

Social-Psychological Factors in Perinatal Labor-Force Participation

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Using material from the National Longitudinal Surveys of Labor Market Experience of Young Women, this study analyzes eight years of panel data from 895 white married women, with husband present, who had a first birth prior to the 1978 interview. The purpose of this research was to investigate social-psychological factors that may affect exit from the labor force prior to the birth event and reentry following the birth event. Covariance analyses suggest (a) that there is a large and statistically significant effect of attitude toward married women in the work force on labor-force participation throughout the perinatal period (women with more favorable attitudes were more likely to be in the labor force); and (b) that the effect of attitude toward married women in the work force on perinatal labor-force participation is stronger than that of proximity to the birth event, age, age at first marriage, husband's income, or education.

In recent decades the percentage of married women in the labor force has steadily increased (Waldman, 1983: 18). This trend, apparent even during the Baby Boom years of the 1940s and 1950s, has continued its upward path over the last 15 years, resulting in unprecedented numbers of women with dependent children entering the paid labor force. Labor-force participation rates have increased for all married women, but most dramatically among mothers with preschool children and infants. Just 10 years ago, only about

one in three mothers with preschoolers was in the labor force; by 1984, over half were either employed or seeking work (Hayghe, 1985).

Not surprisingly, female labor-force participation, and especially that of mothers with preschoolers and infants, has been the focus of a growing body of research by sociologists and economists. This study analyzes a sample of married, husband-present women as they move through a sequence of crucial life-cycle stages: from the beginning of their marriage, through their first live birth, and continuing on to the second pregnancy. Most of the research studying labor-force participation surrounding the first birth has focused on structural or demographic factors. The purpose of this study is to use data from a large national panel study of women to estimate the effects of attitudinal factors on perinatal labor-force participation, and to examine how such attitudes combine with demographic factors such as age, husband's income, and education to affect exit from the labor force prior to first birth and reentry following the birth event.

Studies of female labor-force participation have often adopted a household labor-supply approach (see, for example, Bowen and Finegan, 1969; Cain, 1966: 5-14). This approach views households as economic units that attempt to maximize the utility derived from their joint consumption of

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income, on the one hand, and leisure or other nonmarket uses of time, on the other. This is sometimes termed the "total resource constraint." The model suggests that in households where income of other family members (principally the husband) is high, the wife will be less likely to be in the labor force, because such households are able to "buy" more leisure or other nonmarket time for the wife. Studying this total resource constraint hypothesis, Mott and Shapiro (1977: 89) found that women whose husbands had relatively high incomes had consistently lower labor-force participation rates than did women in the lower income groups. McLaughlin (1982: 416), on the other hand, found that women from relatively high-income households were *more* likely to be in the labor force during pregnancy and in the months immediately following birth.

Second, the labor-supply model also posits an "opportunity cost," or the cost (in terms of foregone income) of the wife's not entering the labor force. The model suggests that, other things being equal, the greater a wife's earning potential, the more likely she is to be in the labor force. This factor is referred to as the "market wage" by Cain (1966: 8). Mott and Shapiro (1977: 89) operationalized market wage in terms of wife's potential wage rate. As expected, perinatal labor-force participation was positively related to potential wage rate. McLaughlin (1982: 414, 417) looked at two different indicators of market wage: years of formal education, and prebirth work experience. Both of these variables might be expected to indicate opportunity cost, because both are related to potential wage rate. McLaughlin found that education and prebirth work experience were both positively related to perinatal labor-force participation.

For the typical married-couple household, however, there are also costs involved if the wife enters the labor force. Cain refers to this cost as "home wage," which is determined by the wife's home skills and the household's demand for those skills. The most obvious factor for married couples with children, of course, would be costs of child care, but there are many other possible costs as well, including transportation, clothing, and various household support structures. Both Mott and Shapiro (1977) and McLaughlin (1982) found that labor-force participation was negatively related to home wage, as indicated by proximity to the birth event.

