GENDER, NONSTANDARD SCHEDULES, AND PARTNERSHIP QUALITY: EXPLORING HETEROGENEOUS EFFECTS THROUGH A QUASI-EXPERIMENT

ABSTRACT

This study explores how nonstandard schedules (i.e., employment during nights, evenings, and weekends) affect partnership quality (PQ). While this relationship has been explored in the past, few attempts have been made to correct for the complex and competing channels of selection into nonstandard schedules, which may have contributed to inconsistent findings across previous research. Accordingly, the current study employs matching and propensity score stratification techniques to simulate randomization and test for patterns of positive/negative selection on a sample of 20,647 workers in co-resident partnerships included in the UKHLS. Results indicate that after correcting for baseline selection, nonstandard schedules only negatively affect PQ when worked by women. Crucially, women's nonstandard schedules take the largest tolls on the partner of the worker rather than the worker herself. This is tied to a third major finding: women positively select into nonstandard schedules on the basis of their own but not their partner's PQ.

INTRODUCTION

A large body of research conducted over the past few decades has explored the ways in which nonstandard schedules (i.e., employment during nights, evenings, and at weekends) affect partnership quality (hereafter, PQ). The overwhelming consensus across such research is that, by engaging a worker in paid labor during periods of the day and week typically reserved for family life, nonstandard schedules can restrict his or her ability to participate fully in the roles and rhythms of a conjugal relationship. This, in turn, can have negative impacts on partnership cohesion and stability. Compelling evidence of this comes from studies linking nonstandard schedules to a higher risk of union dissolution and conflict (Davis, Benjamin Goodman, Pirretti, & Almeida, 2008; Kalil, Ziol-Guest, & Epstein, 2010; Presser, 2000, 2003; White & Keith, 1990) and decreased partnership satisfaction (Davis et al., 2008; Maume & Sebastian, 2012; Presser, 2003; Strazdins, Clements, Korda, Broom, & D'Souza, 2006; White & Keith, 1990).

However, despite their discordance with the traditional temporal organization of family life, findings on the effects of nonstandard schedules on PQ have not always been so negative. A second strand of research has documented that nonstandard schedules can be beneficial to partnerships if they represent a strategic choice by the household. Such was found, for example, in the case of dual-earner parents selecting into desynchronized schedules to more equally distribute childcare between partners (e.g., Begall, Mills, & Ganzeboom, 2015; Deutsch, 1999; Mills & Täht, 2012; Presser, 2003). Other studies have also highlighted that nonstandard schedules can promote work-family balance if they come with a high degree of flexibility and predictability, one of the reasons individuals often self-select into these arrangements (Deutsch, 1999; Fenwick & Tausig, 2001; Lombard, 2001; Lozano, Hamplová, & Le Bourdais, 2016; Staines & Pleck, 1986).

In attempting to reconcile these two conflicting strands of findings – one highlighting the negative effects of nonstandard schedules on PQ, the other highlighting the positive impacts of these arrangements – it is important to acknowledge the many channels of selection underlying employment in nonstandard schedules. Work schedule arrangements like night, evening, and weekend work are far from randomly distributed across the population. Rather, entrance into these schedules is influenced by complex and competing preferences and constraints tied to characteristics of an individual's household situation and employment relationship – factors that are likely not independent of outcomes relating to family cohesion. Moreover, a distinction must be made between those who choose for a variety of reasons to work nonstandard schedules and those on whom these arrangements are imposed by the employer or the nature of the job. Failing to account for these selection mechanisms will produce biased and inconsistent findings, and undermine the ability to draw conclusions on the causal effect of nonstandard schedules on PQ.

This study builds on previous research on the effects of nonstandard schedules on PQ by attempting to characterize and correct for these selection processes. In the following discussion, competing theories of positive and negative selection are proposed based on the contention that there will be heterogeneous returns to partnerships from nonstandard schedules (in terms of penalties and benefits) that will depend on how partners have selected into these arrangements. To test and correct for these selection processes, Mahalanobis Distance Matching and propensity score stratification techniques are employed on 2010-2016 UK Household Longitudinal Study data to simulate a randomized experiment and identify patterns of heterogeneous treatment effects. Analysis is oriented around two main questions. First, net of baseline selection biases, are nonstandard schedules associated with lower PQ for the worker and/or her partner as previous research would suggest? Second, is there evidence of positive or negative selection into

these arrangements amongst men or women that could have biased previous results? Such patterns of selection, if they are to be observed, would help reconcile contradictory previous findings on the social consequences of nonstandard schedules, and shed new light on the complex and reciprocal relationship between work schedule timing and family functioning.

THEORETICAL AND METHODOLOGICAL FOUNDATIONS

Positive Selection

Following principles of the rational choice framework, one thesis is that individuals choose to enter a nonstandard schedule only when the expected utility is greater than the expected cost. This is consistent with Becker's (1965) theory of the allocation of time, where decisions within the home surrounding the timing of paid work are grounded in rational deliberations of utility maximization for the actor. Through this lens, individuals choose to engage in paid employment during periods of the day and week when the value of non-work activities like leisure or household labor is less than the value of work (Täht & Mills, 2016). Therefore, barring imperfect information and constraints on autonomy, one should expect that only the individuals who stand to benefit most – or suffer the least – from these arrangements will select into and stay in them.

One example of positive selection would be parents selecting into split-shifts where one partner works nights or evenings while the other works days to more equally distribute caregiving and household responsibilities (Bünning & Pollmann-Schult, 2016; Lesnard, 2008; Mills & Täht, 2012; Presser, 1988). Such arrangements not only cater to a preference for familial caregiving but also allow parents to avoid the high costs and long waiting lists typical of public and private child care institutions. A lack of decreased PQ for parents in desynchronized schedules, as has been found in the US and the Netherlands (Chait Barnett, Gareis, & Brennan, 2008; Han, Miller, & Waldfogel, 2010; Kalil, Ziol-Guest, & Epstein, 2010;

Liu, Wang, Keesler, & Schneider, 2011; Mills & Täht, 2010), may simply reflect that these arrangements are part of a shared strategy to maintain stability in other areas of the household. This may be particularly true for women in nonstandard schedules, as previous literature suggests that women, more so than men, take family considerations into account when making labor force decisions (Bielby & Bielby, 1989; Duncan & Perrucci, 1976; Presser, 1995).

