

INTERNATIONAL JOURNAL OF ORGANIZATIONAL LEADERSHIP

WWW.CIKD.CA

journal homepage: <https://www.ijol.cikd.ca>



The Relationship between Remote Working and Work-life Balance with Mediating and Moderating Effects of Social Support: An Empirical Study of Information Technology Employees

KDV Prasad^{1*}, VK Satyaprasad²

^{1,2}Faculty, Symbiosis Institute of Business Management, Symbiosis International (Deemed University), India

ABSTRACT

Keywords:

Remote working, Cronbach's alpha, Social Support, Mediation, Moderation

Received

14 June 2023

Received in revised form

06 July 2023

Accepted

11 July 2023

*Correspondence:

kdv.prasad@sibmhyd.edu.in

This study examined the relationship between remote working and work-life balance with mediating and moderating effects of social support on work-life balance. The study surveyed the information technology employees in and around Hyderabad. The data were gathered using a structured questionnaire for the three constructs remote working, social support, and work-life balance. Only the items for the three constructs with factor loadings of $> .5$ were considered for this study. The reliability and internal consistency of the questionnaire were assessed by Cronbach's alpha and Split-half (odd-even) correlation. The estimated composite reliability and average variance extracted /convergent validity for the constructs are reliable. The data from 301 valid responses were analyzed using structural equation modeling with IBM AMOS 28 version. The assessment with Shapiro Wilk's test statistic indicates that data were normally distributed. The model fit indices demonstrated excellent model fit. There was a statistically insignificant direct effect between remote working and work-life balance; however, social support fully mediates and moderates the work-life balance of the information technology employees. The study assessed the moderating role of social support on the relationship between remote working and work-life balance. The results reveal positive and significant moderating effects of social support on the relationship between remote working and work-life balance. The slope analysis indicates that at a high level of social support, the impact of remote working on work-life balance is positively stronger than low social support, indicating more work-life balance during remote working with high social support.

Remote working is not working from the office but working from a designated place and from home where interaction with colleagues and peers is possible through technology. The absence of peer support, workplace isolation, and missing fun during breaks are some of the issues that affect employee well-being. Some depict remote working as remote work as a flexible, technologically feasible, and family-friendly work arrangement. Remote working is working from a designated place other than an office or home using technology such as laptops, internet, and collaboration tools. It has become increasingly popular recently, in particular during the Covid-19 pandemic. There is a growing interest in studying remote working and work-life balance in relation to social support among employees. The employers directed their employees to work remotely or from to mitigate the infection.

Work-life balance refers that an employee will have sufficient time for both the professional and personal life without interfering with the other. In a remote work setup, employees have more autonomy over their work schedule and can often create a better balance between work and personal life. However, role conflict and role ambiguity, absence of technology, and work schedules will affect the employee work-life balance. Work-life balance refers to the idea that a person should have enough time for work and personal life without interfering with each other. It is believed that employees have more autonomy over their work schedule in a remote work setup and can often create a better balance between work and personal life.

Social support is the physical and emotional comfort given to an individual by our family, friends, co-workers, and others. Emotional support, esteem support, information support, network support, and tangible support are five types of social support described by Schaefer et al. (1981). Social support is the emotional and practical assistance others provide to individuals facing stress, challenges, or problems. In a remote work setup, employees need a robust support system to help them stay motivated, productive, and connected with others. This can be achieved through regular virtual meetings with co-workers, participating in online communities, and trying to stay connected with friends and family. Overall, the above-said factors are all interconnected and essential aspects of a successful remote work experience. By focusing on these three areas, individuals can create a positive and productive remote work environment (Muralidhar et al., 2020).

Social support, particularly family and colleagues support, is essential while remote working to maintain a work-life balance. The work-life balance reflected the conflict between the positive aspects of working on-call or at night and the impact on life outside work. The social structures focused on the role of morale and team spirit. Suitable support structures in the workplace counteracted and compensated for the effects of negative role stressors and arduous and unsocial work schedules (Brown et al., 2010)

The three variables are important factors that can impact an individual's job satisfaction and overall well-being. This study examines the relationship between remote working, work-life balance, and social support in the context of Information Technology (IT) companies in and around Hyderabad. The study will use an empirical approach, collecting data through surveys and interviews with employees of IT companies to gather information on their experiences and perceptions of remote work, work-life balance, and social support.

The presence and absence of job resources model the specific job conditions. Social work opportunities and work-life balance are organizational levers that reduce stress and

willingness to quit employment. The relationships between these work opportunities and turnover intention are partially mediated by anxiety and social support, whereas work-life balance is a valuable resource to mitigate stress (Giauque et al., 2019). Social support also contributes to the work-life balance of remote working women working from home. The positive contribution of social support to work-life balance on working women during work from home is reported by Aras et al. (2022). The association between social support and work-life balance has a positive direction, and the higher social support working women get, their work-life balance will be enhanced. The study also reports the work-life balance of working women and its association with children and age groups.

Tejero et al. (2021) compared the factors associated with work-life balance and productivity before and during working from home. The study reported psychological detachment, sleep, stress, social support, work-life balance, and productivity declined during remote working/work from home. The structural equation model results indicated that personal detachment significantly influenced stress and sleep, subsequently affecting productivity. Social support significantly helped the participants to maintain a work-life balance.

