

Research Article

Family Well-being as a Key Predictor in University Telework Implementation: A Structural Equation Modeling Approach

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Abstract

The global health crisis caused by COVID-19 led universities to adopt remote work models as an emergency response. However, beyond institutional adaptation and digital transformation, the success of telework also depends on personal and psychosocial factors. In Latin American contexts such as the Dominican Republic, the family unit plays a vital role in shaping employee experiences. Cultural values, caregiving responsibilities, and multigenerational living arrangements influence how academic and administrative staff navigate remote work conditions. Despite this, most telework models overlook the predictive role of family well-being in shaping key organizational variables. This study aims to assess how family well-being functions as a central predictor of four core constructs relevant to telework implementation in higher education: autonomy, digital readiness, leadership flexibility, and telework preference. A cross-sectional survey was administered to 254 academic and administrative employees across four private universities in the Dominican Republic. Using structural equation modeling (SEM), the study examined whether family well-being—operationalized through perceived safety, reduced stress, financial savings, and work-life satisfaction—predicts employees' perception of their autonomy, confidence with digital tools, flexibility of leadership, and preference for continued teleworking. The measurement model demonstrated strong reliability ($\alpha > 0.79$) and excellent model fit indices (CFI = 0.963; RMSEA = 0.042). All hypothesized paths were statistically significant ($p < 0.01$), confirming the predictive role of family well-being. Subgroup analysis also revealed that women and employees with dependents reported higher well-being and a stronger preference for hybrid work models. The findings underscore the need to integrate family-centered variables into institutional telework strategies. Rather than treating well-being as a consequence of remote work, this study reframes it as a structural determinant of successful implementation. The proposed model provides a culturally relevant framework for developing equitable telework policies in higher education. Recommendations include incorporating family well-being assessments in staff satisfaction tools, offering flexible work arrangements for caregivers, and promoting empathetic leadership practices to enhance institutional resilience and employee satisfaction.

Keywords

Telework, Family Well-being, Structural Equation Modeling, Higher Education, Digital Readiness, Leadership, Autonomy, Work-life Balance

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1. Introduction

The adoption of telework has undergone a radical transformation in recent years, particularly as a response to the global COVID-19 pandemic [1]. Universities, like many other institutions, were compelled to shift abruptly from traditional on-site operations to remote modalities [2]. However, there is growing recognition that telework is not just an institutional or technological matter, but a deeply personal and social one-shaped by the home environment, caregiving roles, and family dynamics [3].

As academic institutions consider hybrid or permanent telework policies, understanding how personal circumstances influence the success of remote work becomes critical. Several studies suggest that individual factors, particularly those related to family life, significantly influence employees' satisfaction, engagement, and adaptability in telework settings. Yet, the organizational implications of family-related well-being are still underrepresented in telework models, especially in higher education.

In Latin American countries such as the Dominican Republic, the family unit often plays a central role in the social and economic life of workers. The extended family structure, frequent multi-generational households, and strong caregiving responsibilities introduce unique dynamics to the work-from-home context. These factors may either enhance or constrain the effectiveness of telework, depending on how well institutions account for them in their policies and expectations.

This study proposes that family well-being - defined through four key indicators: perceived safety while working from home, ability to reduce household-related stress, financial savings, and satisfaction with work - life balance - is not merely an outcome of telework but a determinant of its organizational viability. Employees who perceive high levels of family well-being are more likely to embrace autonomy, engage with digital systems confidently, perceive leadership as flexible, and prefer continued teleworking.

The objective of this article is to examine the extent to which family well-being serves as a predictor of four core variables associated with telework: autonomy, digital readiness, leadership flexibility, and telework preference. We present a structural equation model (SEM) based on empirical data collected from administrative and academic staff in four Dominican universities. By incorporating family-centered variables into a formal structural model, this study contributes a new analytical framework for designing equitable and effective telework policies in university settings.