A complementary explanation is that it might be only the most objectively stable partnerships that are better able to endure the strain associated with nonstandard schedules that are most often observed in these arrangements. For example, Presser (2000) suggested that parents selecting into split-shifts to more equally distribute care work may also tend towards more progressive ideologies surrounding the gendered division of labor in the household, a factor which might make maternal employment in general and nonstandard schedules in particular less disruptive to PQ. Indeed, for parents, it may be that women's employment at nonstandard times reflects their male partners' willingness to assume caregiving responsibilities while their female partners are at the workplace (Presser, Gornick, & Parasher, 2008).

Evidence of individuals self-selecting into nonstandard schedules based on expectations of greater job satisfaction and well-being has also been documented. For instance, literature from the fields of organizational psychology and human resource management has provided evidence that many workers have an innate preference for work during nonstandard hours and days, a preference which has been linked to various personality factors like introversion and neuroticism, as well as the timing of one's circadian rhythm (Costa, Lievore, Casaletti, Gaffuri, & Folkard, 1989; Popp, Laursen, Kerr, Stattin, & Burk, 2008; Willis, O'Connor, & Smith, 2008). Likewise, certain workers have been shown to seek out nonstandard schedules for the benefits they can sometimes afford, like greater freedom during the day, being able to avoid busy shops

and traffic, as well as the generally more relaxed and social working conditions (seen particularly during evenings and at weekends; Täht & Mills, 2016).

Taken together, such findings allude to the possibility that the individuals and couples most often observed in nonstandard schedules are selective of those best suited to thrive in these arrangements. I therefore make the following positive selection hypothesis: H_{1a} The positive effects of nonstandard schedules on PQ will be largest for those individuals with the highest probability of working these arrangements.

Negative Selection

While the preceding discussion may give the impression that most nonstandard schedule workers self-select into these arrangements voluntarily, the available evidence overwhelmingly suggests that entrance into these arrangements is primarily linked to job constraints imposed by the employer rather than to personal preference. Research from the US and France, for instance, shows that nonstandard schedule use is strongly tied to the workers' relative position in the labor market, as those in routine and non-professional occupations are overrepresented in these schedules (Hamermesh, 2002; Lesnard, 2008; Presser, 1987). As noted by Grzywacz, Daniel, Tucker, Walls, and Leerkes (2011), those with low education, little formal training, and few labor market prospects are often pushed into these schedules simply for a lack of better options.

Consistent with theories of labor market segmentation (Loveridge & Mok, 1979), such findings suggest that there is a high degree of structural selection occurring whereby individuals from marginalized groups within the labor market are disproportionately channeled into nonstandard schedules. Through this lens, standard work hours and days can be viewed as a job amenity for which employees with superior bargaining power can buy and for which those with the least bargaining power may not always be able to afford (Hamermesh, 1996); this ultimately

leads to a high concentration of nonstandard work hours and days in already disadvantaged labor market segments. As I will argue, these processes of structural selection have the potential to generate a negative selection bias whereby the individuals most likely to be observed in nonstandard schedules are also those who may have their PQ suffer the most from these arrangements.

With regards to the modal occupational situation of nonstandard schedule workers, it appears that those individuals most likely to be selected into these arrangements are also in jobs where the destabilizing effects of these schedules on partnerships might be exacerbated. Indeed, while nonstandard schedules can in some instances come with buffer mechanisms against the unhealthy effects of these arrangements, like the ability to reduce working hours or to adjust start and end times flexibly (e.g., Hosking and Western, 2008), these amenities appear to be concentrated in a small proportion of jobs at the top of the occupational ladder (Golden, 2001; Henly, Shaefer, & Waxman, 2006). The majority of nonstandard schedules occur in occupations that have higher exposure rates to occupational stressors like low job security, physical strain, low job control, and low influence on working hours (Bøggild, Burr, Tüchsen, & Jeppesen, 2001; Mohren et al., 2002; Nabe-Nielsen, Jørgensen, Garde, & Clausen, 2016; Nabe-Nielsen, Tüchsen, Christensen, Garde, & Diderichsen, 2009; Vanroelen, Levecque, Moors, & Louckx, 2010). The lack of buffer mechanisms and increased workplace stressors within jobs where nonstandard schedules are most common may then overinflate the negative effects these arrangements exercise on partnerships.

With regards to the modal household situation of nonstandard schedule workers, it appears that the individuals disproportionately channeled into these work schedules are in low-SES households that may have an already high pre-existing risk of family discord (Presser, 2003;

Presser & Cox, 1997). Research from the past two decades has documented a positive gradient between socioeconomic status and various indicators of partnership quality and stability (Amato, 2009; Dakin & Wampler, 2008; Karney & Bradbury, 2005; Rauer, Karney, Garvan, & Hou, 2008). The dominant explanation for such trends is that the greater economic strain faced by low-SES households can generate interpersonal distress and conflict within partnerships (Conger et al., 1992). In households where the potential for family discord is already high, it is possible that the negative effects of a nonstandard work schedule on PQ may be particularly acute. This is due not only to the potentially already high levels of strain within the household but also to the scarcity of resources that might otherwise mitigate the negative effects these schedules have on PQ. For example, the income security and bargaining power that might allow one to alter the number and organization of work hours in the face of partnership strain (Bianchi, 2011), or, for parents, the resources required to find substitute care when their work keeps them away from the home during evenings, nights, or at weekends (Heymann & Earle, 2001).

If it is true that the individuals most likely to select into nonstandard schedules are also those in jobs or households where the consequences of these arrangements might be exacerbated, then previous estimates of the true effect of nonstandard schedules on PQ will have been biased downwards. I therefore make the following competing hypothesis surrounding negative selection into nonstandard work schedules: H_{1b} The negative effects of nonstandard schedules on PQ will be largest for those individuals with the highest probability of working these arrangements.

METHODS

Data

To test these hypotheses, this study uses Waves 2 to 7 (2010-2016) of the UK Household Longitudinal Study (UKHLS). The UKHLS is the largest household panel dataset in Europe,

providing a nationally representative probability sample of over 40,000 households in the UK. Given the extensive scope of the information collected within the UKHLS questionnaire, several variables (including those of interest to the current study) are only measured every other wave of data collection. Consequently, Waves 2, 4, and 6 (collected between 2009-2010, 2012-2013, and 2015-2016, respectively) contain measures for the independent and selection variables, and Waves 3, 5, and 7 (collected between 2010-2011, 2013-2014, and 2015-2017 respectively) contain the measures of PQ. Methods to account for the non-contemporaneous measurement of predictor and outcome variables are discussed later. To maximize power, these waves are stacked into person-period format such that Period 1 is comprised of Waves 2 and 3 (spanning 2009 to 2011), Period 2 is comprised of Waves 4 and 5 (spanning 2012 to 2014), and Period 3 is comprised of Waves 6 and 7 (spanning 2015 to 2017).