The findings of this study will have practical implications for IT companies in and around Hyderabad and have challenges and advantages in implementing remote work policies. Additionally, the results may have wider implications for the broader discussion on remote work and work-life balance. They could contribute to a better understanding of the role of social support in mediating and moderating the relationship between remote work and work-life balance. The study examines four objectives: 1) Examine the relationship among remote working, social support, and work-life balance as mediating factors in the context of Information Technology (IT) companies in and around Hyderabad, 2) Investigate the role of social support in mediating the relationship through remote working on work-life balance, 3) To examine the moderating effect of social support on employee work-life balance through remote working, and 4) To make recommendations for IT companies in Hyderabad to support their employees in achieving a better work-life balance in remote working. This study answers the following questions:

How does remote work impact an individual's work-life balance and overall well-being?

How does social support from colleagues and superiors mediate and moderate the relationship between remote work and work-life balance?

Review of Literature

Prasad et al. (2023) studied the mediating effects of job satisfaction and occupational stress on remote working employees and reported the mediating effects of these two variables. Remote working will have significant consequences without appropriate technology, resources, and organizational and peer support. The authors suggested organizations should examine the need for remote working and discuss the intricacies of remote working with employees before allowing an employee (Prasad et al., 2023). AlAzzam (2017) investigated the association between work-family conflict, social support, and job satisfaction among Chinese nurses. The results showed that work-family conflict was negatively associated with job satisfaction, and social support significantly mitigated this relationship. Overall, the study highlights the

importance of social support in managing work-family conflict and improving job satisfaction among nurses.

Xiao and Cooke (2012) reported in a study on the work-life balance of knowledge workers in the sharing economy in China. The results showed that remote working and flexible working arrangements were positively associated with work-life balance. The study also found that organizational support, social support, and individual characteristics like self-efficacy played essential roles in managing work-life balance. Overall, the study highlights the need for organizations to provide support and flexibility to knowledge workers in the sharing economy to manage work-life balance and suggests that individual characteristics and social support are also essential factors to consider.

The impact of telecommuting on work-family conflict and the moderating effects of interpersonal justice and social support were reported by (Blakely et al., 2005). The results showed that telecommuting was associated with lower levels of work-family conflict. The study also found that social support and interpersonal justice played important roles in mitigating work-family conflict among remote workers. The study highlights the importance of organizational policies and support in managing work-life balance and the need for social support and fairness to reduce work-family conflict in remote working environments (Blakely et al., 2005).

Bloom et al. (2015) studied the effects of working from home on work-life balance and productivity in a Chinese experiment. The results showed that workers working remotely reported higher levels of work-life balance than their office-based counterparts. However, they also reported higher levels of social isolation, which negatively impacted their well-being. In terms of productivity, the study found that remote workers had higher output levels and were less likely to take sick leave, but they also worked longer hours. Overall, the study suggests that remote working can offer benefits but also presents challenges that need to be managed.

Empirical research was conducted to identify the conditions that working from home will improve or influence job satisfaction. This study's findings show no significant effects of remote work on job satisfaction. Though there are some positive effects on job satisfaction through remote working, there were no significant effects on job satisfaction working from the office (Bellmann & Hubler, 2021).

A study by Wolor et al. (2021) investigated the impact of employee productivity on remote working for long periods during the Covid-19 pandemic in the context of work-life balance and employee stress. The authors used LISREL 8.5, used a sample of 135 employees, and concluded that the work-life balance and work-related affect work productivity. The findings can influence organizational policies and develop strategies to enhance employee work-life balance during remote working.

In a study on telecommuting, perceptions of psychological job control in the context of management strategies, authors reported the office and house boundary management issues. Low turnover is directly related to greater psychological job control and work-life balance. Effective boundary management strategies will positively impact family-work conflict, with good boundary management strategies linked to good work-life balance (Kossek et al., 2006).

Shirmohammadi et al. (2022) analyzed 40 recent empirical studies covering the Covid-19 pandemic and reported misfits between desirable expectations and the unpleasant realities of

remote work. The authors highlighted the critical role human resource development practitioners can play in assisting employees to achieve a fit between their expectations and experiences of remote work. Aruldoss et al. (2021) investigated the relationship between the quality of work-life and work-life balance. The hierarchical regression results indicated that quality of work life is negatively related to job stress, positively associated with job satisfaction, and positively related to job commitment. The authors also reported that job stress is negatively associated with work-life balance and job satisfaction is positively related to work-life balance. The results also show partial mediation of job stress, job satisfaction, and job commitment in the relationship between quality of work-life with work-life balance.

Metselaar et al. (2022) investigated the consequences of perceived performance and the mediating role of employee autonomy and work-life balance satisfaction in teleworking employees at different locations outside the office. Mediation analysis showed that the paths from teleworking to performance via autonomy and work-life balance satisfaction were significant for working from home.

Azim and Al-Halawani (2020) used a cross-sectional quantitative study based on a survey to investigate the relationship among perceived non-work social support, self-efficacy, and employee job engagement. Data were analyzed using a partial least square-based structural equation model, Smart-PLS version 3.0. The study findings indicate an absence of a statistically significant relationship between perceived non-work social support and employee job engagement. However, it is revealed that non-work social support indirectly contributes to higher engagement through increased self-efficacy, a mediator. The result suggests that support from family and friends increases employees' self-efficacy, which in turn motivates them to engage in work.