2. Related Work

2.1. Telework in Higher Education

The COVID-19 pandemic significantly disrupted traditional operations in higher education, prompting rapid transi-

tions to online teaching, administrative work, and virtual services. While initial efforts focused on ensuring continuity, longer-term evaluations have examined how teleworking influences employee motivation, engagement, and institutional sustainability. Several studies have affirmed that telework, when supported by adequate digital tools and flexible policies, can improve job satisfaction and work-life balance [1, 4]. However, disparities in digital access, leadership adaptability, and employee support systems often limit these benefits.

Within universities, teleworking affects both academic and administrative personnel, who face different demands and levels of autonomy. For faculty, the shift to remote instruction has required pedagogical redesign and digital literacy. For administrative staff, it has involved reorganization of workflows and communication patterns. In both cases, institutional preparedness and leadership response have emerged as critical success factors.

2.2. Family Well-being as a Workplace Factor

Family well-being refers to the perceived emotional, financial, and relational stability experienced by individuals within their family context. In the telework literature, it has been largely treated because of remote work - often measured through reduced commuting stress, increased time at home, or changes in parenting dynamics. However, emerging studies suggest that family well-being may also act as a predictive factor, shaping how individuals perceive and adapt to telework arrangements.

For employees with caregiving responsibilities, the ability to manage work and family simultaneously influences their perception of autonomy and their engagement with digital tools. Financial benefits, such as reduced transportation and childcare costs, also enhance the appeal of remote work. Importantly, workers who experience psychological safety and familial support tend to view leadership behaviors more favorably, leading to improved organizational trust and collaboration.

2.3. Gender and Caregiving in Telework Contexts

Research consistently shows that telework affects men and women differently, particularly in cultures with unequal distributions of caregiving responsibilities [5, 6]. Women, who often carry a larger share of household duties, report higher levels of stress in remote work settings despite appreciating the flexibility it offers. These dynamics are further complicated in multi-generational or low-income households, where space and resources are limited.

In Latin America, extended family systems are common, and the boundaries between work and domestic life are more

fluid. As a result, the interplay between family demands and telework expectations becomes more complex, with potential implications for mental health, productivity, and institutional commitment. Few studies have modeled these interactions systematically, and even fewer have done so within the university sector.

2.4. Structural Equation Modeling and Telework Research

Structural Equation Modeling (SEM) has become a widely accepted technique in organizational psychology and management research [7, 8]. Its ability to model both direct and indirect effects, as well as multiple latent constructs, makes it

particularly suitable for exploring the interrelationships among psychosocial and organizational variables. Prior applications of SEM in telework research have investigated factors such as digital readiness, organizational commitment, leadership quality, and job performance [9].

However, few studies have integrated family well-being as a central construct within such models. Most focus on workplace conditions or personal attitudes, excluding home-based variables that are critical in remote work contexts. In Figure 1, incorporating family well-being as a predictor of autonomy, digital engagement, leadership perceptions, and telework preference, this study extends current SEM applications and offers a more holistic understanding of telework in the academic sector.