Of the total 147,044 person-period observations available across the three periods, 70,338 were excluded that were not in a co-resident, heterosexual partnership with the same partner across both waves of a given period. Of these 75,414 observations, a further 40,395 were excluded that were not in paid employment of at least 12 hours per week across both waves of a given period. 1,285 observations were then excluded that changed jobs or employers across the two constituent waves of a given period. A further 2,352 observations were omitted that were not between the ages of 18-59 at the time of data collection. List-wise deletion was required to enable matching procedures. After removing missing values on the treatment, selection, and outcome variables, this amounted to a total sample of 20,647 person-period observations nested within 10,098 individuals. In the case of dual-earner households, information is used on both partners. This leads to a three-level data structure where up to three person-period observations

are nested within individuals which are further nested within couples (n = 6,350); techniques to account for this clustering are addressed in subsequent discussions.

Partnership Quality

PQ is measured in this study using nine items taken from the UKHLS self-completion Partnership Module that together attempt to evaluate the presence of positive aspects of a partnership and the accompanying absence of negative aspects. As both partners within a union are asked to complete the partnership questionnaire separately, there is an opportunity to exploit within-partnership variability in reported PQ by modeling both actor effects (i.e., the effect of an individual's work schedule on her own subjective PQ) as well as partner effects (i.e., the effect of an individual's work schedule on her partner's subjective PQ). Exploratory factor analysis was used to reduce the nine items into indexes, which revealed two underlying factors consistent across male and female partners.

Factor 1, defined as *Partnership Cohesion,* captures the degree of intimacy, positive communication, and support between partners. The factor includes four items measuring how often the respondent and her partner, "engage in a stimulating exchange of ideas, "engage in outside interests", "calmly discuss something", and "work together on a project". Factor 2, defined as *Partnership Stability*, captures the degree of durability of and conflict within a given partnership as well as the partner's overall satisfaction with the relationship. The factor includes four items measuring how often the respondent and her partner, "consider divorce", "regret getting married", "quarrel", and "get on each other's nerves", as well as a fifth item asking the respondent to rate her overall, "degree of happiness with the relationship". The two indexes are constructed by summing each item weighted by its respective (oblique) rotated factor loading score, and then standardizing to a cross-gender mean of 0. The final indexes have high reliability

for both women and men, with Cronbach Alpha scores between 0.73 to 0.75. While moderately correlated with one another (r = 0.42-0.48, $p < 0.001$), the components do diverge sufficiently to be modeled separately.

Nonstandard Work Schedules

The independent – or treatment – variables for this analysis are (1) nonstandard work hours and (2) nonstandard work days. Nonstandard work hours are defined as work occurring outside of traditional 9:00 am to 5:00 pm diurnal work day. The measure is derived from a question asking respondents to report, "Which times of day [they] usually work?" In the interest of maximizing statistical power and enabling a binary treatment/non-treatment matching design, this measure is dichotomized such that respondents are coded as nonstandard hour workers if they listed their regular working time as occurring during: "evenings only", "at night", or "rotating shifts".

A limitation of this operationalization is that it obscures differences between rotating and fixed nonstandard hours, like the differing levels of flexibility and predictability. However, for the purposes of the current analysis, the distinction between non-day and day work is more important than distinctions between different types of non-day work. Another point is that variable-hour and flexi-time schedules are not included in the current classification of nonstandard work hours. As Presser (1995) notes, the issue of working during nonstandard hours is distinct from that of having flexible work hours: schedules involving nonday shifts are usually set by the employers and can often be viewed as contrary to employees' interests; in contrast, the practice of flexibility in work hours largely reflects employees' preference. There is also a great deal of ambiguity in classifying at what times of day the majority of hours in a flexi-time or variable-hour schedule actually occur.

Nonstandard days are defined as work occurring outside of the traditional Monday-Friday workweek (i.e., on Saturdays and/or Sundays). The measure is derived from a question asking respondents, "Do you ever work at weekends?" To enable matching procedures, this measure is dichotomized such that respondents are coded as nonstandard day workers if they responded having to work "most or every weekend", and respondents are coded into the control group if they reported having to work no or only occasional weekends. The inclusion of occasional weekend work into the control category was due to the contention that most work today involves some weekend work.

Matching Covariates

This study employs Mahalanobis distance matching techniques (elaborated on later). In choosing covariates to include in the matching matrix, it was essential to include factors that plausibly predicted both the treatment and outcome as well as being correlated with unmeasured confounding variables. Covariates were also included if they were thought to be related to the outcome but only indirectly related to the treatment. Several theoretically relevant factors (most notably, income and the number of working hours) were omitted as they were hypothesized to lie along the causal pathway between nonstandard schedules and PQ; therefore, their inclusion could obscure a non-trivial portion of the treatment effect. Included covariates (shown in Table 1) can be roughly broken into three categories: (1) *structural selection*, (2) *self-selection*, and (3) *occupational selection*.

Table 1. *Variables Used in Mahalanobis Matching Procedures*

Variable	Description	Type
Age	Respondent's age at the time of data collection	Continuous
Time Period	Period of data collection (1 = 2010-12, 2 = 2012-14, 3 = 2014-16)	Continuous
Rural	Respondent lives in a rural area	Binary
Race/Ethnicity	White British, Black or Black British, Middle Eastern, East Asian, Mixed Background (included as dummies)	Categorical
Born in UK	Respondent is born in the UK	Binary
Household		
Parent	Child under age 16 present in the household	Binary
Number of Children	Number of children under age 16 in the household	Continuous
Young Child Present	Child under age 4 present in the household	Binary
Partnership		
Cohabiting	Respondent is in a cohabiting partnership	Binary
Age Difference	Difference in age between partners (0 = $\leq$ 5 years, 1 = > 5 years)	Binary
Partner is Employed	Partner is in regular paid employment	Binary
Partner Full-Time	Partner works full-time ($\geq$ 35 hours/week)	Binary
Partner Works Nights [a]	Partner works nights, evenings, or rotating shifts	Binary
Partner Works Weekends [b]	Partner works weekends every week	Binary
Education		
Highest Qual. is GCSE	Highest qualification is secondary education	Binary
Highest Qual. is Degree	Highest qualification is a tertiary degree	Binary
Occupation		
Professional Occupation	Respondent works in a professional or higher technical grade occupation (NS-SEC coding)	Binary
Lower-Management	Respondent works in a lower-management role (NS-SEC coding)	Binary
Intermediate	Respondent works in an intermediate-grade (clerical, sales, technical, or engineering) occupation (NS-SEC coding)	Binary
Routine Occupation	Respondent works in a routine or semi-routine grade occupation (NS-SEC coding)	Binary
ISEI Index	International Socio-Economic Index of respondent's occupation	Continuous
Low Autonomy	Respondent has little to no influence over start and end of work day (1 = "a little", "none"; 0 = "some", "a lot")	Binary
Personality		
Big 5 Personality Items	Agreeableness, Conscientiousness, Neuroticism, Openness, and Extroversion (included separately)	Continuous

Notes: [a] Variable is included only in nonstandard work hours matching matrix; [b] Variable is included only in nonstandard work days matching matrix.