Based on the literature survey, authors could identify and develop a research gap on the perceived social support of employees in managing work-life balance and mediation moderating effects of social support on employee work-life balance through remote working.

Research Gap and Hypotheses

The proposed study bridges the gap in research on social support and organizational issues, like remote working and work-life balance. The authors could source several available literature that reported social support's influence during remote working. However, the mediating effects and the moderating role of social support are not studied in detail. So far, findings are inconclusive regarding the effects of information technology employees in the context of Hyderabad, and a few studies have examined remote working effects on employee well-being. Further, there is a need to address work-life balance issues concerning remote working and social support in the information technology industry in Hyderabad. Though the pandemic eased out, most of the employees in the information technology sector in Hyderabad, an Indian Metro, are still continuing remote working. The proposed study with mediating and moderating the effect of social support on employee work-life balance in the information technology sector will help address the employee work-life balance issues by modifying the organization's policies if needed. The following hypotheses are proposed considering the identified research gaps and the objectives. The researcher's hypothetical framework is presented in [Figure 1](#).

H₁: Remote working has a statistically significant and influences the work-life balance of IT employees

H₂: Social support has a statistically significant influence on the work-life balance of IT employees

H₃: Remote working is statistically significant and influences the social support of IT employees

H₄: Social support has a mediating effect on the work-life balance of IT employees

H₅: Social support moderates the work-life balance through remote working

Hypothetical Model

The conceptual framework is based on the model Prasad et al. (2023) and Palumbo et al., (2021). Palumbo et al. investigated the implications of home working on work-life balance in educational services to study the unforeseen challenges of the Covid-19 pandemic. The author addressed the issues of home-based telecommuting employees and its side effects on employees, especially regarding work-life balance. The authors suggest that home-based telecommuting may trigger work-to-life and life-to-work conflicts due to blurring boundaries between work and everyday life. Soft tools, such as organizational meaningfulness and work-related well-being, mediate the relationship between working from home and work-life conflicts, lessening the negative implications of working from home on work-life balance. Prasad et al. (2023) studied remote working and occupational stress and reported the mediating effects of occupational stress and job satisfaction and employee performance. The hypothetical model and theoretical relationships among the variables are depicted in Figure 1 and Figure 2.

Figure 1

Authors Hypothetical Model

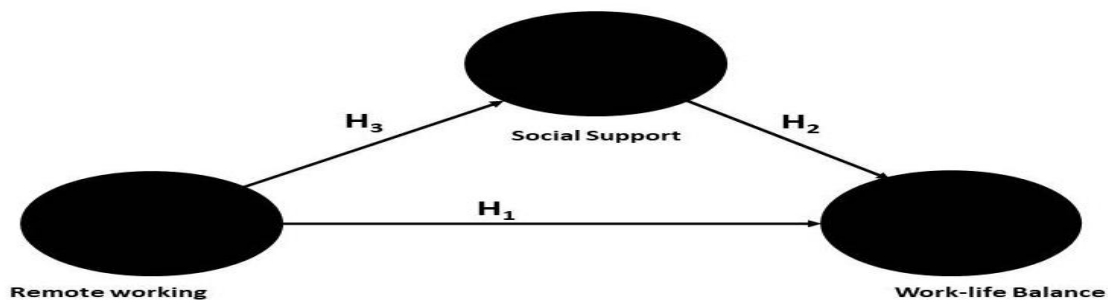
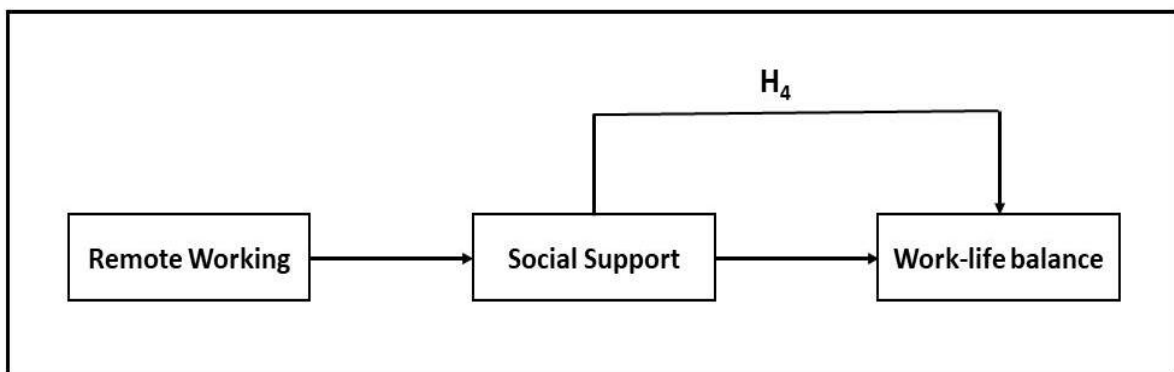