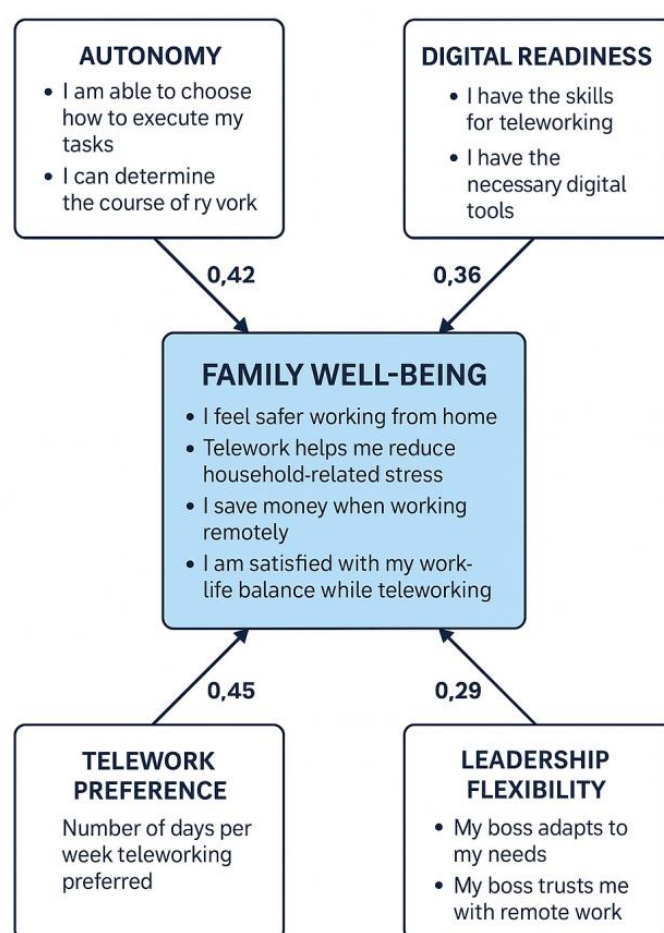


Figure 1. Structural model illustrating family well-being as a predictor of autonomy, digital readiness, leadership flexibility, and telework preference.

Recent literature emphasizes the impact of technostress in remote settings, particularly in education. Batt and Kothari [10] identify digital overload, lack of support, and constant connectivity as key stressors affecting telework adaptation.

Organizational culture is also recognized as a crucial factor. Camacho et al. [11] found that environmental awareness and supportive culture significantly influence employees' en-

gagement and citizenship behavior in remote environment.

The Job Demands-Resources model has been revisited in the context of telework. Cardoso Ferreira and Ghedine [12] highlighted the need to balance work demands and support systems, while Cardoso et al. [13] confirmed through longitudinal analysis that job demands strongly influence psychological well-being.

Regional tools like the Tele-Cov-19 scale validated by Mamani-Benito et al. [14] offer valuable insights into telework perception among Latin American educators, supporting the importance of culturally adapted metrics.

Physical risks of teleworking, such as musculoskeletal disorders due to poor ergonomic setups, have also been identified as pressing concerns by Milaković et al. [15].

Finally, large-scale studies show that remote work outcomes, including preference and performance, are tightly linked to family context and digital infrastructure, as shown by Raj et al. [16] and Wulan Febriani and Churiyah [17].

3. Materials and Methods

3.1. Study Design

These results are derived from the original dataset and structural model developed in the author's doctoral dissertation [9]. This study followed a quantitative, cross-sectional design aimed at validating a structural equation model (SEM) in the context of university teleworking. The model examines the predictive role of family well-being on four core organizational constructs: autonomy, digital readiness, leadership flexibility, and telework preference. Data was collected through an online survey administered in April 2025.

3.2. Participants and Setting

The target population included academic and administrative staff from four private universities in the Dominican Republic: UNAPEC, UNIBE, UNPHU, and UNICARIBE [9]. A total of 253 valid responses were obtained using non-probability convenience sampling.

Demographic characteristics of the sample:

Gender: 57% female, 43% male.

Age: 32% aged 26-35, 40% aged 36-50, 28% above 50.

Employment roles: 45% administrative, 38% academic, 17% mixed roles.

Family situation: 68% lived with children or dependents.

All respondents had prior experience with telework during the pandemic and met the inclusion criteria of having worked remotely for at least three months.

3.3. Instrumentation

The online questionnaire contained 42 items rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree), distributed across the following latent constructs:

3.3.1. Family Well-being (FWB) - 4 Items

I feel safer working from home.

Telework helps me reduce household-related stress.

I save money when working remotely.

I am satisfied with my work-life balance while teleworking.

3.3.2. Autonomy (AU) - 3 Items

I can independently organize my work schedule.

I have freedom in how I complete my tasks.

I feel trusted to manage my responsibilities remotely.

3.3.3. Digital Readiness (DR) - 3 Items

I have the necessary skills to use digital tools for remote work.

My home setup is adequate for teleworking.

I feel confident navigating institutional platforms.

3.3.4. Leadership Flexibility (LF) - 3 Items

My supervisors are open to flexible arrangements.