Structural selection covariates include socioeconomic and demographic characteristics shown to affect both the likelihood of being selected into a nonstandard schedule as well as the risk of partnership instability (age, education, race/ethnicity, migrant status, and rural dwelling;

Hamermesh, 1996; Hoem, 1997; Jalovaara, 2001; Maslauskaite, Jasilioniene, Jasilionis, Stankuniene, & Shkolnikov, 2015; Presser, 2003; Presser & Cox, 1997). Self-selection covariates include individual or household characteristics shown to affect preferences for and returns from a nonstandard schedule. These include: family structure characteristics (presence, number, and age of children); partnership characteristics (cohabiting or married, and the age difference between partners; Presser, 1995; Presser & Cain, 1983; Wight, Raley, & Bianchi, 2008); partner's employment characteristics (employment status, full-time work, and use of a nonstandard schedule; Carriero, Ghysels, & van Klaveren, 2009; Hamermesh, 2002; Lesnard, 2008; Mills & Täht, 2010; Presser, 2000); and time-invariant individual characteristics (Big 5 Personality Inventory; Foldal, Langvik, & Saksvik-Lehouillier, 2016; Larsgård & Saksvik-Lehouillier, 2016; Storemark et al., 2013). Lastly, occupational selection covariates include job characteristics affecting the likelihood of working a nonstandard schedule as well as the levels of demands and resources that moderating the effect of such schedules on PQ (occupational role, occupational status, and the level of autonomy the respondent has in the timing of work hours; Burgard & Lin, 2013; Daw & Hardie, 2012; Golden, 2001; Gornick & Meyers, 2003; Hamermesh, 1996).

Mahalanobis Distance Matching

To evaluate the impact of nonstandard work hours and days on PQ, Mahalanobis Distance Matching (MDM) techniques are used to reduce baseline selection biases. MDM is grounded in the idea finding for each observation in the treatment group a statistical twin in the control group with the same or at least very similar values on a host of pre-treatment covariates. MDM does so by matching on a distance metric that measures the proximity between observations in the multivariate space of *X*. Mahalanobis distance can be formally expressed as

$$MD(X_i, X_j) = \sqrt{(X_i - X_j)'\Sigma^{-1}(X_i - X_j)}$$

where X_i denotes the vector of observed covariates for an individual with work schedule (i) and X_j denotes the vector of observed covariates for an individual with work schedule (j). Σ represents a scaling matrix, in this case, the sample variance-covariance matrix of X. The promise of MDM is to simulate block randomization where the distribution of measured confounders is equalized between treatment and control groups, allowing one to better delineate the true effect of a treatment.

Gender-specific MDM analyses are performed with one-to-two matching with replacement that selects the closest two control subjects for each treated individual. As three-level clustered data is used (20,647 person-period observations nested within 10,098 individuals nested within 6,350 couples), an exclusion restriction matrix was created that ensured that an individual surveyed during period j could never be matched to her future or earlier self surveyed during period $j + 1$ or $j - 1$. As gender-specific models are run and as only heterosexual couples are included, individuals were automatically restricted from being matched to their partners. After fitting initial matching models for men and women, balance was checked across all covariates between the treatment and control groups. If any covariates remained unbalanced after matching (a $\geq$ 0.1 standardized mean difference; Austin, 2001), the matching matrix was re-specified with further two- and three-way interaction terms to improve balance.

Heterogeneous Treatment Effects

To identify patterns of positive and negative selection, heterogeneous treatment effects are estimated across strata of estimated propensity scores and the trend across strata is summarized in a hierarchical linear model (Brand & Xie, 2010; Tumin & Zheng, 2018; Xie, Brand, & Jann, 2012). The general process – performed on nonstandard work hour and days separately – is as follows. Propensity scores capturing an individual's likelihood of working in nonstandard work

days and hours are first constructed separately on the total unmatched sample using the final specification of the Mahalanobis matching matrix employed earlier. Propensity scores are expressed as

$$e_i = \Pr(Z_i = 1|X_i)$$

where e_i denotes the probability (probit) of selection into a nonstandard work schedule ($Z_i = 1$) conditional on observed pre-treatment covariates (X_i). Using a stratification algorithm (S. Becker & Ichino, 2002), these propensity scores are then divided into the minimum number of strata that ensures that within each stratum there are no significant mean differences in any of the covariates between treated and control groups. To ensure sufficient sample sizes within each stratum, strata with less than 20 cases were combined with the next-highest or next-lowest stratum. Cases outside the area of common support are also excluded.

Stratum-specific treatment effects are then estimated in the following hierarchical model

$$Y_{ij} = \alpha_j + \beta_j Z_{ij} + \epsilon_{ij}$$

$$Z_j = \delta_0 + \sigma_j + \eta_j$$

where *i* indexes the individual and *j* indexes the propensity score stratum. β_j represents the stratum-specific treatment effect and σ_j denotes the linear slope of the treatment effects across strata (Tumin & Zheng, 2018). σ_j is estimated using a variance-weighted least squares regression across strata and is the primary parameter of interest in this analysis. A significant positive σ_j across strata would indicate positive selection, or that individuals with the highest likelihood to work in a nonstandard work schedule are also those whose partnerships benefit the most from these arrangements. In contrast, a significant negative σ_j across strata would indicate negative selection, or that individuals with the highest likelihood to work a nonstandard work schedule are also those whose partnerships suffer the most from these arrangements. As three-level clustered

data is used, standard errors are clustered around the partnership ID within each stratum-specific regression to correct for case dependence. To account for any residual confounding, covariates from the matching matrix were controlled for within a given level-one stratum-specific regression if they had standardized mean differences of > 0.1 within that respective stratum.