Figure 2

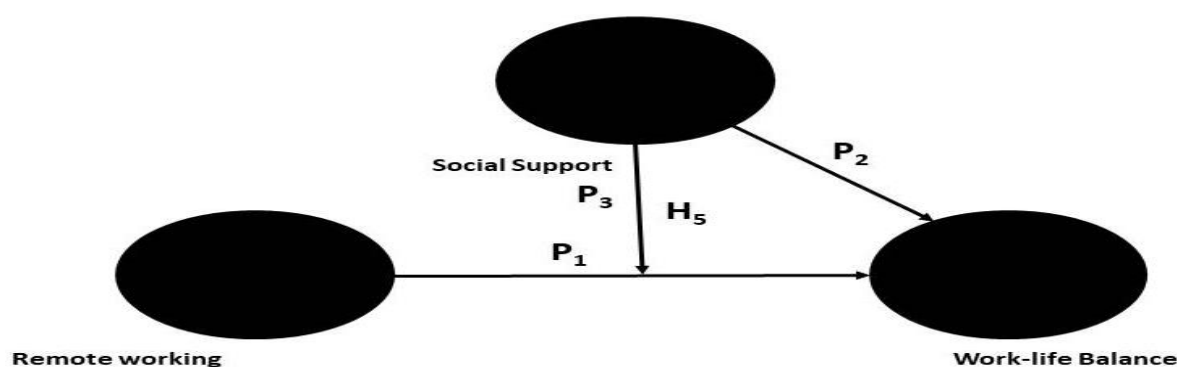
Theoretical Model and Relations among Variables (authors' creation) Adopted from Metselaar et al. (2022)



To better understand, the study modeled moderating effects of social support on work-life balance through remote working, adopting the model (Figure 3) of Hair et al. (2022). The moderating effect (P₃) is represented by an arrow pointing at the effect p1 linking remote working and social support. Furthermore, when including the moderating impact on an SEM path model, there is also a direct relationship (P₂) from the moderator to the endogenous construct of work-life balance.

Figure 3

Moderation Model Adopted from Hair et al. (2022)



Method

The sample consists of 301 subjects, with 158 men and 143 women. The characteristics of the study sample are presented in Table 1. The population of IT sector employees is unknown; therefore, the Cochran (1977) method was used to estimate the sample size. As per Cochran's (1977) method, the required sample size is 384. However, this study considered 301 valid responses for data analysis. The required minimum sample size for structural equation modeling analysis is 50+5x, where x is the number of questions. The present study has 24 questions, and the required sample size calculated based on the formula is 170 (James, 2009). Therefore, the valid responses, 301 for this study, are higher than the required sample size.

Table 1

Demography and Descriptive Statistics of the Sample

Item	f	Percent
Gender		
Male	158	52.49
Female	143	47.51
Age Group		
20-30	97	32.22
31-40	78	25.92
41-50	74	24.58
>50	52	17.28
Marital Status		
Married	156	51.82
Unmarried	145	48.18
Education		
SSC	35	11.62
Graduate	120	39.87
Post-Graduate	127	42.19
Other	19	6.32
Children		
Yes	120	39.87
No	181	60.13
Experience		
1-5 years	40	13.29
6-10 Years	54	17.94
11-20 Years	85	28.23
More than 20 Yeas	32	10.64

Instruments

The study was carried out with a 24-item questionnaire with three constructs remote working with 12 items, social support-6 items, and work-life balance with six items. The questionnaire was developed following the published questionnaires on remote working (Prasad et al., 2021), social support, and work-life balance (Prasad, 2018). The statements were modified to suit the present study. Twenty-nine statements were considered for this study; however, five items (two from remote working, one from social support, and two from work-life balance) were dropped because the outer loadings of the items were $< .5$. The scale's reliability and validity were assessed (Cronbach's alpha = .84, Split half (odd-even) reliability .87) (Cronbach, 1951). The reliability statistics for the constructs remote working (.92); social support (.90) and work-life balance (.89), (Table 3) indicated the questionnaire is consistent and reliable. The collected data were analyzed using structural equation modeling to measure the effect of remote working and social support on the work-life balance of IT sector employees. The developed questionnaire was published on Google form and circulated through emails and Whatsapp to gather the data. Four hundred respondents shared the questionnaire link, the employees of the information technology domain. Three hundred and one valid responses were considered for data analysis using structural equation modeling.

Data Analysis

The data were analyzed with structural equation model analysis (IBM AMOS 28) to test the researcher's hypothetical framework. The outer and inner measurement models were examined. The present study consists of three reflective constructs with 19 indicators. The researchers using IBM-AMOS have established to measure absolute path-coefficients in several research studies and organizational psychology studies with small and large sample sizes, including non-normal and normal data (Hair et al., 2013).

Results

The following sections present the results of structural equation modeling – the measurement and structural models and mediation analysis- along with the testing of hypotheses. The present study consists of 3 latent constructs, and all are reflective. Therefore, the reliability and validity are assessed for their appropriateness for further investigation to determine the reflective measurement (Hair et al., 2011). The structural model with loadings is presented in Figure 4. Initially, convergent validity was assessed to evaluate the outer measurement model, and for this factor, loadings, Average Variance Extracted (AVE), and Composite Reliability (CR) were measured. The three reflective constructs' factor loadings are analyzed to assess the measurement model. The five items with low ($< .5$) factor loading values (for the three constructs) were removed to enhance the outer model, as the scales were reflective (Hair et al., 2013). The structural equation model was re-run after removing the low-factor loadings. From the re-run of SEM, all the factor loadings for 19 items reached greater than recommended average indicators value of a construct is .7, and an excellent outer measurement model was constructed (Chin et al., 2008). Referring to the model's assessment, the recommended cutoff value of 0.7 loadings constitutes a good outer measurement (Chin et al., 2008; Hair et al., 2013). However, there are some loadings for four construct items where the loadings for respectively items are $< .7$ (Table 2), which were retained for the analysis as

the respective construct's average loading is $> .7$ and Average Variance Extracted for every construct is $> .5$ (Hair et al., 2013). The outer factor loading for all the reflective constructs is presented in Table 2, and the values indicate an excellent outer model. The reliability statistics for the study variables are presented in Table 3.

