a child during the ages of 16-19 (adolescence), 2) having a child during the ages of 20-25 (early adulthood), and 3) having a child during the ages of 26-46 (middle adulthood). These age cutoffs were determined through considerations of both developmental stages and the timing of births for men in the data. In order to test these parameters, the following model is specified:

$$\text{Log}(\lambda_{it}^j) = \beta_0^j + \beta_1^j \text{Age}_{it} + \beta_2^j \text{Age}_{it}^2 + \alpha_1^j \text{Birth16_19}_{it} + \alpha_2^j \text{Birth20_25}_{it} + \alpha_3^j \text{Birth26_46}_{it}$$

For the variable Birth16_19, men who have a birth during this period are coded as “1” for the year of the birth and every year thereafter. Men who never have a birth or who have a birth after age 19 are coded as “0” for all time periods. For the variable Birth20_25, men who have a birth during this time period are coded “1” for the year they have the birth and every year thereafter. Men who never have a birth, or who have a birth prior to age 20 or after age 25, are coded as “0”. The same coding procedure is applied to the Birth26_46 variable. A z-score based test is used to test for statistically significant differences in the parameters (Nagin, 2005).

Results

To reiterate, the goals of this study were to explore men's income, employment, and housework trajectories, as well as to examine how having a child affected these trajectories. Furthermore, this study aimed to assess how various trajectory groups and various age groups were differentially affected by having a child.

Income Trajectories

Sample descriptive statistics. Labor income (subsequently referred to only as "income") was obtained in years 1975-1990 of data collection, resulting in 16 years of available data for this outcome variable. To be included in the analyses, men had to have valid data for at least 5 of the 16 time points ($n=5094$). Descriptive statistics for the entire sample can be found in Table 1. The sample is predominately white, and 76% of the sample had a child by the end of data collection. The average age of first birth for men in the sample who had a child is 24.5 years old. When looking at men who became fathers, 15.2% had their first child during adolescence (ages 16-19), 48.1% had their first child during early adulthood (ages 20-25), and 36.7% had their first child during middle adulthood (age 26-46).

For the sample as a whole, the average income trajectory over the span of 16-46 is shown in Figure 1. On average, men's incomes increased at a decreasing rate over time. At age 16, men's earnings were close to zero. By age 28, men were earning approximately 20,000 dollars a year, on average. Men's incomes continued to increase until age 39, when incomes then flattened out as they approached 40,000 dollars in annual income.

The basic trajectory model. In order to find the best-fit model, a series of analyses was conducted, varying both the number of groups and the shapes of the trajectories. Ultimately, the 3-group, all quadratic model was the best-fit model for this sample, indicated by the highest BIC

score (BIC=-85,131.47). Averages of assignment probabilities (AvePP) across individuals were calculated for each trajectory group. For the 3 trajectory groups, the range of AvePP's was .90-.91. At minimum, AvePP's should be .7 for all groups (Nagin, 2005), with values in this analysis representing a strong fit between the selected model and the data.

The results for the 3-group model are depicted in Figure 2. The three groups that emerged include a low-income group, a middle-income group, and a high-income group. All groups began with relatively low income at age 16 and diverged over time. The percentages in the figure represent the estimated percentage of the population that falls into each trajectory group. The largest group is the middle-income group (54%), whose annual income reached approximately 37,000 dollars. This group is followed by the low-income group (36%), whose annual income remained under 20,000 dollars for the entire age span. Finally, the high income group (10%) is the smallest group. This group's income increased more rapidly than the other two groups and peaked at nearly 100,000 dollars.

Table 2 reports demographic measures for each group. As expected, on average, the high-income group worked more hours. The high-income group averaged 47 work hours a week, while the low-income group only worked an average of 31 hours a week. The high-income group was also more likely to have post-high school education, to give birth to a child, to be a married at the time of birth, and to be white. Fathers in this group were also more likely to have parents with higher educations and a mother who was married when they were born.

Childbirth as a covariate. Table 3 reports the parameter estimates for the effects of having a child on the three different trajectory groups. Having a child had a significant positive effect on both the low-income and middle-income groups, but had no effect on the high-income

group. In other words, compared to men within the same group who did not have a child, men in the low- and middle- income groups who had a child significantly increased their incomes following the birth of that child. The coefficients presented in Table 3 can be interpreted like those in a conventional regression (Nagin, 2005). In these analyses, income was in units of 10,000 dollars. Therefore, for the low-income group, having a child was related to a 4,800 dollar increase in annual income, on average. When considering the standard deviations within groups, this is an increase of 84% of a standard deviation for the low-income group. For the middle-income group, having a child was only related to a 1,600 dollar increase in annual income, or 14% of a standard deviation, on average. To test if these two coefficients were significantly different from each other, the Wald-based Chi-square test was used. The Chi-square value was significant at $p < .01$, suggesting that men in the low-income group increased their incomes in response to having a child relatively more than men in any other group.

The final step in the analyses for income trajectories was to see if the age at which men became fathers affected how their trajectories were impacted by the birth. Results for analyses on the effects by age group can be found in Table 4. For adolescent fathers, there was no effect of birth on income for the low-income group, while there were modest declines for the middle-income group (\$500; 4% of a standard deviation) and high-income group (\$1,800; 6% of a standard deviation). It should be noted only a small number of men in the high-income group became fathers during adolescence ($n=34$, 8.2% of the high-income group).

For men who became fathers in early or middle adulthood, the low-income group experienced the greatest increase in income following the birth of a child at 5,300 (93% of a standard deviation) and 4,300 dollars (75% of a standard deviation), respectively. The next

largest increase was experienced by the middle-income group, with a 1,600 dollar (14% of a standard deviation) increase for men who became fathers in early adulthood and a 2,000 dollar (17% of a standard deviation) increase for men who became fathers during middle adulthood. Finally, for the high-income group, there was no significant increase for men who became fathers in early adulthood, but there was an increase of 1,300 dollars (4% of a standard deviation) for men who became fathers in middle adulthood.

Overall, findings suggest that men who had a child during early or middle adulthood generally increased their incomes following the birth of a child. On the other hand, having a child during adolescence had either no effect on income or was related to a decrease in men's income trajectories. When looking at each age group across trajectory groups, the low-income group's income was always most positively (or least negatively) affected by the birth of a child, followed by the middle-income group, and then the high-income group. These results are also presented graphically in Figures 3, 4, and 5.

These results suggest that three main income groups exist in the data: a low-income group, a middle-income group, and a high-income group. In each of these trajectory groups, having a child was related to changes in men's income trajectories. However, income group and the age at which men became fathers interacted to determine the consequences of childbirth for men's income trajectories. Low-income fathers were the most positively affected (or least negatively affected) by the birth of a child. These findings also suggest that adolescent fathers did not reap the same economic benefits of childbirth as other age groups.

Employment Trajectories

Sample descriptive statistics. Hours of employment were obtained in years 1968-1993 of data collection, resulting in 26 years of available data for this outcome variable. While the original measurement was in annual hours of employment, in these analyses, employment has been converted to hours per week to aid in interpretation. To be included in the analyses, men had to have valid data at 5 or more time points ($n=6136$). Descriptive statistics for the entire sample can be found in Table 5. The sample looks nearly identical to the income sample. The average employment trajectory over the age span of 16-46 is shown below in Figure 6. As expected, on average, men were not employed at age 16. Then, their hours of employment rapidly increased until the mid 20's, after which men were stably working full-time (40 hours a week), on average.

The basic trajectory model. The best model for the employment analyses was a 5-group model, with 1 linear and 4 quadratic trajectories ($BIC=-326,243.70$). The range of AvePP's was .92-.97, indicating a strong fit between the selected model and the data. This basic 5-group employment model is depicted in Figure 7. Of the five groups, one remained relatively low over time, only experiencing a slight increase (low-increasing group, 7%). Men in the low-increasing group only worked between 0 and 10 hours a week, on average, across the age span. This trajectory group was the linear trajectory. Two other groups also experienced increases over time, but at a decreasing rate (middling-increasing, 22%; high-increasing, 32%). The middle-increasing group looked very similar to the sample average. This group increased rapidly until the mid 20's, after which they stably worked close to 40 hours a week. The high-increasing group was already working over 20 hours a week at age 16. This group steadily increased their hours, peaking at approximately 50 hours a week in their late 30's, after which they declined

slightly. Finally, there were 2 groups that peaked at one point during the age span, and then declined dramatically (early-peak, 17%; middle-peak, 22%). Each of these groups peaked at approximately 45 hours a week, with men in the early group peaking in their mid-twenties and men in the middle group peaking in their mid-thirties, followed by rapid decline.

Table 6 reports demographic measures for each group based on posterior probability group assignment. The low- and high-increasing groups had the largest number of distinguishing characteristics. The low-increasing group had the lowest income and the least amount of education. Men in this group were also the most likely to be black and the most likely to be unmarried at the time of their child's birth. On the other hand, men in the high-increasing group had the highest income, were the most likely to be white, and were the most likely to be married at the time of their child's birth. While few characteristics distinguish the remaining three groups, it is notable that the middle-peak group was the most likely to have a post-high school education and had children later than the other groups. Also, although men in the middle-peak group had hours of employment that dropped significantly from their 30's to their 40's, they had incomes that dropped only slightly (average ages 30-35=\$24,982; average ages 40-46=\$22,646). The incomes of men in the early-peak group, on the other hand, dropped to near zero in their 40's (average ages 40-46=\$515).

Childbirth as a covariate. Table 7 reports the parameter estimates for the effects of having a child on the different trajectory groups. While having a child had a significant effect on 4 of the five groups, only the effects on the low-increasing group and the middle-increasing group appear meaningfully large. In each of these groups, having a child was related to an increase of over 3 hours a week spent in employment. For the low-increasing group this

represents 65% of a standard deviation change. For the middle-increasing group, a change in 3.40 hours a week is equal to 28% of a standard deviation. The remaining effect sizes indicate less than a quarter-hour increase or decrease in weekly hours of employment, less than 3% of a standard deviation for each group.