RESULTS

Table 2 summarizes the characteristics of women and men according to whether they work nonstandard hours and days. Across the total sample, 10% of women and 15% of men reported working regular nonstandard hours, and 15% of women and 18% of men reported working regular nonstandard days. For men and women working regular nonstandard hours, the largest differences relative to control groups are seen primarily in the proportions identifying as an ethnicity other than White British and being born outside of the UK, having a GCSE rather than a degree qualification, being in an occupation with low to no work schedule autonomy, and working in a routine or semi-routine occupation. Similar (if less drastic) trends are also observed for men and women working regular nonstandard days. Other clear trends for both nonstandard day and hour workers are to be on average younger, live predominantly in urban areas, be in a partnership with an age difference greater than 5 years, and have a partner who works a synchronized nonstandard schedule. Nonstandard schedule workers appear on average to have slightly higher numbers of children present in the household and are more likely to be parents in general. The notable exception is women working nonstandard work days, who are less likely to have dependent children present. These covariate imbalances were eliminated after matching treatment and control groups on a Mahalanobis Distance matrix, where standardized mean differences of < 0.1 were achieved for all covariates; detailed balance diagnostics can be made

available upon request. I now restrict focus to the matched sample to estimate the effects of nonstandard schedules on PQ.

Table 2. *Means of Pre-Treatment Covariates in Unmatched Sample, by Gender and Work Schedule*

	Nonstandard Work Hours				Nonstandard Work Days			
	Women, *n* = 10,054		Men, *n* = 10,181		Women, *n* = 10,092		Men, *n* = 10,199	
	Control	Treat.	Control	Treat.	Control	Treat.	Control	Treat.
Variable	Mean							
Age	42.93	42.42	42.75	41.81	43.06	41.82	42.88	41.41
Time Period	1.87	1.81	1.84	1.81	1.87	1.82	1.85	1.80
Rural	0.27	0.22	0.24	0.22	0.27	0.25	0.24	0.24
Race/Ethnicity								
White British	0.90	0.83	0.88	0.85	0.89	0.90	0.88	0.87
Black	0.01	0.03	0.02	0.02	0.02	0.02	0.02	0.01
Middle Eastern	0.04	0.09	0.05	0.08	0.04	0.04	0.05	0.08
East Asian	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00
Mixed Background	0.04	0.04	0.04	0.05	0.05	0.04	0.04	0.04
Born in UK	0.91	0.84	0.90	0.86	0.90	0.90	0.90	0.88
Household								
Parent	0.48	0.49	0.56	0.59	0.48	0.46	0.56	0.57
Number of Children	0.81	0.89	0.99	1.05	0.82	0.80	1.00	1.01
Young Child Present	0.14	0.15	0.21	0.24	0.14	0.16	0.21	0.24
Partnership								
Cohabiting	0.18	0.19	0.18	0.18	0.17	0.22	0.18	0.19
Age Difference	0.24	0.30	0.21	0.26	0.24	0.29	0.21	0.25
Partner is Employed	0.91	0.88	0.80	0.77	0.91	0.89	0.79	0.78
Partner Full-Time	0.71	0.69	0.30	0.30	0.71	0.70	0.30	0.29
Partner Works Nights	0.26	0.35	0.21	0.28				
Partner Work Weekends					0.15	0.25	0.10	0.19
Education								
Highest Qual. GCSE	0.29	0.36	0.28	0.42	0.28	0.41	0.27	0.41
Highest Qual. Degree	0.38	0.18	0.38	0.14	0.38	0.26	0.37	0.22
Occupation								
Professional Occupation	0.12	0.04	0.25	0.05	0.13	0.03	0.25	0.09
Lower MGMT	0.40	0.34	0.33	0.15	0.40	0.36	0.32	0.25
Intermediate	0.21	0.13	0.10	0.16	0.22	0.10	0.11	0.10
Routine Occupation	0.23	0.39	0.20	0.42	0.22	0.41	0.19	0.38
ISEI Index	48.68	37.68	50.73	38.05	48.14	44.39	50.19	42.83
Low Autonomy	0.54	0.79	0.41	0.79	0.54	0.70	0.44	0.60
Personality								
Agreeableness	4.73	4.84	4.18	4.07	4.73	4.77	4.17	4.15
Conscientiousness	6.01	6.02	5.57	5.48	6.00	6.06	5.54	5.60
Neuroticism	2.47	2.42	1.44	1.40	2.47	2.40	1.44	1.39
Openness	6.98	6.79	7.31	6.99	6.95	7.01	7.29	7.13
Extroversion	3.20	3.21	2.65	2.76	3.19	3.29	2.63	2.84

Data Source: 2010-2016 UKHLS

Notes: Sample includes individuals in co-resident partnerships between the ages of 18-59 who are in regular paid employment.

Gender-specific treatment effects representing the effect of nonstandard work hours and days are shown in Table 3. Looking first to the effects of nonstandard hours, it appears that, consistent with previous research (Kalil et al., 2010; Lozano et al., 2016; Maume & Sebastian, 2012; Mills & Täht, 2010; Presser et al., 2008), night and evening schedules are most destabilizing to partnerships when worked by women. A novel finding, however, is that it appears that for women these arrangements take the biggest toll on the partner of the worker. As can be seen, women's nonstandard hour work is associated with significantly lower levels of Partnership Stability (b = -0.14, $p < 0.01$) for her partner but only marginally lower levels for the worker herself (b = -0.09, $p < 0.10$). Similarly, such work is associated with borderline significant lower levels of reported Partnership Cohesion for the partner (b = -0.09, $p < 0.10$) but has no significant effect on the female worker's levels of Partnership Cohesion. Men's nonstandard hour work, on the other hand, appears to have no significant effects on either his own or his partner's levels of Partnership Cohesion or Stability.

A similar pattern emerges when looking at the effects of nonstandard work days. Men's weekend work appears to have no significant effects on his own and his partner's reported levels of Partnership Cohesion and Stability. In contrast, women's weekend work is associated with significantly lower levels of both Partnership Stability (b = -0.08, $p < 0.05$) and Cohesion (b = -0.10, $p < 0.01$) for the partner. A notable finding is that not only does women's weekend work have no significant negative actor effects on reported Partnership Stability, but marginally (but not significantly) increases subjective Cohesion for the worker herself (b = 0.07, $p < 0.10$). Sensitivity analyses (available upon request) indicate that these effects are for the most part robust to different specifications of nonstandard hour and day work.