Table 2

Items and Outer Loadings for Study Variables

Remote working	Outer loading
RW1 – “I can communicate through various modes and can prioritize the communication modes like email Whatsapp”, chat, Skype based on the importance	.90
RW2 – “I have enough knowledge/technical know-how to carry out my work remotely without or with minimal supervision”	.88
RW3 – “My organization provides all the software/technology needed for remote working”	.89
RW4 – “The technology provided able me to connect to others while remote working”	.69
RW5 – “There is a scope for digital/virtual meetings of staff with peers during remote working”	.70
“RW6 – “My role is essential for achieving the objectives of the Team/ organization through remote working”	.70
RW7 – I am part of the essential delivery service team and my role is demand through remote operation”	.74
“RW8 – I will not feel workplace isolation during remote working”	.75
“RW9 – I am able to connect colleagues through remote working”	.73
“RW10 – I will not feel alienated from the workplace and teamwork during remote working”	.60
Social Support	
“SS1 – I receive enough backup support from family”	.86
“SS2 – My spouse will look after my children”	.80
“SS3 – I receive emotional support (support from spouse/husband etc.)”	.79
“SS4 – I receive instrumental and information support (assistance from friends and loved ones”	.66
“SS5 – I often receive appraisal support from my family and relatives (Support in terms of goods, materials and service”	.63
Work-life balance	
WL1 – “I often neglect my personal needs due to the stress of my work”	.82
WL2 – “My work suffers because of everything going on in my personal life”	.74
WL4 – “I return home from work too tired to try to do things I wish to do”	.81
WL5 – “My job makes it difficult to take care of the type of private life I might like”	.82

Note. Source: Primary data analyzed and processed

After assessing the outer loadings, the CR, i.e., the degree of reflection of an unobserved variable or latent constructs by the items of that construct, and convergent validity measuring AVE were measured. The values for CR for all three constructs are greater than the recommended value of $> .5$ (Hair et al., 2013), indicating the reliability of all the latent constructs. The AVE values for all the constructs are greater than the recommended value of $.5$ (Hair et al., 2013). The construct reliability validity and AVE values are presented in Table 3.

Table 3

Reliability Statistics

S.No	“Study Variable”	“Split-Half (Odd-Even) Correlation”	“Cronbach alpha”	CR	AVE
1	Remote Working	.81	.92	.93	.58
2	Social Support	.82	.89	.86	.56
3	Work-Life Balance	.80	.92	.87	.64

