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# Comparing telework locations and traditional work arrangements: differences in work-life balance support, job satisfaction, and inclusion

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**Abstract**

**Purpose** – The purpose of this paper is to examine differences in work-life balance (WLB) support, job satisfaction, and inclusion as a function of work location.

**Design/methodology/approach** – Web-based survey data were provided by 578 employees working at one of four locations (main office, client location, satellite office, and home). Multiple regression analyses were used to identify differences in WLB support, job satisfaction, and inclusion across employees working at the four locations.

**Findings** – Results showed that main office and home-based workers had similar high levels of WLB support and job satisfaction. Main office workers reported higher levels of WLB support than satellite and client-based workers. Additionally, main office workers reported the highest levels of workplace inclusion.

**Research limitations/ implications** – Data were originally gathered for practical purposes by the organization. The research design does not allow for manipulation or random assignment, therefore extraneous variables may have impacted the observed relationships.

**Practical implications** – Allowing employees flexibility in choosing their work locations is related to positive outcomes. The authors suggest several practices for the effective implementation of alternative work arrangements.

**Originality/value** – This paper is among the first to examine the outcomes of telework across locations. It uses a large single organization and a quasi-experimental design, enhancing the validity of the findings.

**Keywords** Teleworking, Conflict management, Job satisfaction

**Paper type** Research paper

Teleworking is defined broadly as "working from anywhere at anytime" (Kurland and Bailey, 1999), or performing one's work duties at a remote location. The term "telework" is used interchangeably with "telecommuting" and "virtual work" (e.g.

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Gajendran and Harrison, 2007; Siha and Monroe, 2006). As a practice, it is becoming increasingly common internationally (Davis and Polonko, 2003). In fact, the mobile worker population is expected to increase from 758.6 million in 2006 to over 1.0 billion by 2011, representing 30 percent of the worldwide workforce (Sudan *et al.*, 2007). Telework is a widespread practical concern that merits research attention.

## Work arrangements

Telework is a broad term used to describe a variety of arrangements that involve working away from the employer's main campus. For instance, Kurland and Bailey (1999) described four types of telework: home-based, satellite office, neighborhood work center, and mobile. In contrast, Garrett and Danziger (2007) define telework as:

> (a) those whose remote work is from the home or in a satellite office, (b) those whose telework is primarily in the field, and (c) those whose work is "networked" in such a way that they regularly work in a combination of home, work and field contexts (p. 29).

The present study compared workers employed by a single organization, but with four primary work locations: the employer's main office, a satellite office, a client site, and the employee's home. While telework theorists (Garrett and Danziger, 2007; Kurland and Bailey, 1999) differentiate between types of work arrangements, little research has examined how work arrangements impact individual and organizational outcomes. The purpose of the present study, therefore, is toward filling the void in the research.

## Theoretical framework

Numerous telework researchers and theorists have pointed out that working away from the central office changes the motivational qualities of work, as well as employee attitudes and organizational perceptions. Feldman and Gainey (1997) considered the impact of telework from a job design standpoint. Drawing from Hackman and Oldham's (1980) job characteristics model, Feldman and Gainey (1997) suggested telework should have positive implications for employee motivation and attitudes; working away from the traditional office permits higher autonomy because it allows workers control over how and when work is performed. Indeed, telework is positively associated with autonomy (Gajendran and Harrison, 2007) and flexibility (Hill *et al.*, 1998).

Other telework researchers (e.g. Sparrow, 2000; Verive *et al.*, n.d.) have explained how work location may impact employees' psychological contract or underlying cognitive schema of their employment relationships. Allowing employees to work away from the office may be viewed as a gesture of kindness and trust, which in theory should be reciprocated through employee loyalty and appreciation. According to Sparrow (2000), teleworkers represent "privileged core employees, enjoying high trust relationships, and given autonomy over work location and time, i.e. the re-emergence of industrial guilds serviced by a small technical and commercial elite" (Sparrow, 2000, p. 214). Due in part to the autonomy and flexibility it provides, and the entrusted status it may symbolize, telework is likely to impact employee perceptions of work-life balance (WLB) support and job satisfaction.