Results for analyses on the effects by age group can be found in Table 8. For the low-increasing group, adolescents increased their employment following the birth of a child more than any other age group, followed by men who had a child during early adulthood. In contrast, there was no effect of childbirth on hours of employment if men first became fathers in middle adulthood. A graphical representation of this group can be found in Figure 8. The middle-increasing group, the other group with meaningful large effect sizes, experienced similar effects of increased hours (a bit more than three hours a week) whether childbirth occurred during adolescence, early adulthood, or middle adulthood.

While the employment analyses yielded less robust findings regarding the effects of childbirth on trajectories than the income trajectories, there were a few notable results. Similar to the income findings, men in the most economically disadvantaged group responded to childbirth by significantly increasing their time spent in employment. However, in contrast to the income findings, adolescents in the most disadvantaged group increased their time in employment in response to a child more than the other age groups.

Housework Trajectories

Sample descriptive statistics. The sample for the final analyses included all men who had valid housework data for at least 5 time points ($n=6,681$). Descriptive statistics for the entire sample can be found in Table 9. The average trajectory for time men spent in housework over

the span of 16-46 is shown in Figure 9. On average, from ages 16-20, men spent less than 4 hours a week on housework. They subsequently increased the time they spent in housework until age 30. After age 30, time spent in housework remained relatively stable at approximately 7 hours spent in housework each week.

The basic trajectory model. The best-fit model for housework was a 5-group model, with each trajectory having a quadratic shape (BIC=-353,126.64). For the 5 trajectory groups, the range of AvePP's was .93-.97, indicating a nearly ideal fit between the selected model and the data.

The results for the 5-group housework model are depicted in Figure 10. Of the five groups, one remained low in housework over time (stably-low group). The stably-low group consistently spent less than 5 hours a week in housework. Another group began and remained higher than all of the other groups and even increased over a majority of years (high-increasing group). Men in this group started out spending approximately 5 hours a week in housework at age 16 and reached over 16 hours a week spent in housework during their 30's. The remaining three groups either increased or decreased slightly, but predominately remained in the middle of the low and high groups (low-increasing, middle-decreasing, and middle-increasing groups). Together, the three middle groups represent a majority of the population (71%), while the stably-low (15%) and high-increasing groups (14%) represent a smaller percentage of the population. Nevertheless, it may be these two groups that are the most interesting to investigate further.

Table 10 reports demographic measures for each group based on posterior probability group assignment. While there was a significant difference between at least 2 groups for nearly all of the characteristics, few sequential patterns emerged. In fact, the only sequential pattern

was in number of hours working. The descriptive statistics suggest that time in housework was negatively related to time spent in labor employment. A few other notable findings stand out. While the stably-low group had similar incomes to the three middle groups, the stably-low group worked more hours to obtain this income. Men in this group were also the most likely to have less-educated parents and to have less education themselves. They also had more children than men in any of the other groups.

Childbirth as a covariate. Table 11 reports the parameter estimates for the effects of having a child on the five trajectory groups. Having a child had a significant, positive effect on all 5 groups. In other words, when compared to men within the same group who did not have a child, men who became fathers significantly increased the time they spent in housework following the birth of their child, regardless of trajectory group. For the stably-low group, having a child was related to a 1.1 hour, or one standard deviation, increase in housework per week, on average. For the low-increasing group, having a child was related to approximately a half-hour (21% of a standard deviation) increase in housework per week. Both the middle-decreasing and high-increasing groups increased their housework by 1 and a half hours per week (93% and 37% of a standard deviation, respectively). Finally, for the middle-increasing group, having a child was related to a .9 hour increase (56% of a standard deviation) spent in housework. In testing whether the coefficients were statistically different from each other using the Wald-based Chi-square, results suggest that the effect of having a child on the low-increasing group is statistically lower than the effects on the other groups.

After investigating the impact of childbirth on each group, the next step was to determine whether the age at which men became fathers affected how their housework trajectories were

impacted by the birth. Results for analyses on the effects by age group can be found in Table 12. Findings suggest that men in all age groups significantly increased their time spent in housework following the birth of a child. In addition, within each group, adolescents' housework trajectories were the most positively affected by the birth of a child. In other words, adolescent fathers increased their time spent in housework following the birth of a child more than any other age group, regardless of trajectory group membership. For example, adolescents in the stably-low group increased their time spent in housework by 2.4 hours a week, which is an increase of over 2 standard deviations. Similarly, adolescents in the stably-high group increased their time spent in housework by 3.6 hours a week. A graphical depiction of the stably-high group is shown in Figure 11.

Overall, these housework analyses suggest that having a child was related to increases in the time men spent in housework. Like the income analyses, these results also suggest that the age at which men become fathers in part determines the consequences of childbirth for men's housework trajectories. Specifically, adolescents increased the time they spend in housework in response to becoming fathers more than any other age group.

Discussion

In light of increasing interest in fathering and the importance of promoting men's well-being for children's healthy development, the overarching goal of this study was to understand how becoming a father affects men's lives. Life course theory has emphasized the importance of life events, such as the birth of a child, in shaping developmental paths (Elder, 1998). Despite these theoretical foundations concerning the consequences of parenting, previous research has not adequately addressed how fathers are affected by becoming parents and a number of studies

have neglected a developmental perspective by using cross-sectional data. In examining men's socioeconomic trajectories, this study utilized an advanced statistical technique, group-based trajectory analysis, to explore how men's trajectories were affected by having a child. Results suggest that there are numerous paths that men follow in their developmental trajectories of income, employment, and housework. Results also suggest that how men's trajectories are affected by the birth of a child depends both on the age at which they become fathers as well as their socioeconomic status.

General Trends in Trajectory Groups

While a central focus of this study was examining how men's socioeconomic trajectories are affected by the birth of a child, interesting patterns also emerged from the descriptive analyses of trajectory groups for income, employment, and housework.

Income has typically been broken down by society into 3 classifications that are supported by the 3 trajectory groups that emerged from the data: a low-income group, a middle-income group, and a high-income group. As expected, the middle-income group was the largest group (54%), while the high-income and low-income groups were smaller. The high-income group only represented 10% of the population and earned substantially more income than the other two groups. This is in line with research on income inequality in the United States suggesting that the top quintile of the population accounts for nearly half of overall earnings (Schiller, 2001). The low-income group, on the other hand, approached the federal poverty line. The federal poverty line for a family of four in 1990 (the year income was adjusted to in these analyses) was approximately \$13,000. The earnings of men in the low-income group in these analyses from ages 30-35 averaged close to \$12,000, although their family incomes averaged

\$25,000. The low-income group represented an estimated 36% of the population. While this number may seem high, historical trends in men's incomes have suggested that even in times of overall economic growth, proportions of men with low-earnings have increased in the United States (Dooley & Gottschalk, 1985). The low-income group is of particular interest since this group was significantly more disadvantaged than the other groups in income, education, and employment. Because persistent poverty and disadvantage can have substantial repercussions for children's development (Brooks-Gunn & Duncan, 1997), understanding how income trajectories of men who become fathers change following the birth of a child is an important step in working to improve the lives of low-income men and their families.

Employment trajectories revealed a more complex pattern than the income trajectories. This was surprising given that employment was hypothesized to be highly related to income. In the case of some trajectories, this was true. For example, in the income trajectory analysis, the high-income group worked the most number of hours (mean of ages 30-35) and the low-income group worked the least number of hours (mean of ages 30-35). Similarly, in the employment trajectory analyses, the lowest employment group (the low-increasing group) had the lowest income, and the highest employment group (the high-increasing group) had the highest income. Still, even with these similarities, the employment trajectories revealed some complicated patterns that were not as clearly linked to the income trajectories. While there were three employment trajectories that look similar to the income trajectories (low-increasing, middle-increasing, and high-increasing), together these groups only represented 61% of the population. The remaining two groups rapidly peaked and then rapidly declined in hours spent in employment (early-peak and middle-peak groups). Men in the early-peak group seemed truly to

be dropping out of the labor force, as indicated by their extremely low incomes in their late 40's. Perhaps men in this group were laid off later in life and were subsequently unemployable. Men in the middle-peak group, on the other hand, maintained their incomes even though they decreased their time spent in employment. Given that this was the group with the highest education, it is possible that these men had reached a level of promotion that allowed them to work fewer hours due to a higher salary. While it is possible to speculate about these two patterns, more research is needed to better understand how employment and income are linked in these groups as well as why these groups peak early in life followed by a rapid decline. Overall, results revealed the most distinguishing characteristics regarding the low-increasing and high-increasing employment groups. The low-increasing group was the most disadvantaged group. Men in this group had the lowest incomes and were the most likely group to be black and unmarried. On the other hand, men in the high-increasing group had the highest incomes and were the most likely to be white and married.

The third set of analyses was on men's time spent in housework. Although men's time spent in housework has increased in recent decades (Bond, Galinsky, & Swanberg, 1998), these analyses revealed a wide variety of housework patterns. Similar to the employment analyses, a five-group model emerged. Out of the five groups, one was stably low, one started high and continued to increase, and three fell in the middle. Results suggest that time spent in housework was heavily tied to time spent in employment. Groups that spent more time in housework were spending less time in employment. Interestingly, income did not consistently differentiate the housework groups.

Together, the three analyses suggest that income, time in employment, and time spent in housework are linked, particularly for groups at the high and low ends of each measure. For these groups, time in employment and labor income were positively related while time in employment and time in housework were negatively related. The next section of results discusses the effects of having a child on socioeconomic trajectories.

Effects of Becoming a Father: Differences by Age of First Birth.

Analyses on the effects of having a child on the various trajectory groups revealed important differences by the age of first birth. Overall, men who became fathers during early or middle adulthood increased both their incomes and their time spent in housework following the birth of their child. Theories on the provider role have long supported the notion that fathers place a priority on financially providing for their children (Brooks & Gilbert, 1995). However, these results also suggest that men may respond to childbirth by increasing the time they spend in additional family roles, such as housework. This supports research in recent decades finding an increase in additional forms of father involvement with a greater value placed on fathers' role in the household (Cabrera & Tamis-LeMonda, 2002).