Note. Source: Primary data processed

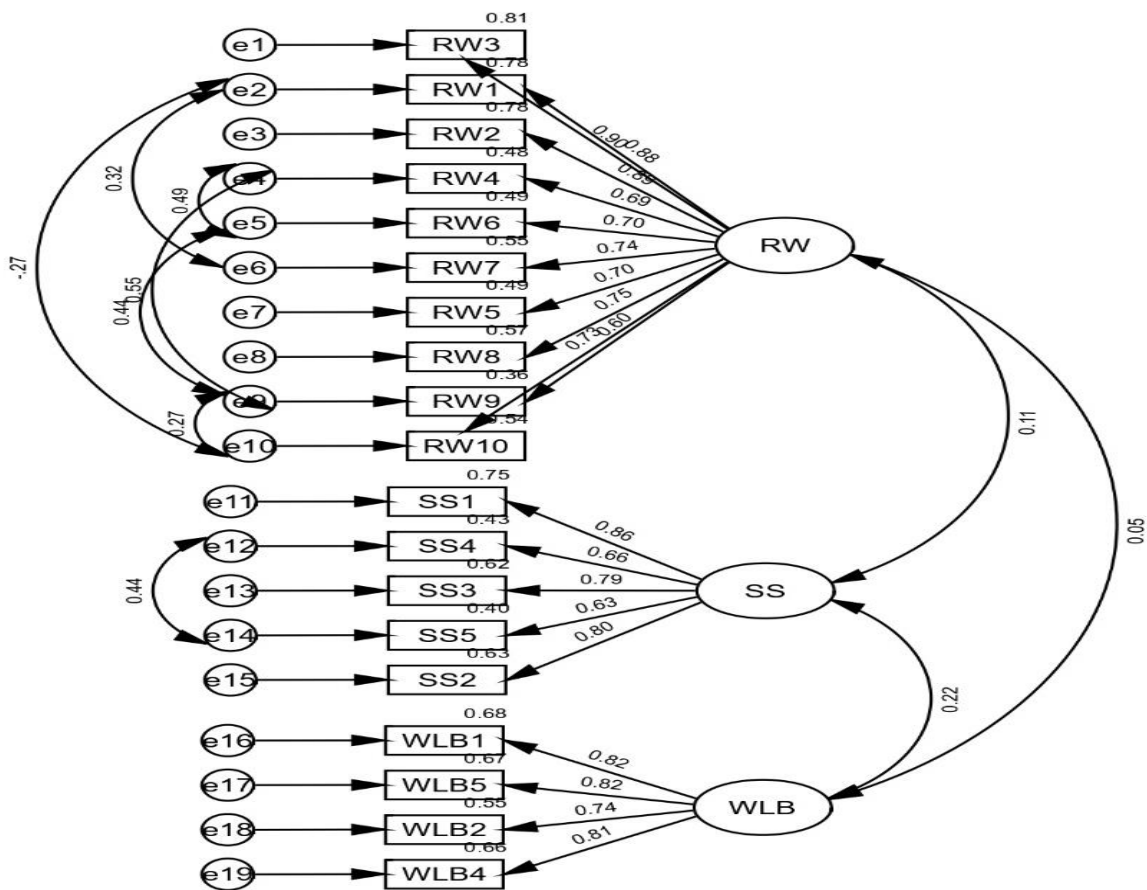
Structural Model

The inner composition of the relations between the different constructs is depicted in the structural model. The model fit statistics are indicated in Table 4. The structural model fit statistics indicate the model is an excellent fit. The structural model is presented in Figure 4.

Table 4
Model Fit Statistics

Item	Estimate	Range	Reference
CMIN	405.87		
DF	142.00		
Relative Chi-Square (CMIN/DF)	2.85	< 3	Kline (2011)
Comparative Fit Index (CFI)	0.93	> .90	Bentler & Bonett (1980)
Incremental Fit Index (IFI)	0.92	> .90	Bollen & Lennox (1991)
Tucker Lewis Index	0.93	> .90	Tucker & Lewis (1973)
Normed Fit Index	0.93	> .90	Bentler and Bonett (1980)
Root Mean Square Error of Approximation (RMSEA)	0.07	0.5 or less	MacCallum et al. (1993)
Standardized Root Mean Square Residual (SRMR)	0.04	< .05	MacCallum et al. (1993)
PClose	0.99	> .05	James et al. (2009)

Figure 4
Structural Model



Discriminant Validity

Discriminant validity refers to the degree to which the measures should be highly correlated and indicates how the given construct differs from other constructs (Anderson & Gerbing, 1988). According to Fornell and Larcker (1981), the construct AVE should be > than the variance among the construct and other constructs of the model. In Table 5, the diagonal values in bold indicate > than its correlation with any other latent variable, so the discriminant validity is met. The Heterotrait-Monotrait Ratio (HTMT) analysis examines the ratio among trait correlations of the two constructs. If the HTMT value is < .90 the discriminant validity is

established between the two constructs. As presented in Table 5, all the values are < .90. Therefore, the discriminant validity is established (Henseler et al., 2015)

Table 5*Discriminant Validity*

	Remote working	Social support	Work-life balance
Remote working	.76		
Social support	.11	.75	
Work-life balance	.05	.22***	.80
HTMT			
Remote working			
Social support	.06		
Work-life balance	.03	.19	

Note. Source: Primary data analyzed; Thresholds are 0.850 for strict and 0.900 for liberal discriminant validity.

Common Method Bias

The Common Method Bias (CMB) is inflation or (in rare cases depletion) of the true correlation between the observable variables in the study. In most cases, the respondents reply to the questions consisting of independent and dependent variables simultaneously; there is a chance for artificial inflation of covariance. This study estimated common method bias using Harman's Single Factor Test and Common Method Latent Factor methods.

Harman's Single Factor test: In this test, the researchers have loaded all the indicators were loaded to one factor, and Confirmatory Factor Analysis was performed to assess the model fit. The model fit was verified, and an excellent fit indicated no common method bias.

Latent Common Method Factor: In this procedure, the authors used a latent variable that directly relates to all the construct's indicators in the model. A latent construct was drawn and labeled as Common Method. Later the model included a direct relationship from the unobserved common method latent construct to every indicator in the model. After drawing a path from the common method construct to all the indicators in the model, a constraint to all the relationships from the method factor to be equal is made to examine if there is any common influence across all the indicators. The model was run with the latent common method variable, which directly relates to all the factors, and the Chi-Square value of this CFA model was noted. The observed Chi-square value is 410.23, with a degrees of freedom is 141. The original model chi-square without latent factor is 405.87 with degrees of freedom is 142. The difference between the chi-squares is 4.36, indicating that there is a common method bias. However, it is not a substantial concern in this study as the CMB is at a very low level and is not affecting the study's outcome. The results are presented in Table 6.

Table 6*CMIN (without latent common method)*

Model	NPAR	CMIN	dF	P	CMIN/DF
Default model	67	405.87	142	.000	2.85
Saturated model	209	.000	0		
Independence model	38	4061.97	171	.000	23.75

CMIN (with latent common method)

Default model	67	410.23	141	.000	2.90
Saturated model	209	.000	0		
Independence model	38	4061.97	171	.000	23.75

Testing of Hypotheses

From Table 7, it can be observed that the path coefficients for remote working are not statistically significant and not influencing the work-life balance of the information technology employees ($\beta = .08$; $p > .05$) (Figure 5), and if remote working is increased by 1 unit, the work-life balance goes by .08 units (Table 7). From this, it is evident not support the Hypothesis H₁: Remote working has a statistically significant and influences the work-life balance of IT employees

Social support is statistically significant and positively influences the work-life balance of the employees of the IT industry with ($\beta = .13$; $p < .01$) (Figure 6). H₂: Social support has a statistically significant influence on the work-life balance of IT employees supporting the H₂.