Although telework has many benefits, virtual workers are removed from the central office location; therefore their amount of face-to-face interaction with co-workers, supervisors, and clients is limited. For this reason, Feldman and Gainey (1997) argued

that telework reduces task interdependence, a motivational factor. In addition, they identified social isolation as a drawback to working virtually and argued that telework may impede fulfillment of an individual's need for affiliation. Considerable support has been found for this premise as teleworkers often appreciate the autonomy and efficiency of working away from the main office; however, at times they miss the social context of traditional work (e.g. Chevron and Primeau, 1996; Cooper and Kurland, 2002; Gajendran and Harrison, 2007; Golden *et al.*, 2008; Kurland and Cooper, 2002; Siha and Monroe, 2006). The issue of workplace inclusion is highly relevant to virtual work arrangements.

## Examining the outcomes of work arrangements

### *WLB support*

Although telework initially aimed to cut organizational costs associated with maintaining and leasing property, telework is increasingly implemented to reduce work pressures and facilitate WLB (Sparrow, 2000). Feldman and Gainey (1997) theorized that workers pursue telework to balance competing roles of work and family; they are attracted to organizations that offer telework technology and are likely to leave organizations that do not allow them the capacity to balance their work and personal life roles. The flexibility model views telework as a way of balancing the demands of work and family (Huws *et al.*, 1996; Sullivan and Lewis, 2001). In support of the flexibility model, numerous studies have identified telework as a strategy for workers to care for dependents (e.g. Hartig *et al.*, 2007; Hilbrecht *et al.*, 2008; Major *et al.*, 2008; Sullivan and Lewis, 2001). Given the high cost of childcare, working would not be an option for some individuals if not for telework arrangements (Olson and Primps, 1984).

The results of numerous studies have shown that telework helps workers to accommodate WLB demands. For example, in qualitative studies, teleworkers report that telework enhances their WLB (Hilbrecht *et al.*, 2008; Hill *et al.*, 1998; Sullivan and Lewis, 2001). Specifically, telework provides workers flexibility to balance the competing roles of work and family, allowing them to fulfill their household responsibilities, strengthing family relationships, and permitting optimization of time management (Hilbrecht *et al.*, 2008; Hill *et al.*, 1998). Hill *et al.* (2003) compared traditional office workers, mobile workers ("virtual workers"), and home-based workers finding that home-based workers reported the highest levels of WLB and the greatest amount of work/family success. Moreover, a meta-analytic review of the results of 19 primary studies ($n = 9{,}852$) found a negative relationship with an effect size of $d = 0.23$ between telework and work-family conflict (Gajendran and Harrison, 2007).

Paradoxically, however, telework can be a source of work-life imbalance. Working from home increases the permeability of work and personal life domains (e.g. Hartig *et al.*, 2007; Marsh and Musson, 2008). Especially in high stress jobs, working from home may not allow workers to escape work, both mentally and physically (Russell *et al.*, 2009). In qualitative research, subjects reported a breakdown of the psychological distinction between work and family (Hill *et al.*, 1998; Sullivan and Lewis, 2001). Telework enables workers to continue working for longer hours (Hill *et al.*, 1998). As a result, teleworkers may experience increased stress and overload (Hill *et al.*, 1998; Konradt *et al.*, 2003; Russell *et al.*, 2009; Towers *et al.*, 2006).

Research has sought to empirically examine the equivocal findings of telework's impact on work-family balance. According to the literature, the work-family interface consists of two domains (i.e. work and family), each with their own boundary (e.g. Netemeyer *et al.*, 1996). Work may interfere with family (e.g. a parent needs to work long hours and cannot attend a child's recital) just as family may interfere with work (e.g. a sick child requires a parent to miss work). Work interference with family and family interference with work are distinct phenomena, each uniquely associated with outcome variables (Mesmer-Magnus and Viswesvaran, 2005). In a large quantitative study of working professionals ($n = 454$), Golden *et al.* (2006) identified a positive relationship between the amount of time people telework and levels of work interference with family. Conversely, they found a negative relationship between time spent teleworking and family interference with work. In a study of employees from multiple organizations ($n = 230$), Lapierre and Allen (2006) found telework was negatively related to family interference with work and was unrelated to work interference with family. The bidirectional nature of work-family conflict appears to be an important distinction in understanding the relationship between telework and work-life issues.

At present, the research on whether telework may benefit workers is equivocal. Although numerous studies have considered work-life conflict and balance, whether workers perceive greater organizational support is not well understood. WLB support may be defined as individuals' perceptions of the organization's willingness to and interest in supporting their family and personal life needs. WLB support is negatively related to work interfering with family, and positively related to job and family satisfaction (Ford *et al.*, 2007; Michel and Hargis, 2008). Additionally, support is positively related to organizational commitment and job satisfaction, and negatively related to turnover intent and job search behaviors (Behson, 2002; Thompson *et al.*, 2004). To the extent that telework indicates organizational WLB support, telework may have positive organizational implications.