Table 3. *Mahalanobis Distance Matching Estimates of Nonstandard Schedule Treatment Effects*

Treatment	*n* [a]	Average Treatment Effect on Partnership Stability		Average Treatment Effect on Partnership Cohesion	
		b	*SE* [b]	*b*	*SE*
Women					
Nonstandard Hours					
Actor Effect	3,424	-0.09+	0.05	-0.04	0.05
Partner Effect	3,424	-0.14**	0.05	-0.09+	0.05
Nonstandard Days					
Actor Effect	5,152	-0.03	0.04	0.07+	0.04
Partner Effect	5,152	-0.08*	0.04	-0.10**	0.04
Men					
Nonstandard Hours					
Actor Effect	5,232	0.04	0.04	-0.02	0.04
Partner Effect	5,232	0.02	0.04	-0.03	0.04
Nonstandard Days					
Actor Effect	6,392	0.01	0.03	0.04	0.03
Partner Effect	6,392	-0.05	0.04	0.00	0.04

Data Source: 2010-2016 UKHLS
Notes: Sample includes individuals in co-resident partnerships between the ages of 18-59 who are in regular paid employment. [a] Pruned sample includes only treated and untreated cases matched 1-to-2 on Mahalanobis Distance. [b] Abadie-Imbens standard errors are used that take into account the uncertainty of the matching procedure. + $p < 0.1$, * $p < 0.5$, ** $p < 0.01$, *** $p < 0.001$

That women's weekend would have negative partner effects on Partnership Cohesion and positive actor effects is a surprising finding. One explanation for these diverging trends in the actor and partner effects of women's nonstandard schedule work would be that women may be positively selecting into such arrangements on the basis of their own PQ but not their partner's. This could be either to arrange their employment around other activities outside of work (household-related or otherwise) or to engage in the more social services-based work that is concentrated on weekends and during evenings in the current sample (Täht & Mills, 2016). To test for such patterns of selection, propensities scores capturing the likelihood of working in nonstandard hours and days are constructed for men and women. These scores are then broken down into balanced strata, and hierarchical linear models are fit to estimate stratum-specific treatment effects as well as the linear trend of these effects across strata. Tables 4 and 5 show

stratum-specific actor and partner effects of nonstandard hour and day work and the corresponding linear slope across strata.

Table 4. *Propensity Score Stratum-Specific Actor and Partner Effects of Nonstandard Work Hours on PQ, and Linear Relationship Between Propensity Score Stratum and Estimated Treatment Effect*

		Actor Effect on Cohesion		Actor Effect on Closeness		Partner Effect on Cohesion		Partner Effect on Closeness	
Stratum	Range	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*
Women, *n* = 10,031									
1, *n* = 2,384	.01-.02	-0.17	0.23	-0.03	0.26	-0.04	0.14	0.07	0.14
2, *n* = 1,400	.03-.05	0.01	0.15	-0.25	0.14	-0.04	0.08	-0.04	0.09
3, *n* = 1,692	.05-.10	0.02	0.10	0.13+	0.14	-0.10	0.06	-0.13+	0.08
4, *n* = 788	.10-.12	-0.06	0.13	-0.21	0.12	-0.06	0.07	-0.10	0.07
5, *n* = 870	.13-.15	-0.23*	0.10	-0.16+	0.11	-0.02	0.07	-0.17*	0.07
6, *n* = 1,226	.15-.20	-0.04	0.09	-0.07	0.08	-0.02	0.10	-0.08	0.10
7, *n* = 1,330	.20-.40	-0.03	0.08	0.14	0.08	0.23+	0.13	0.13	0.16
8, *n* = 78	.40-.58	0.01	0.36	0.30	0.35	0.03	0.02	-0.01	0.02
Slope across strata		0.00	0.02	0.05*	0.02	0.10	0.19	-0.15	0.17
Men, *n* = 10,144									
1, *n* = 1,839	.01-.02	0.50*	0.16	-0.04	0.19	0.09	0.10	0.06	0.10
2, *n* = 1,213	.03-.05	-0.22	0.15	-0.29+	0.17	-0.10	0.08	-0.03	0.08
3, *n* = 1,231	.05-.10	-0.10	0.10	-0.04	0.10	-0.10	0.07	-0.04	0.07
4, *n* = 465	.10-.12	0.44*	0.13	0.35*	0.14	-0.20+	0.11	-0.06	0.10
5, *n* = 391	.13-.15	0.06	0.14	0.18	0.12	-0.01	0.11	0.10	0.10
6, *n* = 983	.15-.20	-0.08	0.08	-0.12	0.09	0.08	0.08	-0.02	0.08
7, *n* = 2,626	.20-.30	0.04	0.05	-0.02	0.05	-0.08	0.10	-0.13	0.10
8, *n* = 862	.30-.40	-0.07	0.09	0.04	0.08	0.12	0.15	0.13	0.14
9, *n* = 153	.40-.56	-0.05	0.24	0.21	0.22	0.00	0.13	0.08	0.13
Slope across strata		-0.02	0.02	0.01	0.02	0.01	0.01	0.01	0.01

Data Source: 2010-2016 UKHLS

Notes: Sample includes individuals in co-resident partnerships between the ages of 18-59 who are in regular paid employment. [a] Standard errors in stratum-specific regressions are clustered around unique partnership ID's to account for nested data. + $p < 0.1$, * $p < 0.5$, ** $p < 0.01$, *** $p < 0.001$

For women's nonstandard hour work (Table 4), no significant positive or negative trends are observed across strata for Partnership Cohesion, where treatment effects appear relatively stable. In contrast, there is a significant positive slope ($b = 0.05$, $p < 0.05$) in the effects on Partnership Cohesion across strata, indicating that the women with the highest likelihood of working nonstandard hours are those who receive the largest gains in perceived Cohesion with partners. Similarly, for women's nonstandard day work (Table 5), significant positive slopes in

actor effects across propensity score strata are observed for both Partnership Cohesion ($b = 0.06$, $p < 0.05$) and Stability ($b = 0.05$, $p < 0.05$). However, when looking at how the partner effects of women's nonstandard hour (Table 4) and day (Table 5) work vary across propensity score strata, no discernible positive slopes are observed. Taken together, these findings support a thesis of positive selection into nonstandard schedules for women: it appears that those most likely to enter into these arrangements are also those who receive the largest perceived benefits to PQ. In line with earlier contentions, it appears that any positive selection into these arrangements by women is likely occurring on the basis of their own and not their partner's perceived PQ.