Further, remote working is not statistically significant and not influences social support ($\beta = .09$; $p > .005$, explaining a 5% variance in work-life balance (Figure 6). This not supports the H₃: Remote working is statistically significant and influences the social support of IT employees supporting H₃.

Table 7

Estimates of Structural Equation Modeling (Hypotheses Testing)

Hypotheses	β	t	p	Decision
H1: RW→WLB	.08	1.76	> .05	Not Supported
H2: SS→WLB	.13	3.36	< .001	Supported
H3: RW → SS	.09	1.82	> .05	Not Supported
H4: SS mediates WLB	.14	4.07	< .001	Supported

Note. Source: Primary data processed

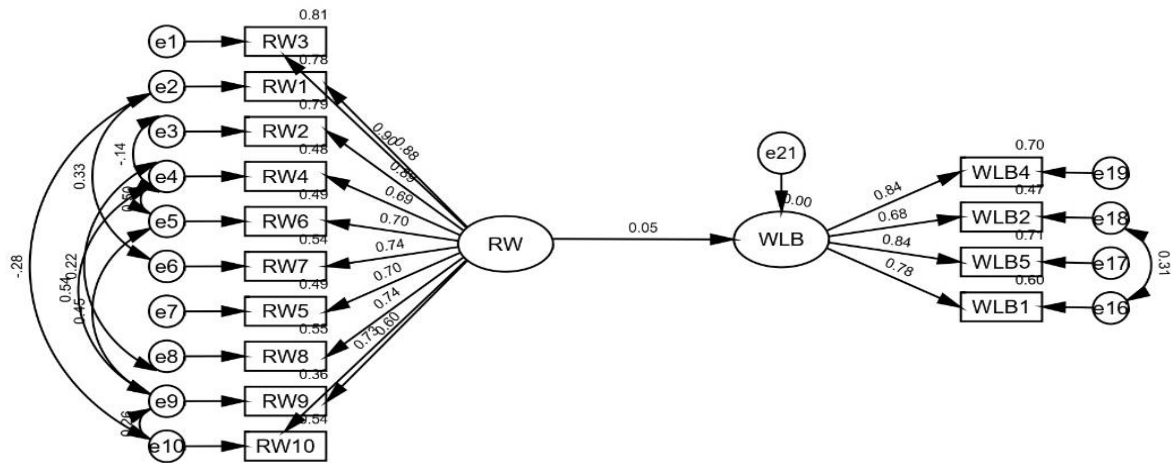
Mediation Analysis

The influence between two constructs takes an indirect path through a third variable called a mediator. At this point, the third variable intervenes with the influence of the two constructs. A mediating variable is also referred to as an intervening variable. The direct, indirect, and total effects need to be assessed to measure the effect of mediating variables.

In assessing the mediating effect of mediating variables, the direct effect of the independent construct on the dependent construct in the absence of a mediator was measured. If the result is found significant, further mediation analysis is carried out (Hair et al., 2016). Later the bootstrapping procedure for assessing the confidence intervals is followed (Cheung & Lau, 2008; Mahfud et al., 2020). From Figure 5, it can be observed that in the absence of a mediator, remote working has a positive and considerable impact on the work-life balance of IT sector employees. The Estimates are not statistically significant ($\beta = .03$; $p > .05$); however, further mediation analysis is carried out.

Figure 5

Direct Relationship among Independent Variable Remote Working with Dependent Variable Work-life Balance in the Absence of Mediator