As Sparrow (2000) points out, working from home is often a privileged work arrangement awarded to facilitate WLB. Offering flexible work programs such as telework signals the organization's willingness to help employees address WLB needs (Shockley and Allen, 2007). Thus, home-based teleworkers are likely to perceive their work arrangements as a gesture of organizational WLB support. In contrast, other remote work locations (satellite and client-based work) are more likely to be a function of the organization or client's needs. In terms of reducing work-life conflict, satellite work may do little more than reduce the employee's commute; it does not allow the same level of integration of work and home life responsibilities as home-based telework. Similarly, working at a client location separates the employee from the parent organization which may increase isolation. For these reasons, we hypothesized the following:

*H1.* Individuals working from home will report greater perceptions of WLB support than those working from a (a) satellite location, (b) the main office, or (c) a client location.

*Job satisfaction*

Working from home is associated with job satisfaction (e.g. Bailey and Kurland, 2003; Belanger, 1999; Golden and Veiga, 2005). However, as Bailey and Kurland (2003)

pointed out in their review of the telework literature, few studies have examined job satisfaction as an outcome of telework. As discussed earlier, telework is likely to predict job satisfaction because it provides individuals autonomy and flexibility to meet their own needs and personal life demands (e.g. Baltes *et al.*, 1999; Golden and Veiga, 2005). In Sullivan and Lewis's (2001) qualitative study of home-based workers, increased independence and autonomy in scheduling work emerged as advantages of teleworking. In other qualitative research (Hill *et al.*, 1998), increased employee morale was identified as an outcome of working from home. In an empirical study comparing mobile and home-based workers, home-based workers reported higher levels of job satisfaction (Hill *et al.*, 2003). Recent meta-analytic findings revealed a positive relationship between home-based telework and job satisfaction (Gajendran and Harrison, 2007).

Whereas autonomy and flexibility may influence teleworkers to feel more satisfied with their jobs, professional isolation may act as a countervailing force. For example, Campione (2008) found a positive relationship between telework and depression; they identified the decrease in face time with other employees and social isolation as the likely explanation. In an attempt to resolve the ambiguous relationship between telework and job satisfaction, Golden and Veiga (2005) examined the moderating role of telework intensity (i.e. frequency of telework). They found that the relationship between telework and job satisfaction was curvilinear (i.e. in the shape of an inverted-U); people with moderate telework levels reported the highest satisfaction. However, their study did not account for differences in work location, which constitutes another explanation for the inconsistent findings regarding the relationship between telework and job satisfaction.

To the extent that home-based telework is a privileged work arrangement, home-based teleworkers should report higher job satisfaction than employees who are less connected with the organization or experience reduced job autonomy (i.e. satellite and client-based workers). Because the main office location is the central hub for organizational life (see Bartel *et al.*, 2007), it logically follows that working from the main office location should yield relatively high levels of job satisfaction as well (i.e. social isolation is not an issue for main office workers). Although main office-based workers may have lower autonomy and flexibility than their home-based teleworking counterparts, main office-based workers may be better able to compartmentalize their work and personal life roles; furthermore, other family-friendly policies frequently may provide some degree of flexibility. Thus, we propose the following:

*H2a.* Individuals working from home and from the main office will report similar levels of job satisfaction.

Satellite-office workers may be able to compartmentalize their work and personal lives; further, they are on the periphery of organizational life and therefore should experience lower job satisfaction than main office workers. Due to the demanding schedule and reduced flexibility associated with client-based work, and the isolation of client-based workers from their fellow coworkers, client-based workers may be especially prone to low job satisfaction.

*H2b.* Individuals working from home will report greater job satisfaction than those working from ($b_i$) a satellite office or ($b_{ii}$) a client location.

*Workplace inclusion*

Association with other people is a basic human need, fundamental to human motivation (Baumeister and Leary, 1995). Workplace inclusion refers to one's sense of belonging to the organization. It involves feeling invited to participate and perceiving that one's input matters (Hayes *et al.*, 2002). Workplace exclusion (or lack of inclusion) is associated with adverse outcomes such as higher turnover, reduced organizational commitment, lower job satisfaction, burnout, and disinterest in and rejection by co-workers (Baumeister and Leary, 1995; Golden, 2006; Greenhaus *et al.*, 1990). Likewise, professionally isolated workers report anxiety, loneliness, and physiological health symptoms (Beaumeister and Tice, 1990; DeWall and Baumeister, 2006; Jones, 1990).