Finally, wives probably have differing tastes or attitudes toward employment outside the home. It is likely that the more favorably inclined a wife is toward entering the paid labor force, the more

likely she will be to do so. Dowdall (1974) studied a sample of married women between the ages of 15 and 64 with at least one child; her indicator of taste for market work was a 6-item scale measuring attitudes toward married women in the work force. Her findings indicate that this attitudinal variable had a greater effect on the wife's labor-force participation than did education, age of youngest child, or husband's income (all of which had statistically significant effects). Although it was not the primary focus of their research, Waite and Stolzenberg (1976) also found that the effect of attitude toward married women in the work force on female labor-force participation was the strongest of any of the variables in their model.¹

If we restrict our analysis to married couples in the perinatal period, with no other potential wage earners in the household besides husbands and wives, we can simplify the labor-supply model of the labor-force participation of wives to four conceptual variables, and when each of these four factors is considered in isolation, the predictions of the labor-supply model are fairly straightforward. Husband's income should be negatively related to wife's labor-force participation, because high-income households can afford to consume additional nonmarket time. Demand for home skills should be negatively related to labor-force participation as women drop out of the labor force during pregnancy and then reenter as children grow older. Wives with high earning potential, other things being equal, should be more likely to enter the labor force. Finally, wives with more favorable attitudes toward market work should have higher labor-force participation rates.

Of course, these factors cannot be considered in isolation. When we view the married-couple household as an economic decision-making unit, we must realize that labor-force participation decisions are made not with respect to any one of these factors in isolation but in terms of a wide range of possible factors considered simultaneously. Therefore, it should not surprise us to learn, for example, that husband's income does not seem to have the negative effect on wife's labor-force participation at all points in the family life cycle that a simplified version of the labor-supply model might predict. It is important to consider the social-psychological aspects of this decision-making process, and to recognize that the relative costs and rewards involved in entering or leaving the labor force will probably be different at different points of the family life cycle. Waite (1980) has made this point quite effectively, demonstrating that the magnitude (and sometimes

even the direction) of the effects of various factors in this process can vary at different life-cycle stages.

Rather than duplicating the results of these previous studies of perinatal labor-force participation, the present research focuses on the effects of taste for market work within the context of the labor-supply model. Although we include (for comparability) indicators of market wage, home wage, and total resource constraint, as well as other factors not in the labor-supply model but known to affect the probability of labor-force participation (age at first marriage, region of U.S. residence, and mother's work history, whose effects might obscure our analysis of the factors in the labor-supply model), our primary focus is on the effects of taste for market work on perinatal labor-force participation. With the labor-supply model in mind, we can formulate one specific hypothesis about labor-force behavior in the perinatal period: that taste for market work, as indicated by attitude toward married women in the work force, will have a significant and positive effect on labor-force participation throughout the perinatal period. We expect that women with favorable attitudes toward married women in the work force will have higher rates of labor-force participation prior to, during, and after the first pregnancy that results in a live birth, even when the other major factors in the labor-supply model are taken into account.

METHOD

The Data Set

The data used in this study are drawn from the National Longitudinal Surveys of Labor Market Experience of Young Women, a panel study of 5,159 women between the ages of 14 and 24 when first interviewed in 1968. These respondents were reinterviewed nine times from 1969 to 1980. The data were collected by the U.S. Bureau of the Census and the Center for Human Resource Research of Ohio State University.

The specific population under study in the present research is the set of all white women who experienced a first live birth prior to the 1978 interview and who were still in the study at any point after or including the 1972 interview (there were too few nonwhite women to perform a meaningful corresponding analysis). Data from a specific interview was included if it met the following qualifications:

1. Respondent married and living with spouse at time of interview
2. No marital disruptions prior to interview

3. Respondent not in school at time of interview
4. Interview conducted prior to second pregnancy that resulted in a live birth

Of the 5,159 women in the full sample, 895 met these qualifications and were included in our analyses. There was an overall attrition rate of 15.8% for all respondents over the full 12-year period in this sample.

Mott and Shapiro (1977; Shapiro and Mott, 1979) have presented a pooled cross-sectional procedure for transforming the data set. This procedure involves shifting the unit of analysis from the individual *respondent* to the individual *interview*. Each interview therefore has the potential to become a separate observation in the analysis, contingent upon meeting the definitional requirements described above. This procedure significantly increases the size of the working sample, because each respondent may be included in the working data set several times.² Thus, our set of 895 women actually provides us with an effective sample that yields information about far more than just 895 points in time.