Regarding employment trajectories, fathers in adolescence, early adulthood, and middle adulthood were often affected similarly. It is notably, however, that for a majority of early and middle adult fathers, having a child had only marginal effects on the time they spent in employment. The exceptions were men in the middle-increasing group who had a child during early or middle adulthood and men in the low-increasing group who had a child during early adulthood. In these groups, having a child had a relatively large positive effect on their employment trajectories, suggesting that men in these groups were likely seeking more

employment in order to provide financially for their families. However, in the remaining groups (early-peak, middle-peak, and high-increasing groups), effects were not meaningfully large.

These results imply that some men who became fathers during early and middle adulthood were increasing their incomes through means other than working more hours. Perhaps these men sought out promotions or job shifts that increased their salary but did not require additional time at work.

Men who became fathers during adolescence faced different consequences to having a child. While men who became fathers during middle or late adulthood increased their incomes in response to a child, men who became adolescent fathers did not increase their incomes in response to a child. In fact, becoming a father during adolescence had negative effects on income trajectories for both the middle- and high-income trajectory groups. Previous research has suggested that adolescent fathers often leave school after having a child, resulting in lower-paying jobs and lower incomes in the long term (Rivera et al., 1986). Adolescent fathers in the present study increased their time in housework following the birth of a child. This goes against the stereotypical view of the adolescent father, the view that he is rarely involved in maintaining the house or caring for children. Other research has also found evidence in support of adolescent fathers' involvement (Rhoden & Robinson, 1997). In one comparison study, teen fathers were judged to be more involved with their children than adult fathers (Danzinger & Radin, 1990). Perhaps adolescent fathers attempt to make up for limited economic resources through increased childcare and housework.

Effects of Becoming a Father: Differences among Groups

In investigating differences in the effects of having a child by groups within each analysis, interesting findings emerged regarding the most disadvantaged groups. In the income analyses, the low-income group increased their income the most in response to having a child. Similarly, the lowest employment group responded to childbirth with increases in time spent in employment. In each of these analyses, fathers in the “low group” had the least amount of education and were the most likely to be Black. While low-income fathers have recently been viewed as “deadbeat dads” (men who intentionally avoid taking responsibility for their children; Garfinkel et al., 1998), these analyses suggest that low-income fathers may be making substantial efforts to provide for their children. Other recent research has suggested that low-income fathers provide more financial support for their children than previously believed. In a study of never-married mothers on welfare, Greene and Moore (2000) found that while only 17 percent of non-resident fathers had provided financial support through the formal child care system in the past year, nearly half had provided informal child support. Findings from the present study also support Christiansen and Palkovitz’s (2001) work suggesting that low-income fathers place a greater association between the fathering role and the provider role since they must often sacrifice more to fulfill their children’s financial needs. In contrast, fathers in higher income families associate providing with the worker role since occupation is often chosen based on intrinsic value versus financial necessity. Given the disproportionate number of black men in the low-income and low-employment groups in this study, results can also be informed by previous research on African American men. Some research has found that African American men, in the face of societal discrimination, have sought out recognition through a dedication to work (Dunier, 1992).

While low-income men's positive economic responses to having a child are notable, the increases in income and employment still left them lagging behind men in other groups. This suggests that although low-income men may seek work to provide for their families, they may be met with limited opportunities for education and job mobility.

Effects of Becoming a Father: Interactions of Age of First Birth and Group Memberships

One interesting finding arose from looking across ages and group memberships. There was no effect of having a child on income for adolescents in the most disadvantaged income group, the low-income group. However, adolescents in the most disadvantaged employment group increased their employment more than the other fathers in their group. Research has typically suggested that adolescent fathers fall behind their peers in obtaining employment (Pirog-Good, 1996). However, adolescent fathers in the present study seemed to be seeking out more employment in response to having a child. Results imply that adolescents may have been remaining in low-wage jobs. As a result, even if their hours spent in employment increased, their incomes remained similar to other men who were able to move up the salary-scale.

Limitations

One of the limitations of this study concerns the inability to capture men's resident status. Lacking information on fathers' resident status omits a piece of the overall picture of how men are affected by having a child. Nonresident fathering has been associated with lower quality relationships and less contact between fathers and children as well as less monetary support (Marsiglio, Amato, & Day, 2000). Therefore, nonresident fathers may respond to childbirth in different ways than resident fathers. Future research should look deeper into the differences in how resident and nonresident fathers are affected by having children.

Another consideration in interpreting results is that for a majority of the sample, men reported information on themselves. Men have been found to underreport births. Two reasons that men might not report a birth are 1) They do not know they have child, and 2) They know they have a child, but they are not part of that child's lives. In both cases, men's incomes, employment, and housework trajectories are not likely to be affected by having a child (unless in the second case, they have a child support order). Therefore, this study may over-report effects of having a child on men's socioeconomic trajectories. This study only looked at effects for men who have acknowledged the birth, and these men are more likely to be affected than fathers who did not acknowledge a birth.

Implications

In addition to the implications for research discussed above, this study also has broader implications for policy and practice. Adolescent fathers have typically been underserved compared to teen mothers, with social service agencies offering significantly fewer services for teen fathers than teen mothers (Kiselica & Sturmer, 1993). Yet, results from this study suggest that teen fathers are worse off financially than their peers who become fathers after adolescence. Denying teen fathers services not only denies them emotional and vocational support, but also denies support to their children. Assisting teen fathers to further their education and helping them to obtain higher-wage employment will likely benefit both the father and the child in the long-term. Programs should also work to overcome the stigmatism placed on teen fathers. This study suggests that upon becoming parents, adolescent fathers may contribute in other ways besides financial provision, such as contributing to housework. This strength of adolescent

fathers should be built upon in guiding them through the various ways they can become involved in their children's lives.

Secondly, low-income fathers were, in recent years, placed at the center of a welfare debate that put a greater demand on fathers to provide financially for their children. Results from this study suggest that low-income fathers are making a distinctive effort to increase their incomes following the birth of a child. Acknowledging that many low-income fathers may be seeking to provide for their children is a potentially important step for both practitioners and policy makers. A shift of the view away from "deadbeat" dads may result in a more supportive society towards low-income fathers. Furthermore, results suggest that even though having a child had positive economic consequences for low-income fathers, these increases in employment and income still left them far behind men in other income groups. More programs should be focused on assisting fathers to obtain higher-paying jobs through job training and education programs.

References

- Bond, J., Galinsky, E., & Swanberg, J. (1998). *The 1997 national study of the changing workforce*. New York: Families and Work Institute.
- Brooks-Gunn, J. & Duncan, G. (1997). The effects of poverty on children. *The Future of Children, 7*, 55-71.
- Cazenave, N. (1979). Middle-income Black fathers: An analysis of the provider role. *The Family Coordinator, 28*, 583-593.
- Christiansen, S. & Palkovitz, R. (2001). Why the “good provider” role still matters. *Journal of Family Issues, 22*, 84-106.
- Cohen (1993). What do fathers provide? Reconsidering the economic and nurturant dimensions of men as parents. In J.C. Hood (Ed.), *Men, work, and family* (pp.1-22). Newbury Park, CA: Sage.
- Dallas, C., & Chen, S. (1998). Experiences of African American adolescent fathers. *Western Journal of Nursing Research, 20*, 210-219.
- Danzinger, R. & Radin. (1990). Absent does not equal uninvolved: Predictors of fathering in teen mother families. *Journal of Marriage and the Family, 52*, 636-642.
- Dooley, M. & Gottschalk, P. (1985). The increasing proportion of men with low earnings in the United States. *Demography, 22*, 25-34.
- Duneier, M. (1992). *Slim's table: Race, respectability, and masculinity*. Chicago: University of Chicago Press.
- Elder, G. (1985). *Life course dynamics: Trajectories and transitions, 1968-1980*. Ithaca, NY: Cornell University Press.
- Elder, G. (1998). The life course as developmental theory. *Child Development, 69*, 1-12.
- Fagot, B.I., Pears, K.C., Capaldi, D.M., Crosby, L., & Leve, C.S. (1998). Becoming an adolescent father: Precursors and parenting. *Developmental Psychology, 34*(6), 1209-1219.
- Foster, M., Jones, D., & Hoffman, S. (1998). The economic impact of nonmarital childbearing: How are older, single mothers faring? *Journal of Marriage and the Family, 60*, 163-174.
- Garfinkel, I., McLanahan, S., Meyer, D., & Seltzer, J. (1998). *Fathers under fire*. New York, New York: Russell Sage Foundation.
- Greene, A. & Moore, K. (2000). Nonresident father involvement and child well-being among young children in families on welfare. *Marriage and Family Review, 29*, 159-180.
- Hill, M. (1992). *The Panel Study of Income Dynamics: A user's guide*. Newbury Park, CA: Sage Publications.
- Kiselica, M. & Sturmer, P. (1993). Is society giving teenage fathers a mixed message? *Youth and Society, 24*, 487-501.
- Lamb, M., Pleck, J., & Levine, J.A. (1987). Effects of increased paternal involvement on fathers and mothers. In C. Lewis & M. O'Brien (Eds.) *Reassessing fatherhood: New observations on fathers and the modern family* (pp. 109-125). Newbury Park, CA: Sage.
- Lamb, M.E., Pleck, J.H., Charnov, E.L., & Levine, J.A. (1985). Paternal behavior in