Teleworkers may have inherent communication barriers with their organizations due to temporal and physical distance (Dambrin, 2004; Hinds and Bailey, 2003). Teleworkers may feel "out of the loop" because they do not as readily see how their work fits in with larger team and organizational goals and may face jealousy from non-teleworking counterparts (Gajendran and Harrison, 2007; Lombard and Ditton, 1997). Bartel *et al.*'s (2007) qualitative telework study provided strong evidence that teleworkers often feel insecure about aspects of their organizational membership. Teleworkers felt excluded, out of the loop, and not respected as workgroup members. Additionally, they complained about missing formal and informal opportunities at the office and were concerned about isolation and exclusion. Similarly, in other qualitative research, social isolation has been cited as a telework drawback (Montreuil and Lippel, 2003). In a recent empirical study using a sample of teleworkers, Golden *et al.* (2008) examined the impact of professional isolation, a parallel construct to inclusion, referring to beliefs about the sufficiency of professional and social relationships. Professional isolation was negatively associated with job performance. Furthermore, there were significant interactions suggesting that the impact of professional isolation on job performance is greater for those who spend extensive amounts of time teleworking and for those who engage in limited face-to-face interactions. The authors call for a quasi-experimental study comparing professional isolation in a matched sample of teleworkers and non-teleworkers. The current study responds to this call. We expect that all types of remote work involve communication barriers, and physical distance from the organization, thus:

*H3.* Individuals working from (a) home, (b) a satellite office, or (c) a client location will report lower workplace inclusion than individuals working from the main office.

## Method

*Participants and procedure*

Data for this study were originally collected as part of an organizational initiative to understand existing remote work practices and to determine how to leverage them to achieve business goals. The current study is a secondary analysis of the data. A total of 1,426 individuals from a division of a large, US-based, not-for-profit engineering and technology research organization were invited by e-mail to participate in an online study. Of these, 749 responded, yielding a response rate of 52.5 percent. The survey was anonymous and confidential. The study underwent ethical review and was granted exempt status from an institutional review board. Data examined in this study have not been published elsewhere.

Data from 164 participants were discarded because of missing information on the variables of interest. Because the total amount of missing data was high (21.9 percent), we checked for patterns to determine if data were missing systematically (Tabachnick and Fidell, 2007). Missing data were dummy-coded and tested for relationships with demographic variables including primary work location, gender, race, age, and tenure. Results of these analyses did not reveal systematic patterns in missing data. Data from seven other workers who indicated their primary location as "travel" were excluded. Thus, the final sample included a total of 578 participants.

Participants were predominantly technical staff (75.9 percent) with some managers (10.8 percent) and support personnel (e.g. administrative, non-technical, 11.0 percent). Participants were eligible to telework regardless of their job title; thus, all four work locations (main office, client location, satellite office, and home) represented all job types. The majority were male (67.2 percent), white (75.9 percent), and between the ages of 35 and 64 (78 percent). The vast majority (95.2 percent) indicated working at least 40 hours per week.

*Measures*

*Primary work location.* Workers were asked to indicate their primary work location (i.e. the location where they spend the most hours per week): the main office ($n = 238$), a company-provided satellite location ($n = 108$), a client location ($n = 150$), or at home ($n = 82$).

*WLB support.* A measure of WLB support was created for the current study. Participants responded to two items using a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Items included, "The work environment at [name of organization] supports a balance between work and personal life," and "The work environment within my department/division supports balance between work and personal life." The items were correlated $r(590) = 0.81$, $p < 0.001$.

*Job satisfaction.* A job satisfaction scale was created for the current study ($\alpha = 0.79$). Participants responded to three items using a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Items included, "Overall, I am satisfied with my job," "I recommend [name of organization] to others as a good place to work," and "I am satisfied with my current work schedule."

*Workplace inclusion.* A four-item measure of workplace inclusion was created for the current study ($\alpha = 0.89$). Participants were asked to "Think of your primary work location and indicate how much you feel about the following:" They responded to four items using a five-point scale ranging from 1 (very little) to 5 (very much). Example items included, "A sense of belonging to your department/division," and "'In the loop' with what's going on within your department/division."

