Flexible Work Practices over Time in an IT Organization: Evidence from the Work, Family & Health Network Study

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Short Abstract

Flexible work practices are often promoted as ways to reduce conflicts between work and family. The current model of flexibility as an individually-negotiated "accommodation" is problematic because of unequal access and potential negative career consequences. Work redesign initiatives that allow all employees to work flexibly would avoid those issues. We analyze the effects of such an initiative, called STAR, on employees' flexible work practices and schedule control using a group-randomized trial in an information technology workforce. We find that STAR significantly increases the proportion of hours worked remotely over eighteen months of follow-up and increases the probability of working a variable schedule initially. One potential drawback of STAR would be if it led to the intensification of work or involuntary shifts in work location or hours, but we find no evidence of an overall increase in work hours, psychological job demands, or involuntary flexible work practices for employees in STAR.

Background

Conflict between work and family is increasingly common among U.S. workers (Aumann, Galinsky, and Matos 2011; Jacobs and Gerson 2004), with about 70 percent of workers reporting some interference between work and non-work (Schieman, Milkie, and Glavin 2009). Work-family conflict has grown because "ideal workers" are expected to continuously work full-time, year round, without career breaks, and be available for long hours and overtime as needed, but most workers now have significant responsibilities at home too. The proportion of U.S. households with a non-working adult has declined as a result of increases in women's labor force participation, increases in single parenthood, and increases in adult caregiving. Work-family conflict is connected to issues of gender equity and family processes (King et al. 2012); it is also associated with a variety of negative health outcomes including worse mental health and poorer self-rated health (Beutell 2010), mood, anxiety, and substance disorders (Frone 2000; Grzywacz and Bass 2003), and indicators of poor physical health (van Steenbergen and Ellemers 2009).

Flexible work practices including telecommuting and flextime are often promoted as a way to help alleviate the strains of work-family conflict. When work organizations have flexible work policies in place, they usually allow individuals to negotiate a change in work schedule or location – but such accommodations are rarely available to all employees even in professional and managerial settings (access is even more rare for lower status workers - see Bond and Galinsky 2011; Golden 2008). Conceptualizing flexible work practices as individual accommodations yields a variety of potential problems for employees and organizations, including negative career consequences for employees who use flexible work practices, unequal access for the employees who could benefit most from flexible work practices, and backlash from frustrated workers who are not able to negotiate the same flexibility as their peers. In addition, the model of individual accommodations usually does not include giving all employees more control over when, where, or how work is performed, which scholars increasingly conclude is a way to better manage work-family strains (Bailyn 2011; Kelly and Moen 2007).

Another concern is that working flexibly will lead to an intensification of work or that flexible work practices are not necessarily associated with higher perceptions of schedule control. More specifically, some employees may use flexible work practices voluntarily for their own benefit, while others employees may work flexibility because their demanding jobs require it (see Kaduk, Kelly, and Moen 2013; Noonan and Glass 2012). In a national sample, McCrate (2012) finds that 11.5% of U.S. workers have variable schedules but cannot choose their work start and stop times, an undesirable condition generally driven by the demands of the work.

Research Questions

There are a variety of policy prescriptions that recommend making flexible work practices more widely available, but existing research shows that simply adding another policy on the books is not effective unless employees feel they can use it (e.g. Eaton 2003). In addition, the problems of the individual accommodation model still apply unless the increased availability of flexible work practices applies to all workers in a given workplace or work group. Such dramatic changes in the work environment are rare, but some quasi-experimental and experimental research shows that workplace initiatives that increase employee control over the timing and location of their work reduce work-family conflict and have a variety of other positive outcomes for workers (e.g. Kelly, Moen, and Tranby 2011; Kelly et al. 2014; Moen et al. 2011; Perlow 2012).