- humans. *American Zoologist*, 25,883-894.
- LeMonda, C. & Cabrera, N. (Eds.). (2002). *Handbook of Father Involvement*. Mahwah, NJ: Lawrence Erlbaum.
- Lerman, RI (1993). A national profile of young unwed fathers. In RI Lerman & TJ Ooms (Eds.) *Young Unwed Fathers*. Philadelphia: Temple University Press (27-51).
- Marsiglio, W., Amato, P., & Day, R. (2000). Scholarship on fatherhood in the 1990's and beyond. *Journal of Marriage and the Family*, 62, 1173-1191.
- Nagin, D. (1999). Analyzing developmental trajectories: A semiparametric, group-based approach. *Psychological Methods*, 4, 139-157.
- Nagin, D. (2005). *Group-based modeling of development*. Cambridge, MA: Harvard University Press.
- Nock, S. (1998). The consequences of premarital fatherhood. *American Sociological Review*, 63, 250-263.
- Pirog-Good, M.A. (1996). The education and labor market outcomes of adolescent fathers. *Youth & Society*, 28(2), 236-262.
- Pleck, J. (1995). The gender role strain paradigm: An update. In R.F. Levant & W. S. Pollack (Eds.), *A new psychology of men* (pp. 11-32). New York: Basic Books.
- Rhoden, J. & Robinson, B. (1997). Teen dads: A generative fathering perspective versus the deficit myth. In *Generative Fathering* (pp. 105-117). Thousand Oaks, CA: Sage Publications, Inc.
- Rivera, F., Sweeney, P., & Henderson, B. (1986). Black teenage fathers: What happens when the child is born? *Pediatrics*, 78, 151-158.
- Schiller, B.R. (2001). Counting the poor. In *The Economics of Poverty and Discrimination* (pp.22-48). New Jersey: Prentice Hall.
- Shelton, B.A. & John, D. (1993). Ethnicity, race, and difference: A comparison of White, Black, and Hispanic men's household labor time. In J.C. Hood (Eds.), *Men, work, and family* (pp. 131-150). Newbury Park, CA: Sage.
- Sullivan, M. (1993). Young fathers and parenting in two inner-city neighborhoods. In R.I. Lerman & T.J. Ooms (Eds.) *Young Unwed Fathers*. Philadelphia: Temple University Press (52-73).
- Zussman, R. (1987). Work and family in the new middle class. In N. Gerstel & H.E. Gross (Eds.), *Families and work* (pp. 338-346). Philadelphia: Temple University Press.

Table 1. Descriptive statistics for total income sample

	Range	Mean or %	Standard Deviation
<i>Father Characteristics</i>			
Mean of Housework	0-57	7.12	5.76
Mean of Hours Work	0-67.31	39.02	13.71
Mean of Income	0-210,717	27,883	18,243
Less than High School	0-1	20%	
High School Only	0-1	41%	
More than High School	0-1	39%	
Has a Child	0-1	76%	
Age at Birth of First Child	16-46	24.47	5.00
Number of Births	0-8	1.85	1.52
Number of Marriages	0-5	1.05	.73
Married at First Birth	0-1	71%	
White	0-1	65%	
Black	0-1	32%	
Hispanic	0-1	1%	
Other	0-1	2%	
<i>Household Characteristics</i>			
Mean of Family Income	0-273,492	38,294	23,750
Minors in the Household	0-9	1.46	1.30
<i>Fathers' Parents' Characteristics</i>			
Mother Married at Birth	0-1	86%	
Mother Less than High School	0-1	37%	
Mother High School Only	0-1	46%	
Mother More than High School	0-1	17%	
Father Less than High School	0-1	46%	
Father High School Only	0-1	35%	
Father More than High School	0-1	19%	

Note: Mean variables represent the means when fathers were ages 30-35.

Table 2. Father, household, and parent characteristics by income trajectory group

	Trajectory Groups			χ^2 (df=2)	F-Test
	Low Income	Middle Income	High Income		
<i>N</i>	1888	2720	486		
<i>Father Characteristics</i>					
Mean of Housework	7.60	6.97	6.44		8.84**
Mean of Hours Work	30.68	42.10	47.15		441.86**
Mean of Income	11,783	29,364	58,699		2056.79**
Less than High School	34.8%	15.0%	4.0%	313.34**	
High School Only	39.1%	44.6%	29.8%	40.90**	
More than High School	26.1%	40.4%	66.2%	254.02**	
Has a Child	66.6%	81.4%	85.4%	160.56**	
Age at Birth of First Child	24.04	24.38	26.24		31.37**
Number of Births	1.63	1.97	2.01		31.12**
Number of Marriages	.82	1.18	1.21		160.44**
Married at First Birth	47.9%	80.5%	91.1%	350.59**	
White	43.5%	73.3%	91.7%	508.75**	
Black	53.9%	23.7%	7.4%	516.66**	
Hispanic	.8%	1%	0%	4.69+	
Other	1.9%	2.1%	.9%	2.95	
<i>Household Characteristics</i>					
Mean of Family Income	25,604	40,275	68,550		801.70**
Minors in the Household	1.24	1.59	1.47		33.55**
<i>Fathers' Parents' Characteristics</i>					
Mother Married at Birth	78.7%	91.1%	94.0%	88.05**	
Mother Less than High School	48.0%	34.8%	17.9%	156.54**	
Mother High School Only	35.7%	49.0%	58.4%	101.94**	
Mother More than High School	16.3%	16.2%	23.7%	17.05**	
Father Less than High School	58.3%	43.1%	25.8%	172.74**	
Father High School Only	25.8%	38.9%	41%	77.50**	
Father More than High School	15.9%	17.9%	33.2%	73.05**	

Note₁: Chi-squared tests and ANOVAS are on joint tests of significance.

Note₂: + $p < .10$, * $p < .05$, ** $p < .01$

Table 3. Impact of childbirth on income by trajectory group

Group	Age of Birth	<i>N</i>	Coefficient	Standard Error	χ^2
Low Income	Adolescence	249	.04	.06	.001**
	Early Adulthood	590	.53**	.03	
	Middle Adulthood	418	.45**	.04	
Middle Income	Adolescence	309	-.05*	.02	.001**
	Early Adulthood	1121	.16**	.01	
	Middle Adulthood	785	.20**	.01	
High Income	Adolescence	34	-.18**	.03	.001**
	Early Adulthood	149	.01	.02	
	Middle Adulthood	232	.13**	.02	

Note₁: ⁺ $p < .10$, * $p < .05$, ** $p < .01$

Note₂: Income was in units of 10,000 dollars

Table 4. Impact of childbirth on income by age and trajectory group

Group	Coefficient	Standard Error
Low Income	.48**	.03
Middle Income	.16**	.01
High Income	.02	.02

Note₁: ⁺ $p < .10$, * $p < .05$, ** $p < .01$

Note₂: Income was in units of 10,000 dollars

Table 5. Descriptive statistics for total employment sample

	Range	Mean or %	Standard Deviation
<i>Father Characteristics</i>			
Mean of Housework	0-57	7.12	5.79
Mean of Hours Work	0-67.31	38.92	13.81
Mean of Income	0-220,705	27,129	18,786
Less than High School	0-1	21%	
High School Only	0-1	41%	
More than High School	0-1	38%	
Has a Child	0-1	75%	
Age at Birth of First Child	16-46	24.45	4.99
Number of Births	0-8	1.86	1.61
Number of Marriages	0-5	1.04	.73
Married at First Birth	0-1	71%	
White	0-1	65%	
Black	0-1	32%	
Hispanic	0-1	1%	
Other	0-1	2%	
<i>Household Characteristics</i>			
Mean of Family Income	0-284,703	38,653	24,693
Minors in the Household	0-9	1.46	1.33
<i>Fathers' Parents' Characteristics</i>			
Mother Married at Birth	0-1	84%	
Mother Less than High School	0-1	38%	
Mother High School Only	0-1	45%	
Mother More than High School	0-1	17%	
Father Less than High School	0-1	46%	
Father High School Only	0-1	35%	
Father More than High School	0-1	19%	

Note: Mean variables represent the means when fathers were ages 30-35.

Table 6. Father, household, and parent characteristics by employment trajectory group

	Trajectory Groups					χ^2 (df=4)	F-Test
	Low Incr.	Early Peak	Mid. Peak	Mid. Incr.	High Incr.		
<i>N</i>	408	1051	1340	1346	1991		
<i>Father Characteristics</i>							
Mean of Housework	8.55	8.15	7.61	6.79	6.39		18.00**
Mean of Hours Work	7.08	28.83	37.5	37.63	46.77		662.60**
Mean of Income	2,816	15,240	24,982	25,394	35,487		150.93**
Less than High School	46%	24%	17%	27%	17%	128.32**	
High School Only	38%	47%	31%	43%	43%	62.52**	
More than High School	16%	29%	52%	30%	40%	188.04**	
Has a Child	60%	64%	65%	87%	82%	376.99**	
Age at Birth of First Child	22.26	24.18	26.31	22.96	25.20		95.77**
Number of Births	1.40	1.41	1.50	2.47	2.03		106.20**
Number of Marriages	.5	.83	.91	1.21	1.23		153.74**
Married at First Birth	15%	60%	65%	67%	91%	500.02**	
White	28%	57%	57%	60%	82%	438.56**	
Black	67%	39%	41%	36%	15%	431.13**	
Hispanic	3%	2%	1%	1%	1%	22.99**	
Other	2%	2%	1%	3%	2%	8.29+	
<i>Household Characteristics</i>							
Mean of Family Income	22,800	33,299	38,673	35,397	45,061		67.24**
Minors in the Household	1.04	1.12	1.01	1.97	1.66		107.94**
<i>Fathers' Parents' Charact.</i>							
Mother Married at Birth	67%	85%	85%	82%	93%	105.01**	
Mother Less than High School	49%	34%	33%	48%	34%	93.62**	
Mother High School Only	35%	47%	44%	37%	51%	64.06**	
Mother More than High School	16%	19%	23%	15%	15%	41.80**	
Father Less than High School	51%	43%	42%	56%	44%	54.13**	
Father High School Only	30%	38%	33%	30%	38%	29.30**	
Father More than High School	19%	19%	25%	14%	18%	47.04**	

Note₁: Chi-squared tests and ANOVAs are joint tests of significance.