*Demographic questions.* Participants indicated their gender, whether they worked part-time or full-time, age, and their tenure with the organization. Age was collected on an interval scale in the following increments: 1 (18-24), 2 (25-24), 3 (35-44), 4 (45-54), 5 (55-65), and 6 (65 and over). Similarly, tenure was collected in five year increments 1 (less than 1 year), 2 (1-5), 3 (6-10), 4 (11-15), and 5 (more than 16 years). Participant also indicated the extent to which having children or other dependents at home was a factor in whether or not they would telework. Responses ranged from 1 to 3 (not a factor, minor factor, major factor).

## Results

Because the measures used in this study have not been used in past research, we performed a confirmatory factor analysis (CFA) using EQS 6.1. The CFA model included a factor for WLB support, job satisfaction, and workplace inclusion with, two, three and four items, respectively. Factors were allowed to correlate with one another and the first factor loading of each factor was fixed to 1; all other paths were freely estimated. The fit indices indicated a good fit $\chi^2/df$ ratio of 2.71, comparative fit index (CFI) of 0.99, root-mean square error of approximation (RMSEA) of 0.06, and standardized root mean residual (SRMR) of 0.03. Hu and Bentler (1999) stated that an RMSEA of 0.06 or below indicates good fit. The RMSEA in conjunction with the other indices indicated very good measurement fit. Additionally, modification tests were performed but no changes to the factor model significantly improved fit.

Prior to running hypotheses tests, control variables were examined to determine if they should be included in the analyses. Gender (0=woman, 1=man) and work status (0=full-time, 1=part-time) were dummy-coded. We examined demographics across the four primary work locations (Table I). Additionally, we statistically tested whether demographic variables were related to primary work location. Chi-square tests of independence indicated that primary work location was significantly related to work status (part-time, full-time) and marginally related to gender ($p$=0.07). Thus, we included both as controls in our hypotheses tests. We also performed ANOVAs to determine if work location was significantly related to continuous demographic variables (i.e. age, tenure, impact of dependents). Only tenure was significantly related to primary work location; therefore, we included it as a control variable. As shown in Table II, full-time/part-time work status was the only demographic variable significantly related to the outcome variables (i.e. WLB support and job satisfaction) used for hypothesis testing.

Table II presents descriptive statistics and zero-order correlations. Assumptions of homogeneity of regression, homogeneity of variance, and normality of residuals were supported. There were no univariate or multivariate outliers. Three hierarchical multiple regression equations tested the three hypotheses. Primary work location was transformed into two series of dummy-coded variables. The first series of codes were created to test *H1* and *H2*; home-based workers were coded zero to serve as the reference group. The second set of codes was created to test *H3*; main office workers were coded zero to serve as the reference group. Control variables (i.e. gender, full/part time work status, and tenure) were entered in step 1 and dummy-coded work location variables were entered in step 2.

| | Main office | | Satellite | | Client | | Home | |
|---|---|---|---|---|---|---|---|---|
| | M | SD | M | SD | M | SD | M | SD |
| Gender | 0.67 | 0.47 | 0.64 | 0.48 | 0.74 | 0.44 | 0.58 | 0.50 |
| Full/part time | 0.04 | 0.19 | 0.06 | 0.24 | 0.04 | 0.19 | 0.40 | 0.49 |
| Age | 3.81 | 1.28 | 3.69 | 1.54 | 3.96 | 1.15 | 3.97 | 1.22 |
| Tenure | 2.99 | 1.29 | 2.68 | 1.26 | 2.90 | 1.27 | 3.35 | 1.26 |
| Impact of dependents | 1.46 | 0.72 | 1.50 | 0.79 | 1.33 | 0.61 | 1.56 | 0.77 |

**Notes:** $n$ = 578; gender and full/part time were dummy-coded (0 = female, 1 = male; 0 = full-time, 1 = part-time)

**Table I.**
Demographic information by primary work location

*WLB support*

*H1* predicted that home-based workers would report higher WLB support than workers at the other three primary work locations. The first step in the regression equation was non-significant, $F(3,565) = 1.67, p = 0.17, R^2 = 0.01$. The combination of demographic variables did not significantly predict WLB support. However, work status significantly predicted WLB support ($\beta = 0.09$, $p < 0.05$); part-time workers perceived greater support than full-time workers (see Table III). Primary work location accounted for an additional 4 percent of the variance in WLB support beyond the control variables, $F(6,562) = 4.81$, $p < 0.001$, $\Delta R^2 = 0.04$. *H1a* was supported; home-based workers reported significantly greater WLB support than satellite office workers ($\beta = -0.12$, $p < 0.05$). *H1b* was not supported; home-based and main office workers reported similar levels of WLB support ($\beta = -0.01$, *n.s.*). *H1c* was supported; home-based workers reported higher WLB support than client-based workers ($\beta = -0.20$, $p < -0.01$).