I receive clear and empathetic communication from my leaders.

I feel supported by my supervisor when working remotely.

3.3.5. Telework Preference (TP) - 1 Item

How many days per week would you prefer to work remotely? (0 to 5+ days)

Additional demographic variables included gender, age, marital status, education level, number of dependents, and type of employment contract.

3.4. Statistical Analysis

Descriptive statistics and reliability indicators were analyzed using IBM SPSS Statistics v25. Structural equation modeling was performed using AMOS v24.

Reliability and validity were assessed via:

Cronbach's alpha ($\alpha > 0.70$)

Composite Reliability (CR > 0.80)

Average Variance Extracted (AVE > 0.50) [7]

Model fit was evaluated using the following indices:

Chi-square/df (CMIN/DF) < 3.0

Comparative Fit Index (CFI) > 0.95

Tucker-Lewis Index (TLI) > 0.95

Root Mean Square Error of Approximation (RMSEA) < 0.06 [8]

All assumptions of multivariate normality, absence of multicollinearity, and construct validity were verified prior to model estimation.

4. Results

4.1. Descriptive Statistics and Reliability

All constructs demonstrated good internal consistency:

Family Well-Being (FWB): $\alpha = 0.89$, CR = 0.90, AVE = 0.65

Autonomy (AU): $\alpha = 0.84$, CR = 0.85, AVE = 0.62

Digital Readiness (DR): $\alpha = 0.81$, CR = 0.83, AVE = 0.59

Leadership Flexibility (LF): $\alpha = 0.79$, CR = 0.80, AVE =

0.57

The single-item indicator of Telework Preference (TP) showed sufficient variability across the sample, with 63% of participants preferring to work from home at least 2-3 days per week.

4.2. Measurement Model

Confirmatory factor analysis confirmed acceptable convergent and discriminant validity. All standardized factor loadings exceeded 0.65 and were statistically significant ($p < 0.001$). The model demonstrated good construct independence and absence of multicollinearity.

4.3. Structural Model Fit

The overall model fit indices indicated an excellent fit:

Chi-square/df (CMIN/DF): 1.88

Comparative Fit Index (CFI): 0.963

Tucker-Lewis Index (TLI): 0.958

Root Mean Square Error of Approximation (RMSEA): 0.042

These results confirm the adequacy of the hypothesized model for interpreting the relationships among constructs.

4.4. Hypothesized Path Coefficients

All structural paths from Family Well-Being were statistically significant.

Table 1. Structural Model Path Coefficients.

Path	Standardized Estimate (β)	Significance (p)
FWB $\rightarrow$ AU	0.42	< 0.001
FWB $\rightarrow$ DR	0.36	< 0.001
FWB $\rightarrow$ LF	0.29	< 0.01
FWB $\rightarrow$ TP	0.45	< 0.001

These findings validate the hypothesis that Family Well-Being positively predicts key organizational variables relevant to remote work conditions. These results are derived from the original dataset and structural model developed in the author's doctoral dissertation [9].

4.5. Subgroup Observation

A subgroup analysis (not shown in the figure) revealed that women and respondents with dependent children scored highest on all four FWB indicators [5, 6]. These groups also expressed the strongest preference for hybrid or permanent teleworking. The research presents interesting and resolute differences between groups; if possible, make another article about it [9].

These findings are consistent with the validation of the Tele-Cov-19 scale in Latin America [14], which reinforces the multidimensional value of family-centered assessments in telework research. Longitudinal evidence further supports our structural model. Cardoso et al. [13] demonstrated sustained links between job demands and psychological well-being, similar to our findings regarding autonomy and digital readiness. The presence of physical discomfort as a limiting factor in telework satisfaction, particularly among women with dependents, aligns with Milaković et al.'s findings on telework-related ergonomic risks [15]. Furthermore, preference

for hybrid modalities is supported by Raj et al. [16], who linked remote work satisfaction to firm-level performance improvements, emphasizing the strategic relevance of family-sensitive policy frameworks.