We add to the literature by examining how such workplace initiatives actually change the work practices of employees, whether such changes are sustained over time, and whether such initiatives yield an intensification of work or an increase in "flexible" work practices employees do not feel they control, in addition to any more positive changes in work practices. Our work also addresses two design problems in most existing research on workplace flexibility. First, previous research often assumes that flexible work practices are static and that the work practices captured on a single time point survey

apply beyond that survey reference period. Second, there is selection into access to flexibility in national samples and within organizations, so it is difficult to identify the effects of such flexibility. Organizational analyses of flexible work practices point to the unequal access in flexibility across workplaces and within a given workplace, as described above, with more privileged workers in more generous workplaces having greater access. But research on the effects of flexible work practices generally ignores those complex selection issues. We report here on a group-randomized trial of a broad workplace initiative to address both of these identification issues; this necessarily involves trading off internal validity for a less representative, smaller organizational sample.

We use data from the Work, Family & Health Network field experiment evaluating a workplace initiative called STAR to address the following questions:

(1) Does STAR change work practices and schedule control? If so, are the changes sustained over time?
(2) Does STAR affect overall work hours or other measures of work intensification?
(3) Does STAR affect the proportion of employees with voluntary flexible work practices?

If the initiative operated as expected, we expect that STAR would increase flexible work practices without increasing overall work hours. There is nothing about STAR specifically that would lead us to expect effects on work practices to decay over time, but the company we study merged with another company during data collection, which may affect the stability of STAR effects on work practices. (Many workplace interventions and organizational change initiatives have effects that decay over time, even without that type of organizational restructuring.) Given the focus on STAR on increasing employees control over their schedules, we also expect that STAR would increase the proportion of employees with voluntary flexible work practices while the proportion of employees with involuntary flexible work practice would decline or remain stable.

Data & Methods

The Work, Family & Health Network (WFHN) group-randomized trial analyzed here was conducted in the information technology (IT) division of a U.S. Fortune 500 organization we call TOMO. We are particularly interested in these professional and technical workers because their jobs represent both the promise (in terms of new technologies) and the perils (in terms of global off-shoring and work intensification) of white-collar employment in the twenty-first century.

Work groups of employees and their managers were randomized to either participate in a workplace initiative or to continue usual practice, i.e. continue working and managing the way they had before. There was a separation of the Work, Family, and Health study, which included both those randomized to the control condition (who were not called the control group) and those randomized to the STAR "treatment." In other words, the survey was framed as a broad study of work conditions, family lives, and health. STAR was presented as a company pilot and facilitated by separate personnel not associated with the study.

The STAR workplace initiative aims to modify the practices, interactions, and social meanings within this workplace, specifically targeting employees' control over when and where they work and supervisors' support for family and personal life in hopes of reducing work-family conflict and promoting employee wellbeing (Kelly et al. 2014; Kossek et al. 2014). One critical difference between STAR and most flexible work policies is that all employees in a group or team are invited to STAR training and invited to decide when, where, and how they work, in consultation with their team, rather than having individual employees request a flexible work arrangement that must be approved by their manager.

Randomized experiments, including group-randomized trials, are widely promoted as the way to identify effects of social structures or social environments more conclusively (Oakes 2004), but they remain rare, especially within the work-family field. Randomizing groups, rather than individuals, is appropriate for this study because STAR is designed to modify both individual and team practices,

interactions, expectations, and norms. Employees in both experimental conditions were surveyed at four time points – baseline (before the STAR initiative was rolled out) and at six months, twelve months, and eighteen months after the initial survey. At baseline, 78 percent of eligible employees (including their managers who received a similar, separate survey) participated in data collection; retention rates for subsequent waves were all over 90 percent, yielding our analytic sample of 768 employees who completed all four surveys nested in their 56 study groups. The figures shown here illustrate results from generalized linear mixed models on repeated measures with random effects for wave and for the level-2 unit nested in experimental condition, using an intent-to-treat framework to estimate the intervention effect.