*Job satisfaction*

*H2* predicted home-based workers would report similar levels of job satisfaction as main office-based workers, and greater job satisfaction than satellite-based and

| Variable | M | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Gender | 0.67 | 0.47 | – | | | | | | | |
| 2. Full/part time | 0.09 | 0.28 | −0.20*** | – | | | | | | |
| 3. Age | 3.86 | 1.29 | 0.18*** | 0.04 | – | | | | | |
| 4. Tenure | 2.96 | 1.28 | −0.11* | 0.17*** | 0.34*** | – | | | | |
| 5. Impact of dependents | 1.44 | 0.72 | 0.00 | 0.10* | −0.15*** | 0.02 | – | | | |
| 6. WLB support | 4.17 | 0.95 | −0.02 | 0.10* | −0.06 | 0.01 | 0.04 | – | | |
| 7. Job satisfaction | 4.30 | 0.69 | −0.03 | 0.13** | −0.01 | 0.05 | 0.06 | 0.68** | – | |
| 8. Workplace inclusion | 3.52 | 1.02 | −0.01 | 0.00 | −0.05 | 0.06 | 0.08 | 0.46** | 0.52** | – |

**Table II.**
Means, standard deviations, coefficient alphas and intercorrelations among variables

**Notes:** $n = 578$; M = mean; SD = standard deviation; gender and full/part time were dummy-coded (0 = female, 1 = male; 0 = full-time, 1 = part-time); $^*p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

| | B | SE B | B | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|---|
| *Step 1* | | | | 0.01 | |
| Gender | −0.01 | 0.09 | −0.00 | | |
| Work status | 0.31* | 0.14 | 0.09* | | |
| Tenure | −0.00 | 0.03 | −0.00 | | |
| *Step 2* | | | | 0.05*** | 0.04*** |
| Home (constant) | 4.35*** | 0.17 | | | |
| Main office | 0.02 | 0.12 | 0.01 | | |
| Satellite office | −0.28* | 0.14 | −0.12* | | |
| Client location | −0.41** | 0.14 | −0.20** | | |

**Table III.**
Regression results for predicting WLB support

**Notes:** $n = 578$; gender and full/part time were dummy-coded (0 = female, 1 = male; 0 = full-time, 1 = part-time); work locations were dummy coded such that the home location = 0; $^*p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

client-based workers. The first step in the regression equation was significant, $F(3,565) = 3.14$, $p < 0.05$, $R^2 = 0.02$. The combination of demographic variables significantly predicted job satisfaction. In the first step, only work status significantly predicted job satisfaction ($\beta = 0.12$, $p < 0.01$); part-time workers reported greater job satisfaction than full-time workers (see Table IV). Primary work location accounted for an additional 2 percent of the variance in job satisfaction beyond the control variables, $F(6,466) = 2.86$, $p < 0.01$, $\Delta R^2 = 0.02$, $p < 0.01$. In support of *H2a*, home-based and main office-based workers reported similar levels of job satisfaction ($\beta = -0.06$, *n.s.*). *H2b* was partially supported. Home-based workers reported similar job satisfaction as satellite-based workers ($\beta = 0.80$, *n.s.*). Home-based workers reported greater job satisfaction than client-based workers ($\beta = -0.16$, $p < 0.05$).

*Inclusion*

*H3* predicted that main office workers would report greater inclusion than home-based, satellite-based, and client-based workers. The first step of the regression equation was non-significant, $F(3,564) = 0.844$, *n.s.*, $R^2 = 0.00$. None of the control variables significantly predicted inclusion (see Table V). Primary work location accounted for an additional 18 percent of the variance in inclusion beyond the demographic variables, $F(3,561) = 20.19$, $p < 0.001$, $\Delta R^2 = 0.18$. *H3* was fully supported. Main office workers reported higher inclusion than home ($\beta = -0.10$, $p < 0.05$), satellite ($\beta = -0.15$, $p < 0.001$), and client-based workers ($\beta = -0.47$, $p < 0.001$).