Note₂: + $p < .10$, * $p < .05$, ** $p < .01$

Table 7. Impact of childbirth on employment hours by trajectory group

Group	Coefficient	Standard Error	Estimated Change in Hours/ week
Low Increasing	1.60**	.03	3.08
Early Peak	-.10	.01	-.19
Middle Peak	-.07**	.01	-.13
Middle Increasing	1.77**	.02	3.40
High Increasing	.08**	.00	.15

Note₁: ⁺ $p < .10$, * $p < .05$, ** $p < .01$

Note₂: Employment was originally in units of hundreds of hours worked per year

Table 8. Impact of childbirth on employment by age and trajectory group

Group	Age of Birth	N	Coeff.	St. Error	Estimated Change in Hours/ week	χ^2
Low Increasing	Adolescence	77	1.65**	.04	3.17	0.001**
	Early Adulthood	116	1.40**	.05	2.69	
	Middle Adulthood	51	-.05	.12	-.10	
Early Peak	Adolescence	116	-.12**	.01	-.23	3.304
	Early Adulthood	311	-.10**	.01	-.20	
	Middle Adulthood	247	-.12**	.01	-.23	
Middle Peak	Adolescence	253	-.15**	.01	-.29	.001**
	Early Adulthood	599	-.18**	.01	-.35	
	Middle Adulthood	340	-0.01	.01	-0.02	
Middle Incr.	Adolescence	125	1.77**	.02	3.40	59.08**
	Early Adulthood	277	1.77**	.02	3.40	
	Middle Adulthood	466	1.70**	.02	3.27	
High Increasing	Adolescence	127	.15**	.01	.29	.001**
	Early Adulthood	843	.10**	.00	.19	
	Middle Adulthood	662	.04**	.00	.08	

Note₁: ⁺ $p < .10$, * $p < .05$, ** $p < .01$

Note₂: Employment was originally in units of hundreds of hours worked per year

Table 9. Descriptive statistics for total housework sample

	Range	Mean or %	Standard Deviation
<i>Father Characteristics</i>			
Mean of Housework	0-57	7.15	5.80
Mean of Hours Work	0-67.31	38.96	13.64
Mean of Income	0-220,705	27,767	18,630
Less than High School	0-1	22%	
High School Only	0-1	40%	
More than High School	0-1	38%	
Has a Child	0-1	80%	
Age at Birth of First Child	16-46	24.54	4.97
Number of Births	0-8	1.99	1.11
Number of Marriages	0-5	1.11	.69
Married at First Birth	0-1	74%	
White	0-1	67%	
Black	0-1	28%	
Hispanic	0-1	2%	
Other	0-1	3%	
<i>Household Characteristics</i>			
Mean of Family Income	0-284,703	38,878	25,069
Minors in the Household	0-9	1.50	1.32
<i>Fathers' Parents' Characteristics</i>			
Mother Married at Birth	0-1	87%	
Mother Less than High School	0-1	38%	
Mother High School Only	0-1	45%	
Mother More than High School	0-1	17%	
Father Less than High School	0-1	46%	
Father High School Only	0-1	35%	
Father More than High School	0-1	19%	

Note: Mean variables represent the means when fathers were ages 30-35.

Table 10. Father, household, and parent characteristics by housework trajectory group

	Trajectory Groups					χ^2 (df=4)	F-Test
	Stably Low	Low Incr.	Mid. Decr.	Mid. Incr.	High Incr.		
<i>N</i>	1011	1443	1654	1631	942		
<i>Father Characteristics</i>							
Mean of Housework	1.07	3.79	5.95	9.76	15.39		1493.53**
Mean of Hours Work/ Week	42	40	39	38	34		24.47**
Mean of Income	28,359	28,317	28,207	28,095	24,405		4.54**
Less than High School	34%	22%	19%	17%	23%	108.13**	
High School Only	37%	37%	43%	40%	45%	24.77**	
More than High School	29%	41%	38%	43%	32%	63.31**	
Has a Child	83%	78%	80%	81%	81%	11.61*	
Age at Birth of First Child	23.99	25.09	24.35	25.08	23.73		15.64**
Number of Births	2.48	1.87	1.88	1.89	2.01		31.05**
Number of Marriages	1.11	1.16	1.10	1.12	1.06		3.72**
Married at First Birth	79%	75%	75%	74%	70%	9.35+	
White	72%	71%	64%	67%	60%	43.76**	
Black	23%	25%	32%	29%	33%	42.1**	
Hispanic	2%	2%	2%	2%	4%	12.96*	
Other	3%	2%	2%	2%	3%	3.69	
<i>Household Characteristics</i>							
Mean of Family Income	38,965	39,225	39,538	39,276	36,032		2.49*
Minors in the Household	1.95	1.37	1.47	1.38	1.61		27.48**
<i>Fathers' Parents' Charact.</i>							
Mother Married at Birth	89%	89%	85%	88%	84%	11.33*	
Mother Less than High School	51%	39%	34%	35%	36%	79.81**	
Mother High School Only	36%	43%	47%	47%	47%	38.24**	
Mother More than High School	13%	18%	19%	18%	17%	13.25*	
Father Less than High School	61%	48%	41%	43%	43%	100.69**	
Father High School Only	26%	33%	40%	35%	40%	54.43**	
Father More than High School	13%	19%	19%	22%	17%	32.5**	

Note₁: Chi-squared tests and ANOVAs are on joint tests of significance.

Note₂: + $p < .10$, * $p < .05$, ** $p < .01$

Table 11. Impact of childbirth on housework by trajectory group

Group	Coefficient	Standard Error
Stably Low	.11*	.05
Low Increasing	.04*	.01
Middle Decreasing	.15**	.01
Middle Increasing	.09**	.01
High Increasing	.15**	.01

Note₁: ⁺ $p < .10$, * $p < .05$, ** $p < .01$

Note₂: Housework was in units of 10's of hours per week

Table 12. Impact of childbirth on housework by age and trajectory group

Group	Age of Birth	N	Coefficient	Standard Error	χ^2
Stably Low	Adolescence	112	.24**	.05	15.20**
	Early Adulthood	473	.10*	.05	
	Middle Adulthood	252	.14**	.05	
Low Increasing	Adolescence	139	.12**	.02	8.63**
	Early Adulthood	521	.08**	.02	
	Middle Adulthood	459	.07**	.02	
Middle Decr.	Adolescence	202	.34**	.02	.001**
	Early Adulthood	641	.16**	.01	
	Middle Adulthood	474	.06**	.01	
Middle Incr.	Adolescence	174	.23**	.01	.001**
	Early Adulthood	579	.09**	.01	
	Middle Adulthood	560	.04**	.01	
High Increasing	Adolescence	158	.36**	.01	.001**
	Early Adulthood	371	.12**	.01	
	Middle Adulthood	236	.14**	.01	