Results

Our first research question asks whether STAR changes work practices and if those changes are sustained over time. Results from multilevel repeated measures models indicate that STAR increases the proportion of weekly hours worked at home, and the difference remains significant across all post-baseline survey waves, as shown in Figure 1. We observed the same pattern of STAR effects on remote work regardless of gender and parental status. STAR also increases the proportion of employees

Figure 1: STAR Effects on Working Remotely
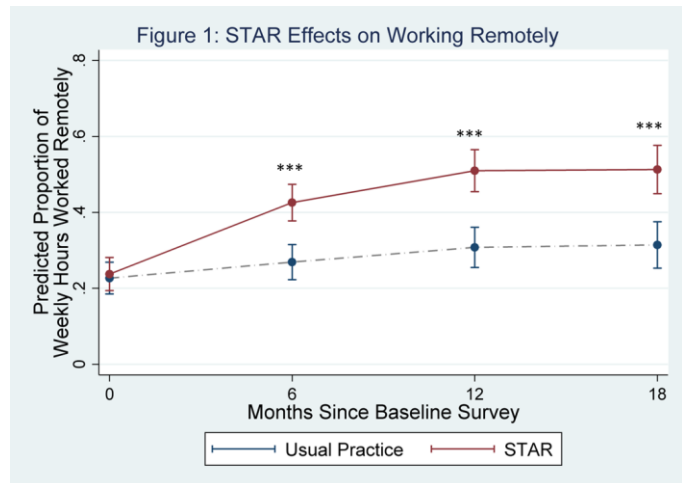
reporting a variable schedule at the six and twelve month surveys, but by the eighteen month survey, the differences were no longer statistically significant; this relationship is illustrated in Figure 2. This initial increase in variable schedules could be employees experimenting with them because STAR allows that, but then transitioning back to regular daytime schedules because social time is more valuable when shared with others (Craig and Brown 2014) or because of new managers and merger-related job insecurity given the face-time culture of the merging company. The increase in variable schedules is greatest for men without children at home, suggesting that employees experimented with shifting their hours, then changed back. We also consider the effects of STAR on perceived schedule control over the 18 month study period; we find that STAR significantly increases schedule control at the 6 month follow-up (confirming findings reported in Kelly et al. 2014), but the effect decays after that.

Our second research question examines the possibility that STAR could lead to work intensification, measured here as an increase in weekly work hours or psychological job demands, along

Figure 2: STAR Effects on Variable Schedules
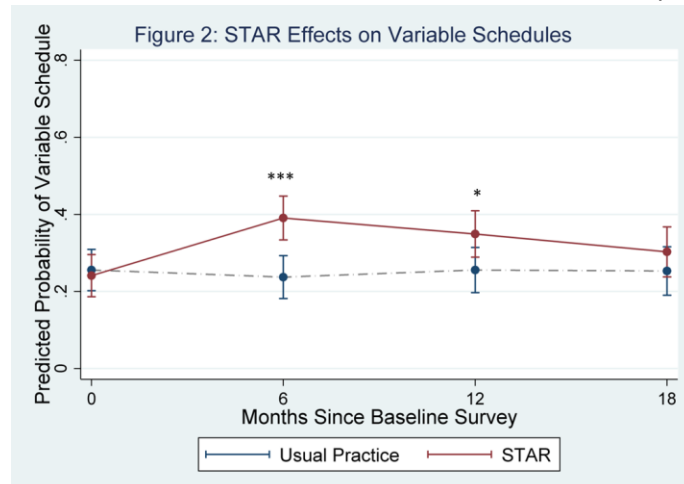
with any positive effects of the initiative. We find no statistically significant overall effect of STAR on work hours or psychological job demands over the 18-month period. Thus these changes in work practices and schedule control occur with STAR, without evidence of work intensification.