Strictly speaking, this pooled cross-sectional technique violates the usual assumptions of independence of observations, because any given respondent may provide more than one observation for the working data set. However, in similar analyses with this data set, McLaughlin (1982) has found little evidence of bias as a result of the use of this technique. Mott and Shapiro (1977) have also demonstrated that the basic data regarding labor-force participation are not affected by the point in the panel series at which a woman gives birth the first time. It seems reasonable, therefore, to employ this technique without prejudice with regard to the empirical parameters to be estimated. Tests of significance will certainly be affected by violation of the assumptions of independence of observations, however, and should be viewed conservatively.

Our working data set provides us with a series of interviews with husband-present women who are either (1) married but not yet pregnant with the first child, (2) married and pregnant with the first child, or (3) married with one child but not yet pregnant with the second child. This set of constraints allows us to study the labor-force participation of what constitutes the largest group of mothers with infants, without the confounding effects of marital disruption and the second pregnancy that resulted in a live birth.

Superficially, our data set is similar to that studied by McLaughlin (1982) and by Mott and Shapiro (1977; Shapiro and Mott, 1979), but there

are significant differences. First, the earlier studies had access only to the 1968–1973 waves of the NLS data; we make use of the 1972–1980 waves. Second, we have limited our data set to women who were married and living with their husbands at the time of the interview; and third, we have eliminated data for women who had multiple births and data beginning with the second pregnancy that resulted in a live birth.³

Variables

The dependent variable in these analyses is the conventional measure of labor-force participation, which categorizes an individual as being in the labor force if she is either currently at work, with a job but not at work, or unemployed and looking for work. An alternative measure, the percentage at work, classifies an individual at work only if she was actually working during the survey week. While for most labor-force research the difference between these measures would be relatively slight, for studies of perinatal employment the differences might be significant, as a result of the use of maternity, vacation, or sick leave in the weeks immediately surrounding birth. Therefore, the results given for the conventional measure of labor-force participation should be considered with these factors in mind. In practice, of course, the two measures correlate quite highly; the differences should not be of great consequence unless very precise estimates of parameters are necessary.

Attitude toward married women in the work force was assessed by using a 9-item summated Likert-type scale. These items were (1) "Modern conveniences make it possible for a wife to work without neglecting her family"; (2) "A woman's place is in the home, not in the office or shop" (reversed); (3) "A job provides a wife with interesting outside contacts"; (4) "A working wife feels more useful than one who doesn't hold a job"; (5) "A wife who carries out her full family responsibilities doesn't have time for outside employment" (reversed); (6) "The employment of wives leads to more juvenile delinquency" (reversed); (7) "Working wives help to raise the standard of living"; (8) "Working wives lose interest in their homes and families" (reversed); and (9) "Employment of both parents is necessary to keep up with the high cost of living." The internal reliability of this scale, as measured by Cronbach's alpha, was .762.⁴

Since previous studies in this area have suggested that the relationship between time interval before or after first birth and labor-force participation is nonlinear, the time-interval variable was recoded into 21 categories (grouped into

6-month intervals except for the 24 months immediately surrounding the birth event, which were grouped into 3-month intervals) from 48 months prior to first birth to 48 or more months after the birth event.

Two variables (region of U.S. residence and mother's employment) were recoded as dummy variables (region: 0 = non-South, 1 = South; mother's employment: 0 = not employed when respondent was 14 years of age; 1 = employed when respondent was 14). Husband's income was converted into 1967 dollars on the basis of the Consumer Price Index coefficients (U.S. Bureau of the Census, 1985). The remaining variables (attitude toward married women in the work force, education, age, and age at first marriage) were treated as continuous interval-level measures and were not recoded.

RESULTS

In all, the 895 women in the data set who reported a first birth before the 1978 interview provided 2,875 observations that fit the selection criteria. Nonresponse to one or more variables in the model under test resulted in a total of 2,287 observations appropriate for analysis.

A linear model (analysis of covariance) utilizing the eight independent variables mentioned above, as well as three interaction terms (attitude by time interval, husband's income by time interval, and education by time interval) was used to predict whether or not a particular woman was in the labor force at the time of the interview. Five of these variables (time interval or proximity to the birth event, attitude toward married women in the work force, husband's income, education, and age at interview) are included because they are indicators of factors in the labor-supply model. The remaining factors (age at first marriage, region of U.S. residence, and mother's work history) are not directly relevant to the labor-supply model but are included as covariates because of their likely effects on labor-force participation rates.

