

Earnings and the Stratification of Unpaid Time Among U.S. Women

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Relatively few quantitative studies have examined socioeconomic differences in time allocation *among* women, with the exception of Kahneman et al. (2006). This article presents a preliminary analysis of variation by earnings in women's time spent outside of paid work. We analyze women's time on leisure, housework, and with children. Recent studies of leisure have found that professionals and highly educated people have less free time than individuals of lower socioeconomic status (Aguiar and Hurst 2007; Gershuny 2000; Jacobs and Gerson 2004).

However, diverse forms of leisure may have quite different implications for individuals' health and well being. Less time in active leisure is associated with negative health outcomes, such as greater risks of obesity, heart disease, and reduced physical functioning. Most conceptualizations of leisure (Bittman and Wajcman 2000; Juster 1999) aggregate varied activities such as watching TV and physical exercise (e.g., Aguiar and Hurst 2007). By contrast, we analyze differences in women's time spent specifically on active, or health oriented leisure activities.

With regard to housework, recent studies (e.g., Gupta 2007) have found a negative relationship between women's earnings and their time spent on housework, but based on retrospective *estimate* data rather than the diary data employed here. Unlike studies confined to "core" household chores such as cooking and cleaning, we include time spent on stereotypically "male" or shared housework, such as outdoor chores and financial tasks.

Finally, previous research has already established that women's time spent with children is positively associated with their education (e.g., Sayer et al. 2004). Here we consider the relationship between women's earnings and (1) routine care, and (2) recreational or

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developmental activities, two types of child care that have different implications for children's well being and their own future earnings.

1 Method

Our analyses use pooled time diary data from the 2003 to 2005 American Time Use Study or ATUS (Bureau of Labor Statistics and U.S. Census Bureau 2004). Our analytic sample includes 8,549 women aged 25 to 54 employed full time, in order to limit the confounding effects of paid work. Weights are used in all analyses to correct for nonresponse and the oversample of weekend days.

1.1 Dependent variables

We use two types of dependent variables for each activity: (1) Overall hours per day in the specific primary activities on the diary day, and (2) a dummy variable coded 1 for women spending *any* time on the activity and coded 0 for those reporting no time on the activity.

For this study we concentrate on the following activities:

(1) *Leisure*, which includes:

- (a) *Health related leisure*: active physical pursuits (such as sports, exercise, dancing, and outdoor activities including camping, hiking, and the like);
- (b) *Other leisure*: socializing with friends and family, watching television or listening to music, going to the movies, attending sporting events, reading, and relaxing.

(2) *Housework*

- (a) *Core housework*: also referred to as “female” typed tasks in the literature, including house cleaning, meal clean up, laundry and ironing, and preparing meals;
- (b) *Other housework*, or “male” or shared chores, such as lawn care and outdoor chores, pet care, repairs and maintenance, bill paying and household management.

(3) *Child care*

- (a) *Routine care*: infant and toddler care, care of children 5 and over, medical care, making telephone calls about children, organizing care or events for children, interacting with child care providers, and travel associated with child care;
- (b) *Developmental or recreational care*: teaching and playing activities, talking or reading, indoor playing, and outdoor playing.

1.2 Independent Variables

Our principal predictor variable is woman's weekly earnings, classified into two categories of weekly earnings, defined by the lowest and highest 10 percent of the earnings distribution. Women in the lower group have earnings up to \$300 per week (women reporting zero earnings are not included), and the earnings of those in the higher group range from

\$1,200 to almost \$3,000. Earnings data are obtained from CPS data linked to the ATUS (therefore lagged by up to a few months from the time-use data).

Differences are calculated in the time spent on each of the three types of activities by women in the two earnings groups, as well as coefficients of weekly earnings from OLS models for time spent on an activity and the logistic models for any time spent on it. These models control for weekly employment hours, education, parental and marital status, and age.