Table 5. *Propensity Score Stratum-Specific Actor and Partner Effects of Nonstandard Work Days on PQ, and Linear Relationship Between Propensity Stratum and Estimated Treatment Effect*

		Actor Effect on Cohesion		Actor Effect on Closeness		Partner Effect on Cohesion		Partner Effect on Closeness	
Stratum	Range	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*
Women, *n* = 10,091									
1, *n* = 1,195	.01-.05	-0.05	0.16	-0.06	0.13	-0.04	0.14	0.07	0.14
2, *n* = 2,260	.05-.10	0.01	0.09	-0.06	0.09	-0.04	0.08	-0.04	0.09
3, *n* = 2,328	.10-.15	-0.16*	0.07	-0.07	0.07	-0.10	0.06	-0.13+	0.08
4, *n* = 1,639	.15-.20	-0.02	0.07	0.01	0.07	-0.06	0.07	-0.10	0.07
5, *n* = 1,539	.20-.30	0.04	0.07	0.00	0.07	-0.02	0.07	-0.17*	0.07
6, *n* = 601	.30-.40	0.15	0.10	0.03	0.10	-0.02	0.10	-0.08	0.10
7, *n* = 263	.40-.72	0.16	0.14	0.45**	0.15	0.23+	0.13	0.13	0.16
Slope across strata		0.05*	0.02	0.05*	0.02	0.03	0.02	-0.01	0.02
Men, *n* = 10,197									
1, *n* = 744	.02-.05	0.05	0.23	0.08	0.20	0.10	0.19	-0.15	0.17
2, *n* = 1,719	.05-.10	0.01	0.10	0.16	0.10	0.09	0.10	0.06	0.10
3, *n* = 1,699	.10-.15	0.01	0.07	0.03	0.07	-0.10	0.08	-0.03	0.08
4, *n* = 1,853	.15-.20	-0.12*	0.06	-0.03	0.06	-0.10	0.07	-0.04	0.07
5, *n* = 756	.20-.23	-0.06	0.09	-0.04	0.08	-0.20+	0.11	-0.06	0.10
6, *n* = 665	.23-.25	0.11	0.08	-0.05	0.09	-0.01	0.11	0.10	0.10
7, *n* = 1,093	.25-.30	0.02	0.08	0.01	0.08	0.08	0.08	-0.02	0.08
8, *n* = 676	.30-.35	-0.01	0.10	0.16+	0.09	-0.08	0.10	-0.13	0.10
9, *n* = 310	.35-.40	0.27*	0.14	0.38**	0.14	0.12	0.15	0.13	0.14
10, *n* = 300	.40-.72	0.06	0.12	0.15	0.13	0.00	0.13	0.08	0.13
Slope across strata		0.02	0.01	0.02	0.01	0.01	0.01	0.01	0.01

Data Source: 2010-2016 UKHLS

Notes: Sample includes individuals in co-resident partnerships between the ages of 18-59 who are in regular paid employment. [a] Standard errors in stratum-specific regressions are clustered around unique partnership ID's to account for nested data.+ $p < 0.1$, * $p < 0.5$, ** $p < 0.01$, *** $p < 0.001$

For men working nonstandard hours or days, on the other hand, no clear patterns of positive or negative selection are observed for the actor and partner effects on PQ. The actor and partner effects (Table 4) of men's nonstandard hours on Partnership Cohesion appear relatively stable across strata and do not reach significance. These relatively flat slopes in treatment effects are also seen for both the actor and partner effects (Table 5) of men's nonstandard day work, where all slopes are slightly positive but not significant. Therefore, for men, there is insufficient evidence to support a hypothesis of positive or negative selection into either nonstandard day or hour work schedules. That positive selection was not observed for men could perhaps be explained by the possibility that family considerations may be less relevant to men's entry into a nonstandard work schedule than for women; as has been suggested, men more so than women work nonstandard hours out of necessity than preference (Presser, 1995).

DISCUSSION

This study presented evidence on the links between nonstandard work schedules and partnership quality (PQ) for men and women. Aside from exploring this relationship in the previously unstudied context of the UK, a major aim of this paper was to characterize and correct for the complex processes of selection underlying employment in nonstandard schedules. To do so, the current study tested whether the individuals most likely to select into nonstandard work schedules – based on their relative position within the multivariate space of measured confounders – differ not only in their baseline PQ but also in the size and direction of the partnership returns they receive from working these arrangements. Net of the confounding effects of occupational, self-, and socioeconomic selection, I explored first whether nonstandard work hours and days predicted levels of subjective PQ for the worker or her partner through a matching-based quasi-experiment. Second, I tested whether the men and women most likely to

work nonstandard schedules were also those who stood to have their PQ benefit or suffer the most from these arrangements.

Findings include three major patterns. First, it appears that women's nonstandard schedule work is, by and large, more detrimental to PQ than men's. These results are consistent with previous studies (Kalil et al., 2010; Lozano et al., 2016; Maume & Sebastian, 2012; Mills & Täht, 2010; Presser et al., 2008), which have found that women's night, evening, and weekend work hours create greater discord within partnerships than men's. As has been suggested, women's work during nonstandard hours or days often means that men have to take a greater responsibility for female-typed household tasks like dependent care work, cooking, and cleaning, which can lead to feelings of frustration and role-overload. As Kalil et al. (2010) also note, it could be that female partners, more so than male partners, cultivate the pleasurable shared time and attend to the emotional maintenance activities necessary for forming the strong bonds that solidify a partnership. Thus, a woman's absence from the household during nights, evenings, or weekends – times of the day and week traditionally reserved for family life – may have particularly dire effects on perceptions of cohesion and stability.

However, a second major finding of this study was that, after correcting for baseline selection biases through matching, women's nonstandard work hours and days only appear to take a negative toll on the partner of the worker rather than the worker herself. This was most apparent in the case of women's weekend work, which had significant negative effects on the male partners' subjective levels of partnership cohesion and stability but appeared to marginally (but not significantly) improve subjective levels of cohesion for the worker. That women working nonstandard hours and days do not share the same lower evaluations of PQ as their male partners is a novel finding. One explanation consistent with findings from Kingston and Nock

(1987) is that male and female partners might have differing conceptions of what constitutes quality time together and when this should occur. Similarly, it could be that male partners, particularly those of women working nonstandard hours, might be suffering disproportionately from the added household and care responsibilities they must shoulder when their partner is away from the home during these times (Kalil et al., 2010). Through this lens, women's work during nonstandard hours and days could be revealing mismatched gender-role expectations between the women who choose to work these arrangements and their male partners. Applying Ogburn's cultural lag theory (1923), men's more traditional expectations of when their partners should be at home may be lagging behind the material conditions working women must now navigate in the UK: in particular, limited or expensive childcare options during the day, a crowded labor market, and a high demand for services-based labor in the evenings and at weekends.