*Additional analysis*

As a follow up analysis, we considered whether WLB support and inclusion drive differences in levels of job satisfaction across primary work location. As an exploratory analysis, we entered WLB support and inclusion as control variables in step 1 and re-ran the regression equation for *H2*. Inclusion ($\beta = 0.27$, $p < 0.001$) and WLB support ($\beta = 0.55$, $p < 0.001$) significantly positively predicted job satisfaction. After controlling for work status, tenure, gender, WLB support, and inclusion, work location predicted incremental variance in job satisfaction ($\Delta R^2 = 0.02$, $p < 0.001$). Main office workers reported significantly lower job satisfaction than home-based workers

| | B | SE B | B | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|---|
| *Step 1* | | | | 0.02* | |
| Gender | 0.00 | 0.06 | 0.00 | | |
| Work status | 0.21** | 0.11 | 0.12** | | |
| Tenure | 0.02 | 0.02 | 0.04 | | |
| *Step 2* | | | | 0.03* | 0.01* |
| Home (constant) | 4.37*** | 0.12 | | | |
| Main office | −0.09 | 0.10 | −0.06 | | |
| Satellite office | −0.14 | 0.11 | −0.08 | | |
| Client location | −0.24* | 0.10 | −0.16* | | |

**Notes:** $n = 578$; gender and full/part time were dummy-coded (0 = female, 1 = male; 0 = full-time, 1 = part-time); work locations were dummy coded such that the home location = 0; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

**Table IV.** Regression results for predicting job satisfaction

| | B | SE B | B | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|---|
| *Step 1* | | | | 0.00 | |
| Gender | −0.01 | 0.09 | −0.00 | | |
| Work status | −0.05 | 0.16 | −0.01 | | |
| Tenure | 0.05 | 0.03 | 0.07 | | |
| *Step 2* | | | | 0.18*** | 0.17*** |
| Main office (constant) | 3.78*** | 0.13 | | | |
| Home | −0.29 | 0.13 | −0.10* | | |
| Satellite office | −0.37 | 0.11 | −0.15** | | |
| Client location | −1.05*** | 0.10 | −0.47*** | | |

**Table V.**
Regression results for predicting inclusion

**Notes:** $n = 578$; gender and full/part time were dummy-coded (0 = female, 1 = male; 0 = full-time, 1 = part-time); work locations were dummy coded such that the main office location = 0; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

($\beta = -0.16$, $p < 0.05$). Satellite ($\beta = -0.01$, *n.s.*) and client-based workers ($\beta = 0.06$, *n.s.*) reported similar levels of job satisfaction as home-based workers.

## Discussion

This study examined differences in three affective outcomes across workers based at four primary work locations. We examined three outcomes that are central to the issue of telework: WLB support, job satisfaction, and inclusion. Our results generally indicated that where workers spend the majority of their work day may alter their relationship with their employer and explain the differences in outcomes. Research tends to treat all types of telework similarly or to focus solely on home-based telework, but these results suggest a need to recognize distinctions in the different types of remote work. We discuss the findings of each of the hypothesized relationships below.

### *WLB support*

Research has yielded mixed findings regarding the impact of telework on work-life balance. The present study expanded on extant research by examining employee perceptions of WLB support. As hypothesized, home-based workers reported higher WLB support than satellite and client-based workers. Satellite and client-based work is more likely to be a function of the organization's or client's needs. Furthermore, while working at the satellite location is a form of telework, it may do little more than reduce employee commute. Contrary to expectations, home-based workers reported similar WLB support as main office-based workers. The finding that home-based employees did not report greater WLB support may be because home-based work has benefits and drawbacks, which may counteract one another.

### *Inclusion and job satisfaction*

Drawing from Feldman and Gainey's (1997) and Sparrow's (2000) theoretical models, we expected that telework status would be linked with differences in job satisfaction. Whereas home-based teleworkers may experience the greatest amount of flexibility and autonomy and appreciate the privileged status that telework symbolizes, they miss the social context of work. In support of this notion, hypothesis tests revealed that

home-based and main office workers reported similar levels of job satisfaction; home-based workers reported higher job satisfaction than client-based workers. Yet, after controlling for differences in inclusion, the observed differences resembled our original hypothesis: home-based workers reported higher job satisfaction than main-office workers. Additional research is needed to understand the mechanisms through which telework relates to job satisfaction. For example, research should measure the relative importance of worker autonomy, flexibility, and inclusion on job satisfaction and should determine if teleworkers do indeed regard their status as a privilege. Personality is presumed to impact telework outcomes (Feldman and Gainey, 1997). Workers may differ to the extent that they value autonomy and flexibility and require social interaction.