2 Results

Table 1 shows that women with the highest 10 percent of earnings spend more than one and a half times as many hours daily on health-related activities, compared to women with the lowest earnings; they are also twice as likely to spend any time on such activities. However, they spend nearly half an hour *less* on other forms of leisure. With respect to housework, women with the highest earnings spend nearly half an hour *less* daily on core housework and are somewhat less likely to spend any time on it. However, they spend nearly a quarter of an hour more on other chores, and they are much more likely to spend any time on these tasks.

Striking differences are also evident on time spent with children: women with the highest earnings spend nearly half an hour more per day on routine care and nearly 10 min

Table 1 Mean hours spent per day, proportions reporting any amount spent, and multivariate results, by women's weekly earnings (hundreds of dollars)

	10th percentile of earnings and below			90th percentile of earnings and above			Weekly earnings (hundreds)	
	Mean hours	S.D.	Proportion non-zero	Mean hours	S.D.	Proportion non-zero	OLS coefficient	Odds ratio
<i>Leisure</i>								
Health related	0.14	0.64	0.09	0.24	0.62	0.20	0.005***	1.039***
Other	4.12	3.13	0.94	3.73	2.98	0.95	-0.013***	0.991
<i>N</i>	851			819			8,531	
<i>Housework</i>								
Core	1.61	1.81	0.80	1.19	1.57	0.71	-0.013***	0.989***
Other	0.40	1.02	0.36	0.64	1.21	0.53	0.012***	1.020***
<i>N</i>	851			819			8,531	
<i>Child care</i>								
Routine	0.87	1.35	0.61	1.35	1.73	0.74	0.017***	1.028***
Developmental	0.32	0.67	0.30	0.48	0.80	0.46	0.005***	1.024***
<i>N</i>	534			420			4,791	

*** $p < 0.001$

Note. "OLS coefficient" is the slope for earnings from a model for time spent on an activity. Statistically significant OLS coefficients correspond to significant differences in the means of the two earnings groups. "Odds ratio" is the odds ratio for earnings from a logistic model for a dichotomous dependent variable that equals 1 for women reporting any time spent on an activity, and 0 for those reporting no time spent. The models control for employment hours, parental and marital status and age. The models for child care apply only to women with children present in the household

more on developmental activities. They are also notably more likely to spend any time with their children doing both routine and recreational activities.

Our preliminary multivariate models confirm these descriptive associations of time spent. Moreover, results not shown that model differences by education mirror our findings for variation by earnings.

3 Summary and Discussion

There are noteworthy disparities among women, based on their earnings, in key categories of unpaid time use. Women with higher earnings spend more time on active leisure activities, a finding that could have important consequences for health outcomes. Women with lower earnings may be more likely to adopt a short-term instrumental orientation to activities that prioritizes satisfaction of current desires and needs leading to increased engagement and time in health-compromising leisure (Cagney and Browning 2004). In contrast, higher earning women may have a longer-term orientation to the future leading to greater emphasis on activities with long-term benefits, such as health relevant physical activities. Our results indicate the value of refining earlier classifications of leisure to more precisely convey qualitative differences in the experience and consequences of leisure.

With respect to routine housework, our findings confirm the results of earlier studies using estimate data, with women with higher earnings spending less time on core tasks such as cooking and cleaning. However, we find that they spend *more* time on other chores, including those considered in the literature to be “male” activities. Recall that “male” activities include bill paying and household management, activities that higher earning women may have more power over than lower earnings women.

Our analysis also corresponds with earlier studies documenting differences by education in women’s time spent with children. Women with higher earnings spend more time in both routine and developmental childcare activity. Put differently, women with greater monetary returns from their labor force participation invest more time in their children.

We plan several refinements of this study by incorporating the characteristics of the women’s male partners in our multivariate models. Instead of the OLS models employed here, we will use other strategies that account for the relatively large proportions of women who report zero time spent on certain activities. For the present, we reiterate our call for attention to socioeconomic disparities in women’s unpaid time, which have been largely neglected in the existing quantitative literature. Understanding these differences is increasingly important because of the growing inequality in U.S. women’s earnings.

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