Overall, the model accounted for about 20% of the variation in labor-force participation. The results of the analysis are presented in Table 1. The analysis of effects presents Type III or complete sums-of-squares, which test the effect of a particular factor in conjunction with all other terms in the model simultaneously. Thus, the order of entry of terms into the equation does not affect the estimate of the magnitude of the effect of any given term, as it would in more traditional regression models.

Our hypothesis predicted that there would be a positive effect of attitude toward married women in the work force on labor-force participation

TABLE 1. ANALYSIS OF COVARIANCE FOR LABOR-FORCE PARTICIPATION DATA

Source	df	Type III			eta ²
		SS	F		
Time interval	20	5.21	1.31		.030
Attitude	1	9.44	47.42*		.055
Attitude by time	20	4.64	1.17		.027
Husband's income	1	1.15	5.81*		.007
Income by time	20	4.97	1.25		.029
Education	1	4.67	23.48*		.028
Education by time	20	3.32	.83		.019
Age at interview	1	.01	.01		.000
Age at first marriage	1	.34	1.75		.002
Residence in South?	1	.03	.18		.000
Mother work?	1	.95	4.80*		.006
Model ^a	87	111.64	6.44**		
Error	2,199	438.07			
Corrected total	2,286	549.71			

^aR² = .203.

*p < .05.

**p < .001.

throughout the perinatal period. Table 1 shows that not only is the effect of attitude on labor-force participation statistically significant, it has the strongest effect of any factor in the model, accounting for about 5.5% of the variation in labor-force participation. Figure 1 shows this relationship graphically (for purposes of this graph, attitude toward married women in the work force was divided into two groups, using a median split).

FIG. 1. MEAN PERINATAL LABOR-FORCE PARTICIPATION RATES BY ATTITUDE TOWARD MARRIED WOMEN IN THE WORK FORCE

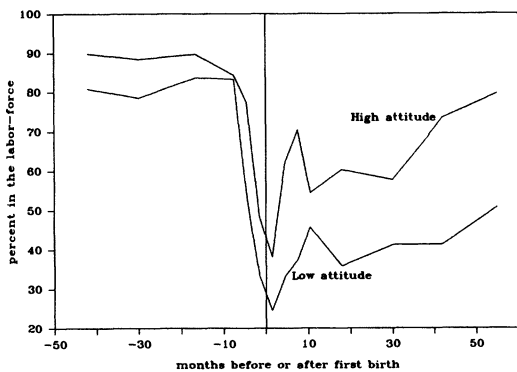
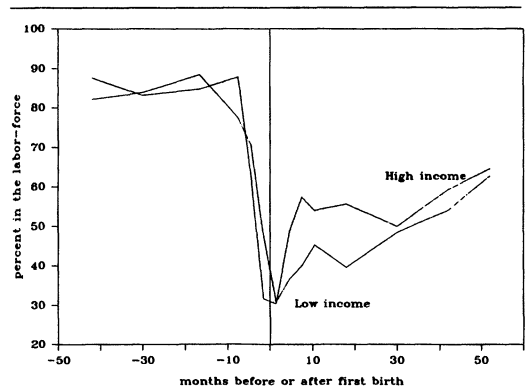


Figure 2 presents the effects of husband's income on labor-force participation. For purposes of this graph, husband's income was divided into high and low groups, using a median split.

DISCUSSION

Perhaps the most interesting finding from this analysis is that attitude toward married women in

FIG. 2. MEAN PERINATAL LABOR-FORCE PARTICIPATION RATES BY HUSBAND'S INCOME



the work force had the strongest effect on labor-force participation of any of the factors in the model. Apparently, taste for market work is a more salient consideration in perinatal labor-force participation decisions among married women than previous research might lead us to believe. Combined, the 11 factors in the model accounted for 20% of the variation in labor-force participation; attitude toward married women in the work force alone accounted for over 5%.