Note₁: ⁺ $p < .10$, * $p < .05$, ** $p < .01$

Note₂: Housework was in units of 10's of hours per week

Figure 1. Average income trajectory for total sample of men

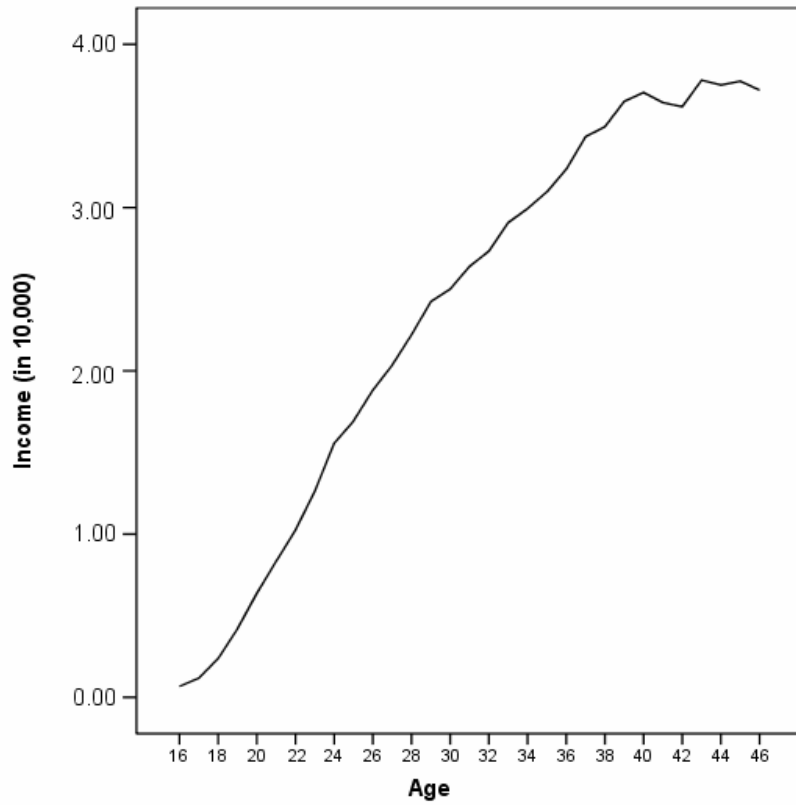


Figure 2. Income trajectories

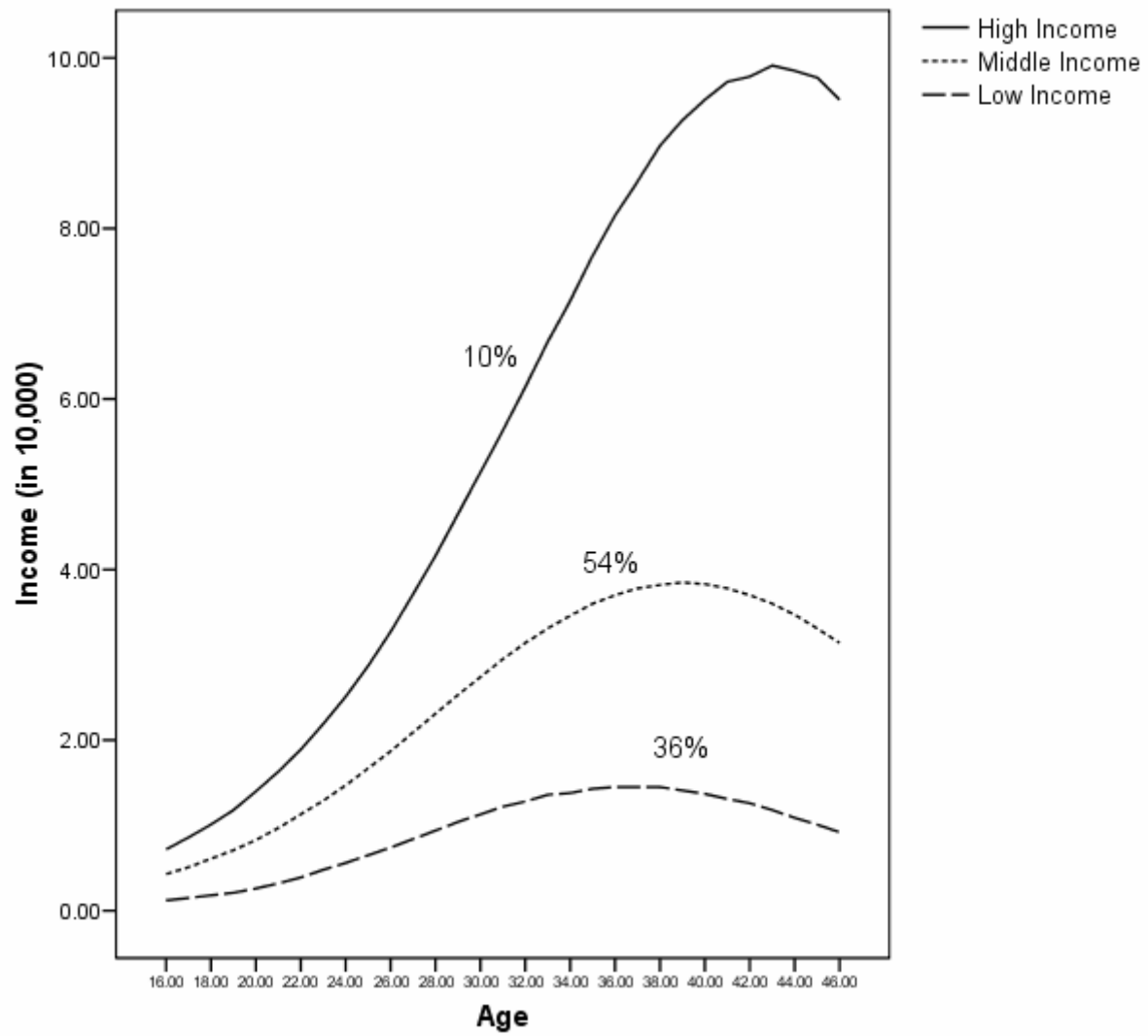


Figure 3. Impact of childbirth on income by age for the low-income trajectory group

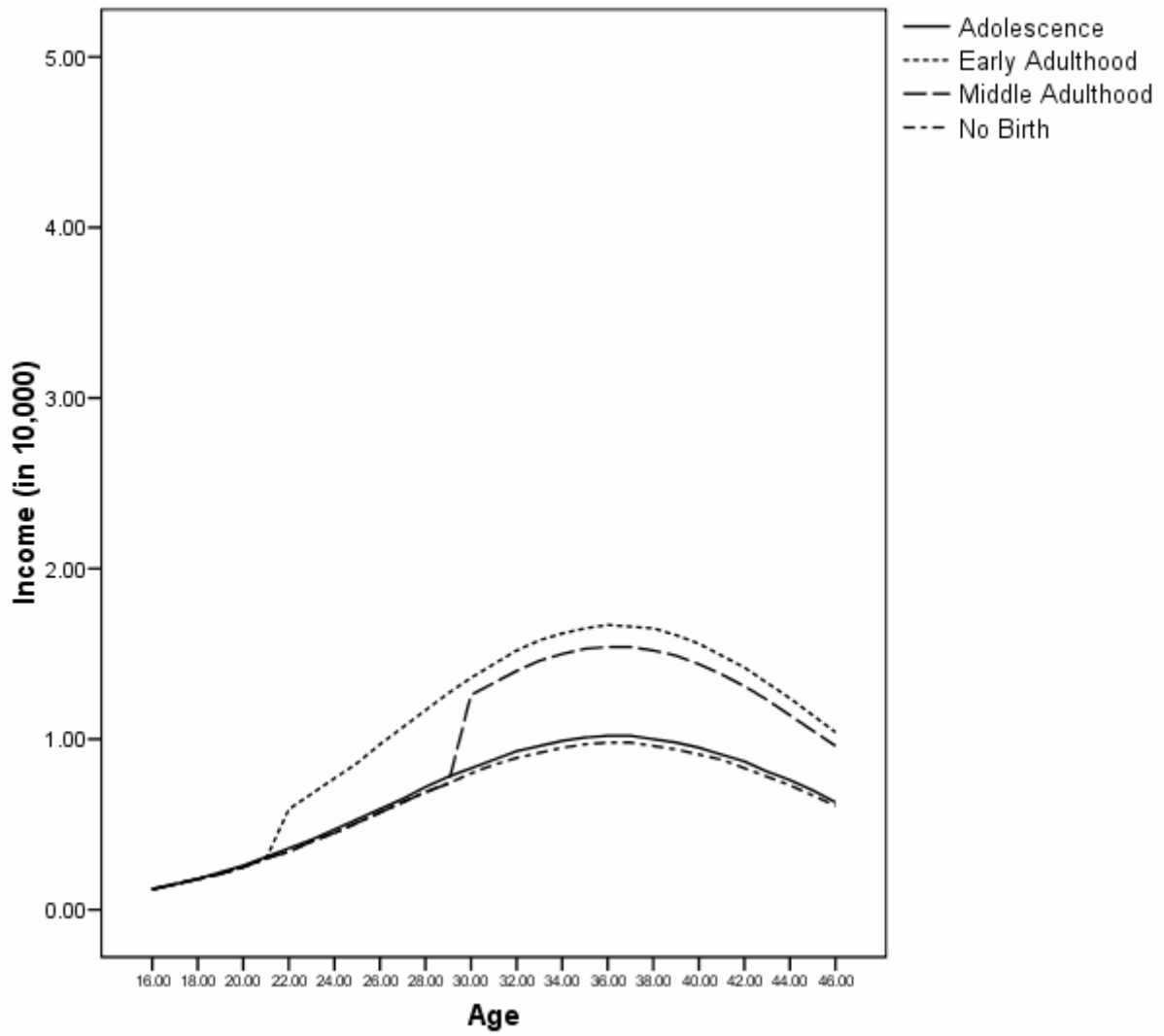


Figure 4. Impact of childbirth on income by age for the middle-income trajectory group

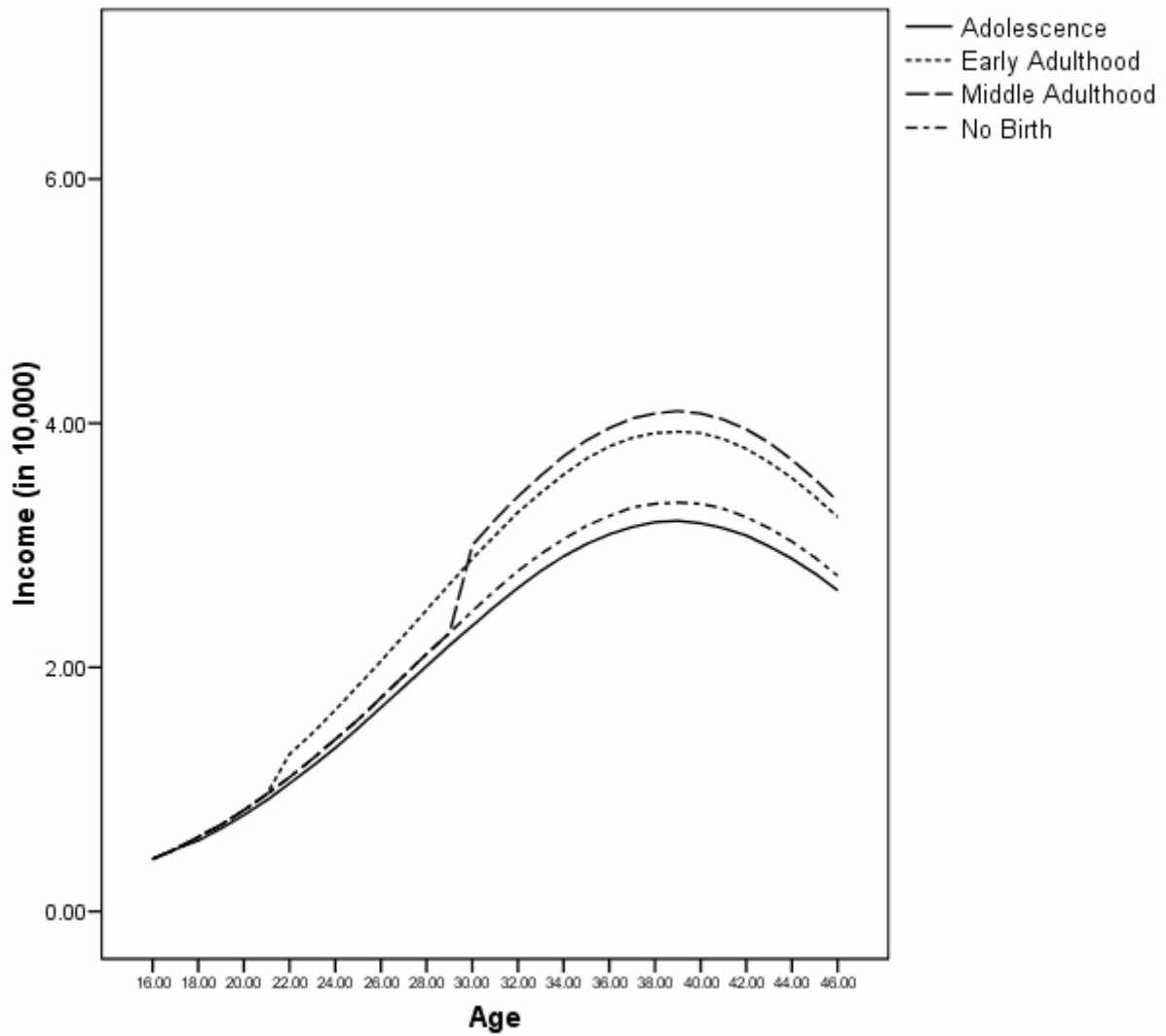


Figure 5. Impact of childbirth on income by age for the high-income trajectory group