Our third research question considers whether STAR affects the proportion of employees with voluntary flexible work practices. We define voluntary flexible work practices as one of four quadrants considering the interplay between flexible work practices and the related,

Figure 3: Combinations of Schedule Control and Remote Work

	No	**Yes**
High	**Choose to Work at the Office** (e.g. software developer feels they could work at home for some of their regular work hours, but chooses not to – perhaps because they are more productive when working in the office)	**Voluntary Flexible Work Practices** (e.g. software developer chooses to work from home for some of their regular work hours, presumably for their own benefit and/or to manage non-work responsibilities)
Low	**Work at the Office** (includes "traditional" work only at the office work practice) (e.g. software developer whose job includes fixing problems with production software or other on-site operational responsibilities and needs to be in the office at specific times to make sure systems are running)	**Involuntary Flexible Work Practices** (e.g. software developer has a very large amount of work to do so continues working at home at in the evenings or on weekends and/or would like to work at home for some of their regular work hours but their ability to do so is unpredictable)

Perceived Control Over Doing Some Work at Home (vertical axis: High / Low)
Extensive Remote Work (horizontal axis: No / Yes)

specific schedule control questions; an example with remote work is shown in Figure 3. We find that STAR increases voluntary flexible work practices, while either decreasing or causing no change in involuntary flexible work practices, depending on the outcome. We illustrate this idea here with Figure 4, showing the proportion of the sample in each of the four schedule control/remote work categories described in Figure 3 for the STAR and Usual Practice groups separately, using 20 percent or more of weekly hours worked remotely as the cut point. We observe similar results using 50 percent or more of weekly hours worked remotely as the cut point. Voluntary variable schedules also increase, but as with the results shown in Figure 2 above, the STAR effect decays over the study period. STAR effects are statistically significant when tested using t-tests of means by condition and by repeated measures models.
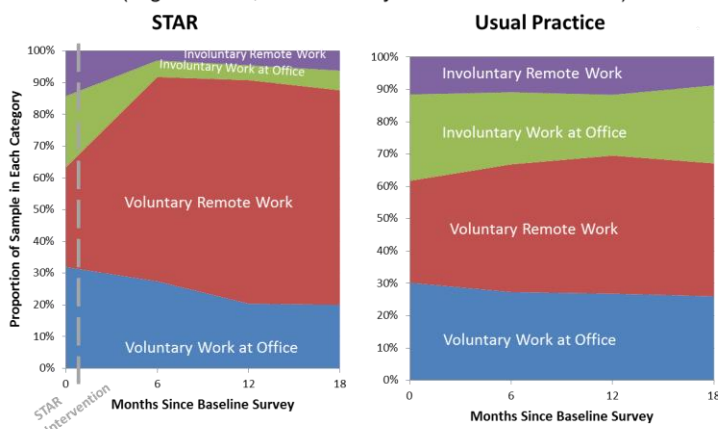
Conclusions & Implications

This research shows that many employees take advantage of the opportunity to work differently when a work-family initiative (STAR) allows it. The relatively low levels of flexible work utilization we have seen in nationally representative surveys likely reflect managers' gatekeeping – limited access to flexibility – more than employees' disinterest in flexible work practices. In addition, employees are engaging in flexible work practices without having their work hours increase significantly. In this case, at least, permission to work anywhere and anytime does not create pressures to work all the time.

Figure 4: STAR Increases Voluntary Remote Work
(High Control, ≥20% weekly hours worked at home)

More generally, researchers have expressed caution about "workplace flexibility" as it is often implemented (Blair-Loy 2009; Noonan and Glass 2012). We agree it is essential to consider how stratified access to and stigmatization of flexible work arrangements reproduce inequalities by class (occupational status) and gender within workplaces (Golden 2008; McCrate 2012; Williams, Blair-Loy, and Berdahl 2013). However, researchers have not examined whether flexible work initiatives that are broadly available within an organization are broadly utilized and gain acceptability and legitimacy. We contend that the policy prescription should not be shying away from new ways of working but institutionalizing them more fully as "the new normal."

This research utilizes a rigorous design in which equivalent treatment and control groups are differentially exposed to a broader organizational initiative that shifts control over schedules and work locations to employees. We find that this broader organizational initiative increases employees' use of these practices and does so without overloading them. This suggests that flexible work practices – when broadly available and not stigmatized – can benefit the health and well-being of employees and their families.

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