The lack of significant negative actor effects of women's nonstandard work hours and days on her own subjective levels of PQ is also a novel finding. This could be tied to a third major finding of this study: it appears that women positively select into nonstandard schedules on the basis of their own (but not their partner's) perceived PQ. As was found, the women with the highest likelihood of working nonstandard hours and days were also those who received the largest gains in perceived cohesion and stability with partners. These trends of positive selection were, however, not observed for the partner effects of women's nonstandard schedule work, nor were they observed for the actor or partner effects of men's nonstandard hour and day work. It is also important to note is that no patterns of negative selection into nonstandard schedules were observed for men or women. This lack of observed negative selection is particularly interesting when one reflects on previous findings that nonstandard schedules, especially nonstandard hours,

are often an employer-driven job disamenity largely concentrated in low-status occupations and amongst largely marginalized groups within the labor market (Grzywacz et al., 2011; Hamermesh, 2002; Lesnard, 2008; Presser, 1987).

That positive selection was only observed for females is also surprising. One explanation would be that women, more so than men, engage in these schedules to arrange their work around other household activities during weekdays, for example, caring for children. Indeed, there is some evidence from the US that family considerations are more relevant for female non-day than male non-day employment (Presser, 1984, 1987, 1988, 1995). This would, however, not explain why the male partners of such women do not also benefit from these arrangements. It could be that, regardless of the female worker's intentions, men still experience feelings of frustration that partners are at work during the hours and days typically reserved for domestic life. A complementary explanation would be that women's positive selection into nonstandard schedules has more to do with the benefits of the jobs where these schedules are most common rather than the benefits of the schedules per se. For example, research from the Netherlands (Täht & Mills, 2016) found that evening and weekend work schedules for women are highly clustered in shop salesperson and personal care jobs, which have generally more relaxed and social working conditions. To the extent that such working conditions are conducive to overall job satisfaction and well-being for women, this could have positive trickle-down effects on outcomes relating to perceived work-family balance.

Further research is still needed to identify in greater detail the mechanisms through which women positively select into nonstandard schedules. Similarly, it is also important to understand better why such patterns of positive selection were not also observed for men. For example, is it that, as Presser (1995) originally suggested, men more so than women work nonstandard

schedules out of necessity rather than preference? Another important avenue for further research would be to unpack why women's nonstandard schedule work negatively affects the partner but not the worker herself. For example, is it that such arrangements are indeed pushing men to engage more in household labor and childcare tasks, or do these diverging trends have more to do with differing responses between genders to the time-constraints these arrangements place on shared couple time?

There are also several limitations to the current study that could suggest further opportunities for future research. A first limitation is that, as this analysis uses independent variables measured during Waves 2, 4, and 6 and dependent variables measured during Waves 3, 5, and 7, I was forced to exclude any individuals in partnerships that ended between the constituent waves of a given observation period (e.g., between Waves 2 and 3, or between Waves 4 and 5). Therefore, it is possible that by only including objectively stable partnerships over each observation period, I have overestimated the true effect of nonstandard schedules on PQ that might be observed if independent and dependent variables were measured contemporaneously. Sensitivity analyses (available upon request) supported this contention, revealing that individuals in nonstandard days were significantly more likely to have their partnerships dissolve between the constituent waves of a given period, indicating the presence of a selective attrition bias.

A second limitation of this analysis is that due to limited sample sizes, I grouped parents and non-parents together. This could be problematic as it is likely that the channels of selection into nonstandard schedules will differ depending on whether there are children are present in the household. Future research could stratify analysis by parental status to determine whether selection into nonstandard schedules operates differently depending on the presence of children.

A third limitation to this analysis surrounds the validity of the ignorability assumption invoked in the construction of the matching matrix. I assumed that conditioning on the rich set of selection covariates, there were no additional confounders between nonstandard schedules and PQ. While this assumption is technically untestable, it is tenuous when using observational data as there are plausibly many unobserved confounders. Future research could explore the causal effects of nonstandard schedules on PQ through an instrumental variable or fixed effects technique.

A final limitation worth noting here is with regards to the inclusion of the partner's work scheduling timing as a treatment selection covariate. Several studies have documented that dual-earner couples tend to synchronize work schedules: when one partner works nonstandard hours or days it significantly increases the odds that the other partner will also work such an arrangement (Carriero, Ghysels, & van Klaveren, 2009; Hamermesh, 2002; Lesnard, 2008; Mills & Täht, 2012). As discussed earlier, this coordination of work schedules can, in turn, have positive effects on outcomes relating to PQ as it facilitates more shared couple time. However, such patterns of synchronization also naturally raise concerns surrounding simultaneity: it is unclear whether partners' nonstandard schedule work is, in fact, a pre-treatment confounder (as it was treated here) or whether it is instead a mediating variable; if the latter, its inclusion in the Mahalanobis matching matrix would have obscured a portion of the treatment effect.

This joint-determination problem may partly explain why some studies (e.g., Lesnard, 2008; Mills & Täht, 2010) have used couple-level measures of work schedules that look at the combination of the male and female partners' work timing. While this couple-level approach would circumvent simultaneity bias in the present case, it would also come with the drawback of obfuscating the individual-level selection mechanisms underlying employment in nonstandard schedules. Though not without its limitations, the current study's inclusion of partners' work

schedule timing as a selection covariate identified the effect of the respondent's work schedule on her own and her partner's subjective PQ holding constant the partner's work schedule. That said, work schedule synchronization between partners is an important component of conjugal life, especially when studying outcomes relating to PQ. Rather than simply controlling for the tendency for between-partner work schedule coordination, future research could explore ways to exploit it using a quasi-experimental design. A particularly interesting avenue is whether and how positive selection into nonstandard schedules operates at the couple level.

Partnership quality is an important determinant of adult identity, life satisfaction, and mental health. Moreover, there is a vast literature documenting the short- and long-term negative social and economic consequences of partnership dissolution for adults and their children (e.g., Amato, 2014; Fergusson, McLeod, & John Horwood, 2014). As such, the social consequences of a known risk factor for partnership dissolution and discord such as nonstandard schedules warrant serious examination. Findings from this study suggest that after correcting for baseline selection biases, nonstandard schedules are associated with lower levels of PQ, but only for the male partners of women working these arrangements. They also suggest, somewhat more optimistically, that the women most tolerant of nonstandard schedules are also those most likely to select into these arrangements. Indeed, the patterns of positive selection observed for women indicate that those who become nonstandard schedule workers may be acting rationally given their characteristics and preferences, selecting into the work schedule that maximizes their own well-being and utility. Such findings highlight the need for a nuanced approach to the study of the social consequences of nonstandard schedules that accommodates the complex processes of selection into these arrangements as well as the heterogeneous actor and partner effects.

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