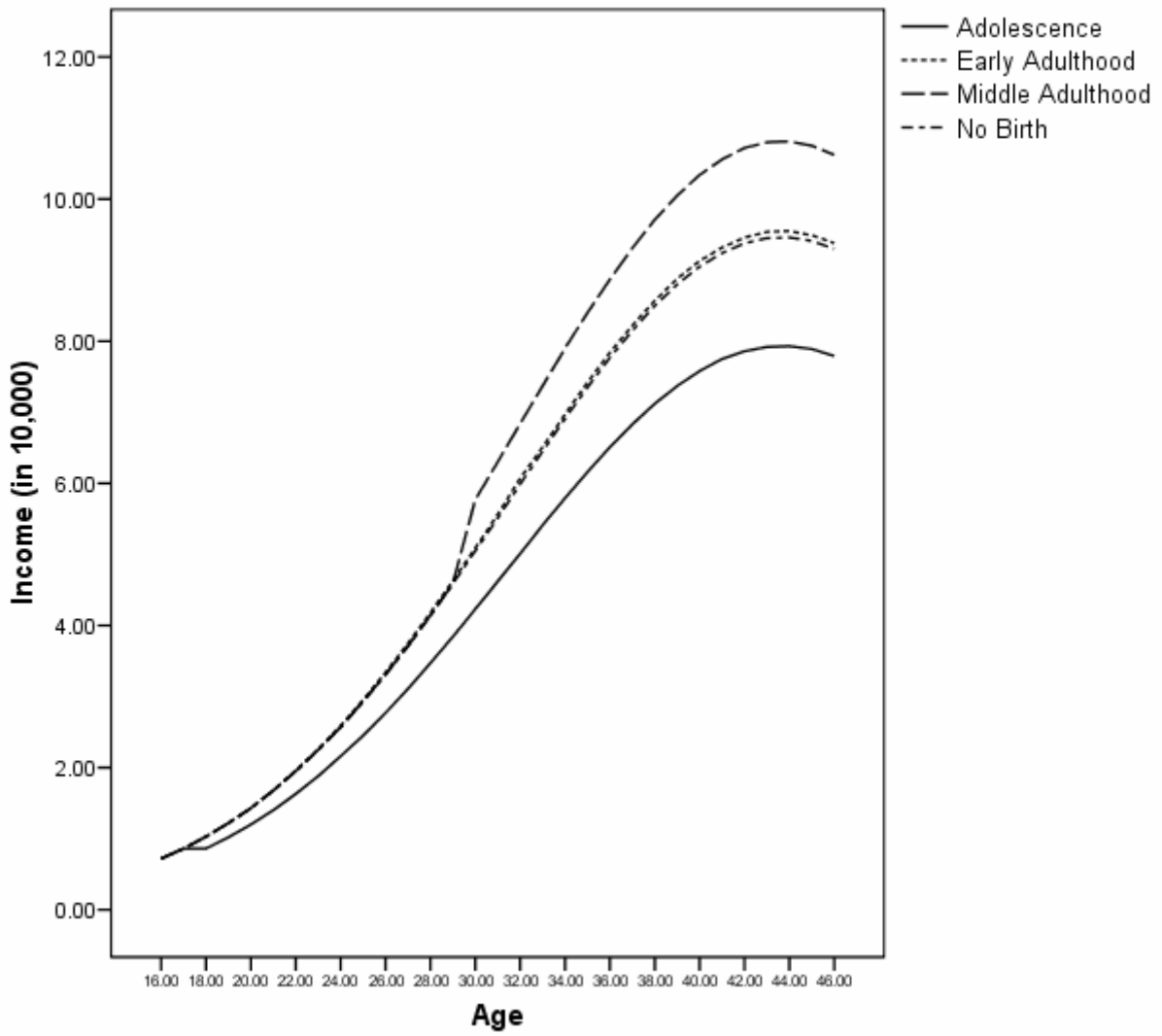


Figure 6: Average employment trajectory for total sample of men

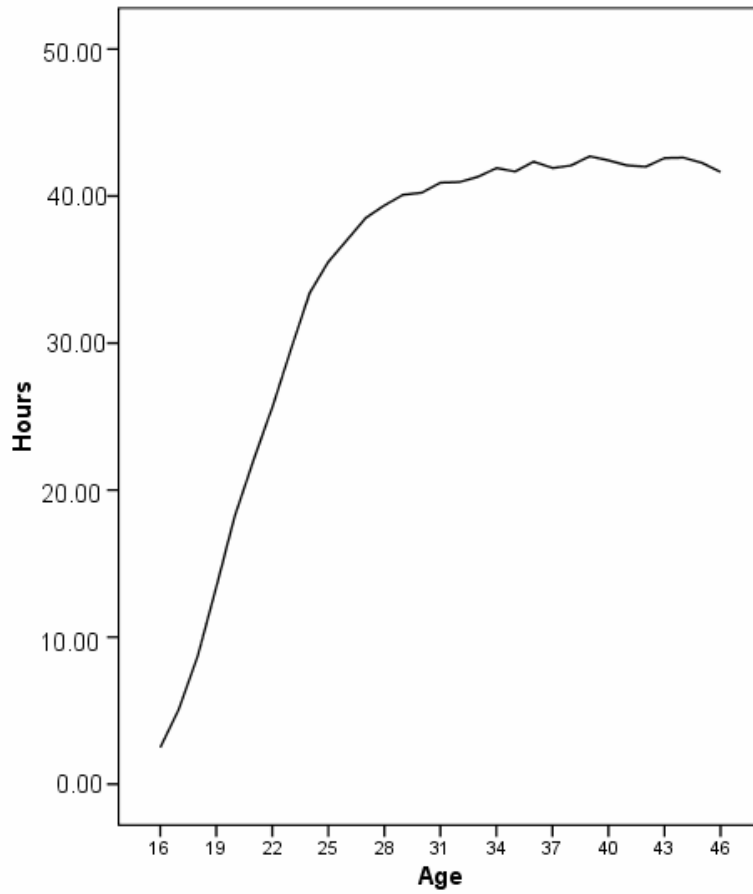


Figure 7. Employment trajectories

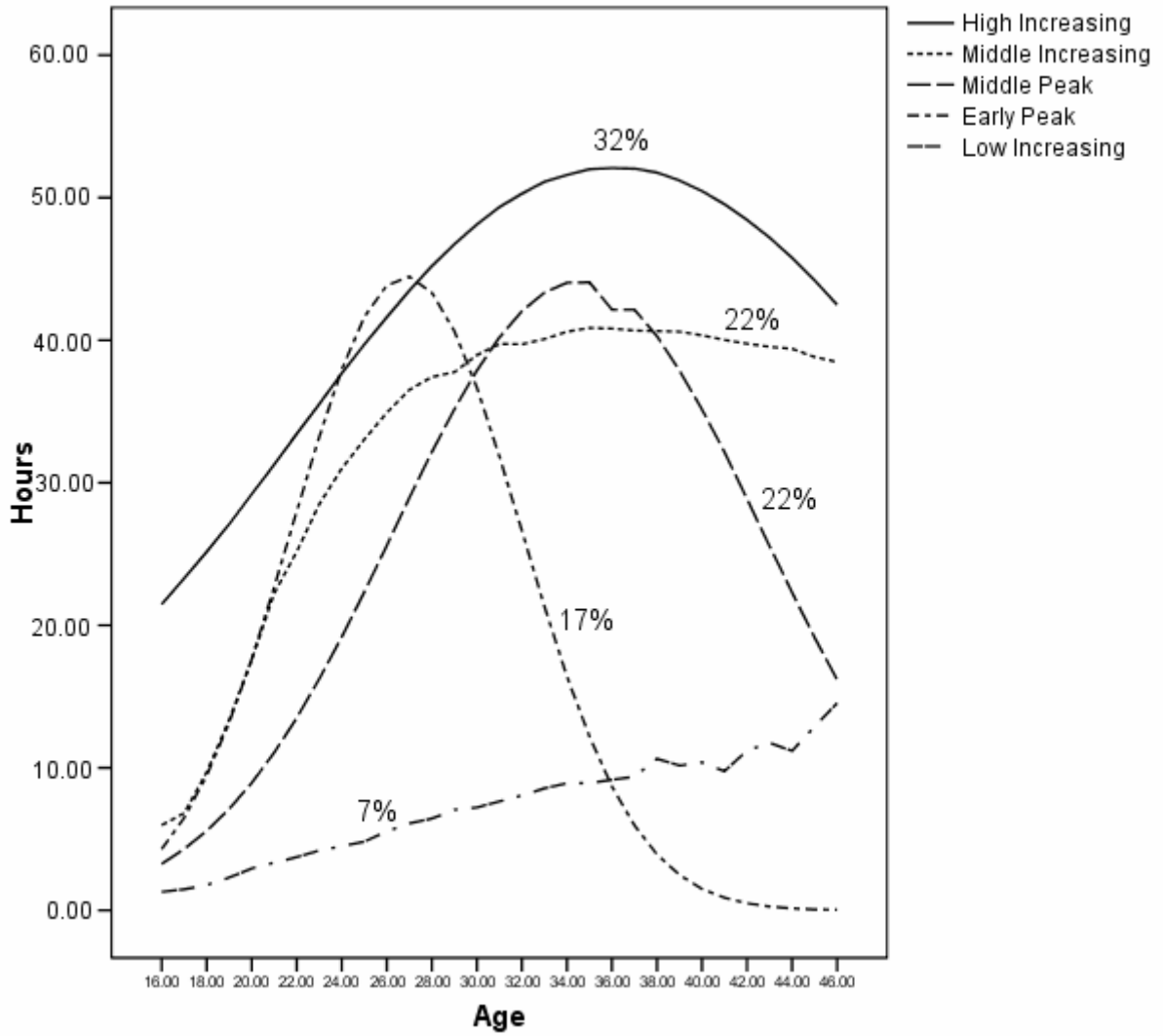


Figure 8. Impact of childbirth on employment by age for the low-increasing trajectory group