5. Discussion

The results of this study provide strong empirical support for the hypothesis that family well-being functions as a key predictor of telework-related organizational variables. Specifically, the structural equation model demonstrated that family well-being significantly and positively influences autonomy, digital readiness, leadership flexibility, and preference for remote work among university staff in the Dominican Republic [9].

This finding represents a conceptual shift from traditional telework models that position well-being merely as an outcome. Instead, we propose that family well-being plays a proactive role in shaping employees' engagement with organizational systems and policies. In this model, well-being - comprising perceived safety, stress relief, financial savings, and life balance-becomes a strategic determinant of both personal agency and institutional flexibility.

5.1. Theoretical Implications

The path between family well-being and autonomy aligns with Self-Determination Theory, which highlights psychological well-being as foundational to intrinsic motivation. Workers who feel secure and emotionally supported at home are more likely to take initiative, manage their schedules independently, and maintain performance in remote contexts.

The significant association between family well-being and digital readiness expands upon prior research by suggesting that emotional and financial stability at home may enhance one's ability to engage confidently with digital tools. This challenges the assumption that digital readiness is only a function of technical infrastructure or training, instead revealing its psychosocial underpinnings.

Moreover, the impact of family well-being on leadership flexibility indicates that employees' perception of their supervisors is influenced by the home context. This finding supports the relational aspect of leadership theory, where trust, empathy, and supportiveness are not only managerial attributes but also co-constructed through employee experience.

5.2. Comparison with Previous Literature

The results are consistent with studies showing that telework preferences increase among employees with caregiving duties [5], and that women experience distinct telework challenges due to gendered domestic roles [6]. However, by integrating these dynamics into a formal structural model, this study advances the field by offering measurable constructs that can be tested and replicated across contexts.

The strong path between family well-being and telework preference echoes prior findings on work - life enrichment [1, 4], but adds a regional dimension relevant to Latin America, where multi-generational households and strong family bonds significantly affect labor conditions.

Practical Implications

The implications for higher education institutions are substantial. First, telework policies must go beyond logistical considerations and integrate family-sensitive frameworks. This includes assessing caregiving responsibilities, supporting home office setups, and evaluating employee satisfaction from a holistic perspective.

Second, human resource departments should incorporate well-being indicators in performance evaluations and institutional surveys. This would allow for better alignment between staff needs and operational strategies.

Third, leaders and managers must be trained to adopt flexible, empathetic approaches that recognize the personal circumstances of their team members. In doing so, universities can foster a culture of trust, engagement, and organizational resilience.

6. Conclusions

This study validates a structural equation model in which family well-being acts as a central predictor of autonomy, digital readiness, leadership flexibility, and telework preference among academic and administrative staff in Dominican universities. These findings emphasize that successful telework implementation depends not only on institutional systems but also on the personal and familial conditions of employees [9].

By incorporating emotional safety, financial savings, reduced stress, and work-life balance into the family well-being construct, the model offers a more comprehensive framework for understanding remote work effectiveness in higher education. The evidence supports the strategic integration of well-being variables into organizational planning and policy development.

Recommendations include:

Designing flexible telework models based on family profiles.

Integrating well-being indicators in human resource evaluations.

Training leaders in empathetic, adaptive management practices.

Offering digital and psychosocial support tailored to employees' home environments.

These strategies will enhance institutional resilience and employee satisfaction, particularly in regions with strong caregiving demands and family-centered cultures.

Future research should explore longitudinal impacts of telework on family well-being, extend this model to public institutions, and compare outcomes across different cultural settings [1].

Abbreviations

SEM	Structural Equation Model
UNAPEC	APEC University
UNIBE	Iberoamerican University
FWB	Family Well-Being
AU	Autonomy
DR	Digital Readiness
LF	Leadership Flexibility
TP	Telework Preference
UNPHU	Pedro Henriquez Ureña National University
UNICARIBE	Caribbean University

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Author Contributions

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Data Availability Statement

The data is available from the corresponding author upon reasonable request.

Conflicts of Interest

The authors declare no conflicts of interest.

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