To our knowledge, the present study is the first to examine the issue of professional isolation in a sample of both teleworkers and workers in traditional work arrangements. The findings of this study support claims (e.g. Bartel *et al.*, 2007; Golden *et al.*, 2008; Montreuil and Lippel, 2003) that social isolation is a drawback of teleworking. Main office workers reported significantly higher inclusion than home, satellite office, and client-based workers. Golden *et al.* (2008) found that the impact of professional isolation is more severe as workers spend more time teleworking. Since our focus was on primary work locations, we likely captured the telework-isolation relationship at or near its highest point. Indeed, this may be why inclusion had a large impact on the telework-job satisfaction relationship.

*Strengths, limitations, and future directions*

A strength of the present study is that it uses a large sample from a single organization, providing the necessary preconditions for reliable results. Sampling teleworkers from a single organization permits greater internal validity than examining teleworkers across organizations because there are fewer between-organization variables to act as confounding variables. Teleworkers often work autonomously and typically only comprise a small segment within a single organization; therefore, recruiting participants for telework research can be challenging. Furthermore, the unique work setting of a teleworker and the employee-organization relationship does not lend itself to replication in a contrived research setting (e.g. a laboratory design). Although quasi-experimental designs do not allow for control or manipulation as is required to rule out all extraneous variables, quasi-experimental field studies such as this one may provide the most sound and realistic method for making inferences about telework. Yet, extraneous variables continue to be a concern. Therefore, additional research is needed to replicate the findings and to examine other factors that may impact the relationship between work location and outcome variables. For example, future research should examine if workers based at different locations experience different leadership and performance goals, perceived control and communication practices.

One of the merits of this research is that it identified a large effect between work arrangement and workplace inclusion (18 percent). However, effect sizes for the impact of work location on WLB support (4 percent) and job satisfaction (2 percent) were relatively small (Cohen, 1977), especially given literature precedent suggesting WLB issues and worker attitudes are central to telework (see Gajendran and Harrison, 2007). The small observed effects may be the result of countervailing forces that drive WLB

support and job satisfaction counteract one another. Additionally, in the present study, workers indicated their primary work location but were not asked how many hours per week they spent at the primary location. Although this limitation is common to telework research (Bailey and Kurland, 2003), it creates an issue of range restriction, which likely attenuated the relationship between work location and outcome variables. As Sparrow (2000, p. 203) suggests in his manuscript about the changing nature of work designs and the changing nature of work, scaled survey items may be "insensitive to the underlying changes in cognitive structures and the perceived cause-and-effect reasoning of employees". Sparrow's logic suggests that qualitative (versus quantitative) methods would better capture the expected relationships in our study. The qualitative findings for WLB issues and job satisfaction discussed in the introduction of this paper seem to support Sparrow's (2000) conjecture. Furthermore, employees adapt to their work conditions and report minor adjustments in work attitudes and phenomena (Sparrow, 2000). Employees in various work conditions may habituate to their work setting, attenuating the impact of work location on employee attitudes and perceptions. Thus, future research should examine the impact of primary work location over time, as it may yield larger observed effect sizes.

*Practical implications*

Our results suggest organizations must take action to improve the workplace inclusion of employees who work away from the main office. For example, managers can setup regular meetings with distant workers and keep them up to date on current issues and involve them in decisions by telephone or e-mail. In addition, work teams should make an effort to meet face-to-face on a regular basis. Organizations should also consider implementing job location rotations for employees who report low workplace inclusion. By switching work locations periodically, employees may benefit from changes to the social atmosphere. When teleworkers are included, home-based telework may have positive organizational implications through job satisfaction. Our exploratory analyses suggest that when managers support employees' work-life balance and foster inclusion, teleworking from home may be a more advantageous work arrangement than working from the main office in terms of job satisfaction.

Client-based workers reported lower WLB support, job satisfaction, and inclusion than workers based at the main office and at home. In many cases, working from the client location is a necessity. Therefore, managers may need to make special efforts to engage client-based workers. Client-based workers may benefit from work-life balance initiatives, stress management activities, and time away from the client location.

*Conclusion*

"Working from anywhere at any time," as telework has been defined (Kurland and Bailey, 1999) aggregates across multiple work arrangements. Using a large database from a single organization, our findings suggest that work location explains significant differences in WLB support, job satisfaction, and inclusion. WLB support and inclusion impact differences in job satisfaction among workers at various locations. Research needs to distinguish between different work arrangements rather than broadly categorizing workers or focusing only on main office and home-based workers as much of the literature has done.

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## Further reading

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