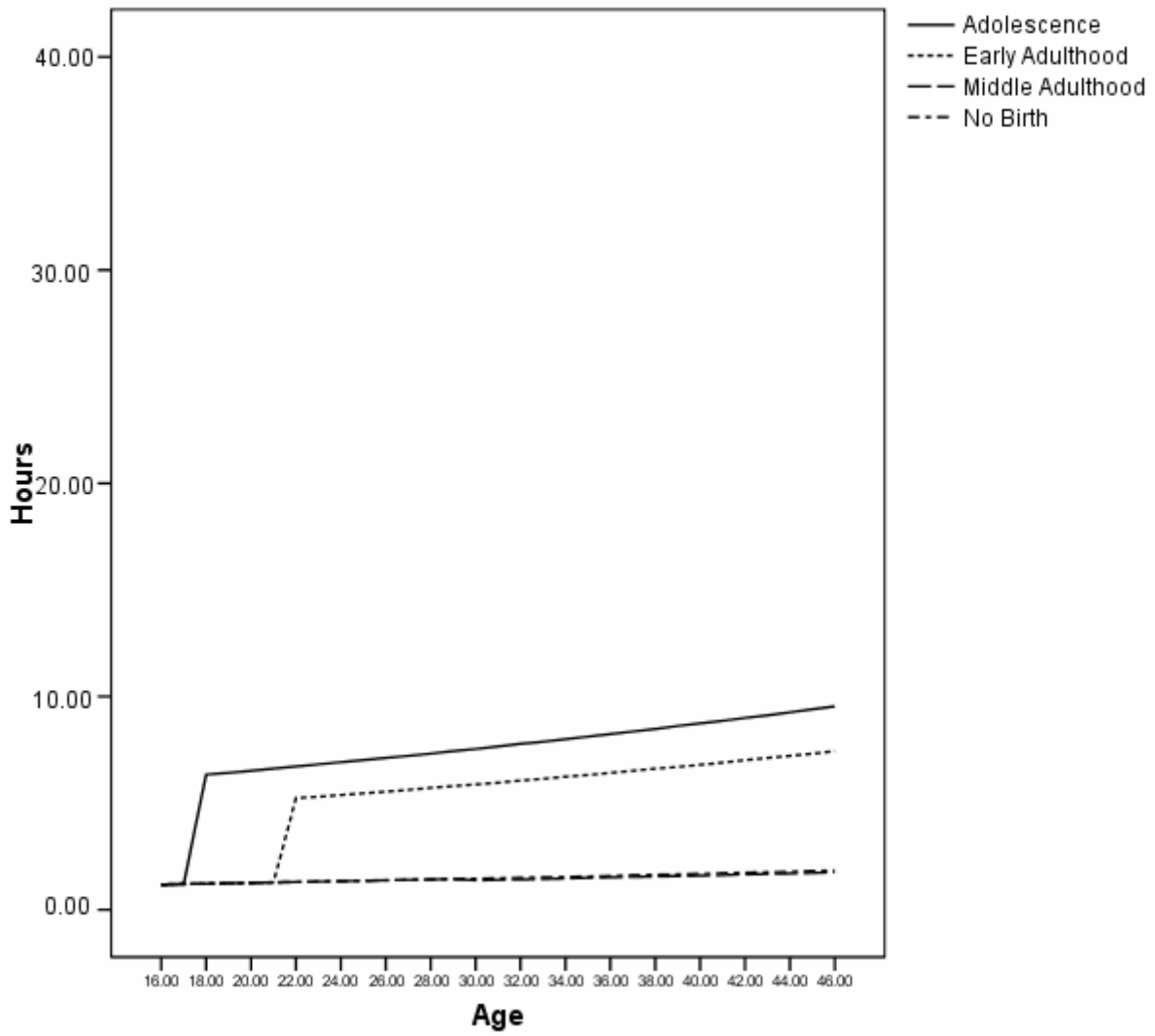


Figure 9. Average housework trajectory for total sample of men

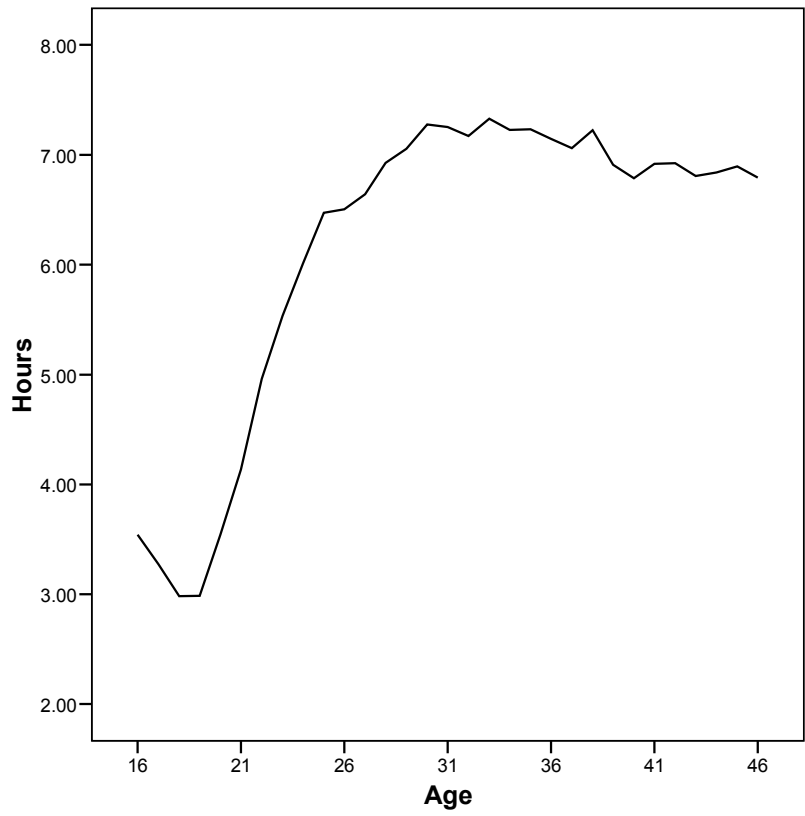


Figure 10. Housework trajectories

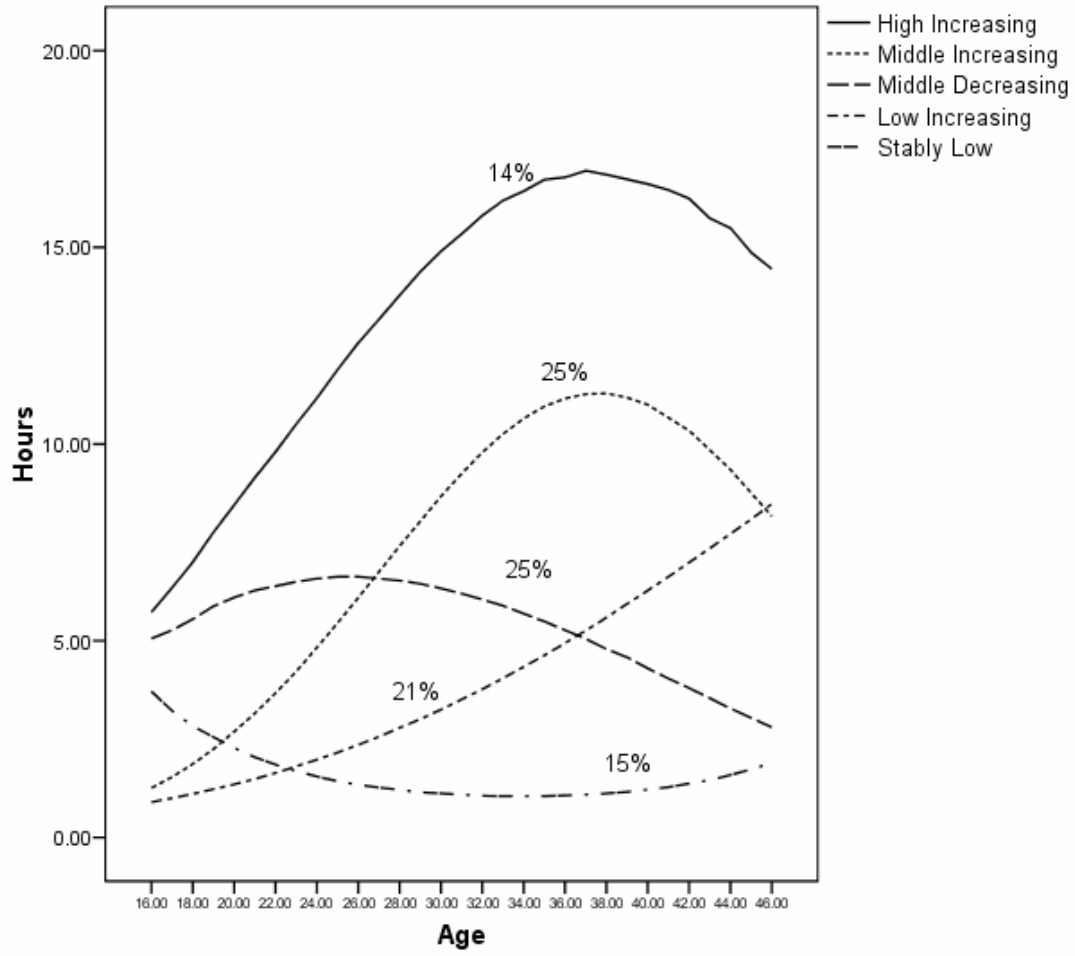


Figure 11. Impact of childbirth on housework by age for the high-increasing trajectory group