It is also interesting to note (in Figure 1) the differences in the effects of attitude toward married women in the work force in the prenatal period as opposed to the postnatal period. Before the first birth, there are relatively small differences between the labor-force participation rates of women with relatively favorable and unfavorable attitudes; after the birth, these differences are much larger, and suggest that taste for market work not only is related to the overall rate of labor-force participation in the postnatal period,

but also to the timing of reentry into the labor force. Although the factor representing the interaction between time interval and attitude is not statistically significant, it nonetheless accounts for nearly 3% of the variation in the labor-force participation, and thus bears further investigation. It may be that attitude has more effect on labor-force participation in the postnatal period because women with relatively unfavorable attitudes toward women in the work force also have relatively low labor-force commitment; these women might find the birth of their first child an opportune time to leave the labor force indefinitely.

Our analyses with regard to the effects of total resource constraint produced results similar to those of other studies using the NLS data set (Mott and Shapiro, 1977; McLaughlin, 1982) in that women with high-income husbands are generally less likely to be in the labor force, with the notable exception being the months immediately preceding the birth event. The analyses presented here, however, indicate that McLaughlin's (1982: 416) suggestion that these differences "are probably due to taste and family support factors associated with higher earning husbands" is not supported. This result cannot be attributed to differences in education, age, age at first marriage, wife's mother's work history, or taste for market work, because all of these factors are controlled in the covariance model. Precisely why women from relatively high-income households are more likely to be in the labor-force during pregnancy cannot be unequivocally determined from these data; it might be hypothesized that these women would be more likely to utilize vacation or sick leave during pregnancy, but an analysis of the percentage of women actually at work during this period (not presented here) shows results similar to those obtained predicting labor-force participation. This issue also requires further study.

The effects of the remaining factors in the labor-supply model (market wage and demand for home skills) are also consistent with the predictions of the model. Demand for home skills is greatest after the arrival of the first child, and labor-force participation is lowest during this period (although the overall effect of time interval is not statistically significant, it accounts for 3% of the variation in the labor-force participation). Education, an indicator of market wage, has a significant positive effect on labor-force participation (although age does not) and accounts for nearly 3% of its variation.

The strength of the effect of a social-psychological variable—attitude toward married women in the work force, a proxy for taste for market work—suggests that further research in this area

should examine the role of other social and psychological factors. The application of the household labor-supply model to the study of the labor-force participation of married women is an important first step in this direction, but sociologists studying these phenomena need to go beyond mere description of these factors and toward viable explanations. We need to be especially concerned with changes in the effects of the various factors in the labor-supply model over the family life cycle, and with interactions between these factors. Particular attention needs to be paid to how married couples perceive the costs and rewards associated with the wife's labor-force participation, with the understanding that any given cost or reward will not necessarily have the same subjective meaning to different couples.

The labor-supply model does not address these issues directly, but it does provide family sociologists with a broad theoretical foundation that has received considerable empirical support. To advance our understanding of these phenomena will require a great deal of additional theoretical development as well as carefully designed longitudinal studies to investigate the social-psychological factors affecting the decision-making processes used by married couples.

FOOTNOTES

1. There have also been a number of studies that have looked at the relationship of sex-role attitudes to female labor-force participation (e.g., Safilios-Rothschild, 1970; Smith-Lovin and Tickamyer, 1978; Booth and Duvall, 1981). These studies are not directly relevant here, however, because sex-role attitude measures are not necessarily indicators of taste for market work.
2. Each woman could potentially contribute as many as six observations to the data set (although most contributed three or fewer observations because of the inclusion constraints discussed above). The modal number of observations per woman in the working data set was two.
3. Exclusion of women beginning with the second pregnancy has the effect of slightly overrepresenting women with long second birth intervals in the data set. For these data, however, the correlations between length of birth interval and key variables in our analysis are minimal; for example, the correlation between length of birth interval and attitude toward married women in the work force is $-.08$, while the correlation between length of birth interval and labor-force participation is $-.01$. Therefore, excluding women beginning with the second pregnancy does not seem to bias the data set seriously. For com-

parison, note that McLaughlin (1982) deleted all observations after the birth of the second child. I am grateful to an anonymous *JMF* reviewer for sensitizing me to this issue.

4. The nine items measuring attitude toward married women in the work force were asked only once during the study (at the 1972 interview). Consequently, only observations from the 1972 and later surveys are included in the analysis. Additional analyses (not reported here) suggest the relationships under study are not particularly sensitive to sequencing of these questions, however, as very similar results are obtained when responses from all nine interviews are included.

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