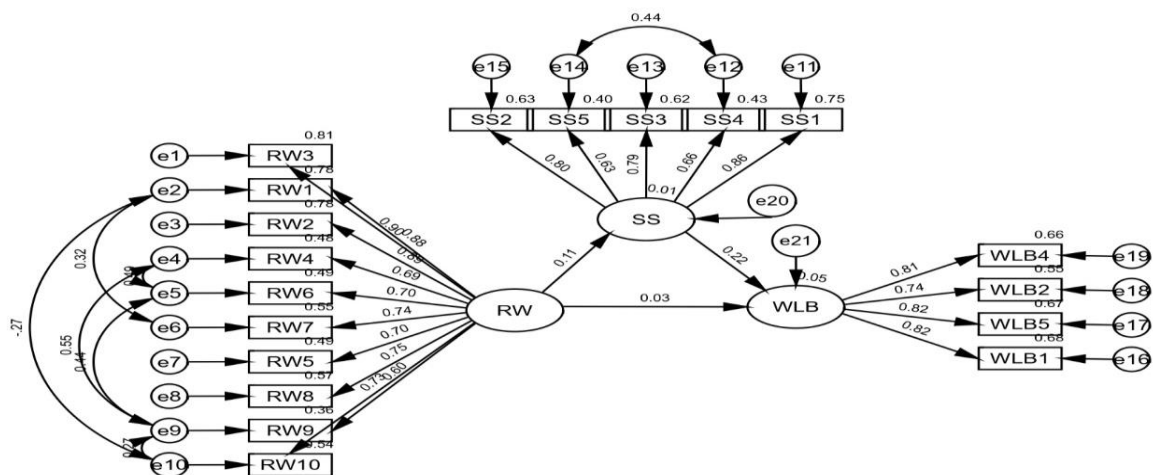


The study examines the effect of the mediation effect of social support on the work-life balance of IT employees. The author followed the procedure of Preacher and Hayes (2008), which assesses the indirect effects of the model. This study examined the indirect effect of mediating variable social support on work-life balance. Prasad et al. (2023) studied the mediating effects of organizational support and occupational stress on performance through remote working in information technology employees. The findings reveal that organizational commitment is statistically significant and mediates performance through remote working.

The study assessed social support’s mediating role in the work-life balance of IT employees. The results revealed social support is statistically significant and has an indirect effect on work-life balance through remote working ($\beta = .22, p < .01$), indicating an increase in a unit of job satisfaction decreases .22 units of work-life balance is enhanced, supporting H4: Social support has a mediating effect on work-life balance through remote working.

Figure 6

Mediation Analysis



Note. RW: Remote working; WLB: Work-life balance; SS: Social Support

The study assessed the mediating effect of social support on the relationship between remote working and work-life balance. The results revealed a statistically significant ($b = .14$,

$t = 4.07, p < .001$), supporting H4: social support mediates the work-life balance. However, the direct effect of remote working on work-life balance in the presence of the mediator social support was also found to be not statistically significant ($b = .003; p > .05$). Hence, social support fully mediates the relationship between remote working and work-life balance. Mediation analysis results are presented in Table 8.

Table 8

Mediation Analysis Summary

Relationship	Direct effect	Indirect effect	Confidence Interval		P-value	Conclusions
			Lower bound	Upper bound		
Remote working → social support → Work-life balance	.01 ($> .05$)	.14 (.000)	.08	.18	$< .001$	Full mediation

Moderation Analysis

The study assessed the moderating role of social support (SS) on the relationship between remote working (RW) and work-life balance (WLB). The results revealed that statistically significant and positive moderating impact of social support on the relationship between remote working and work-life balance ($b = .09, t = 2.76, p = .005$) supporting H5: Social support moderates the work-life balance through remote working. The moderation analysis summary is presented in Table 9.

Table 9

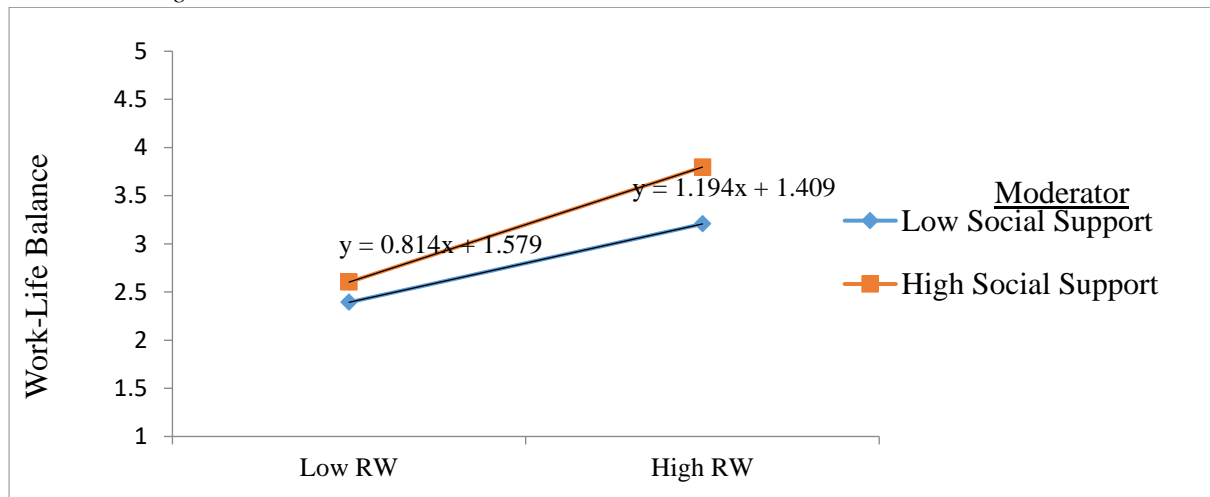
Moderation Analysis Summary

Relationship	Beta	CR	p
SS→WLB	.19	4.96	0.000
RW*SS→WLB	.09	2.76	0.006

A simple slope analysis in Figure 7 shows that the line is steep for low Remote working (RW). This shows that at a Low level of social support, the impact of remote working on work-life balance is much weaker than high-level social support. As the level of social support (SS) is increased, the strength of the relationship between remote working and work-life balance is increased.

Figure 7

Simple Slope Analysis on the Nature of Moderating Effects of Social Support on Work-Life Balance through Remote Working



Discussion

The study focuses on the impact of remote working on work-life balance and mediating and moderating the role of social support through remote working on information technology employees in and around Hyderabad. This empirical research was conducted by gathering data from employees of the Information Technology (IT) industry using a questionnaire and survey method. The results reveal that remote working positively affects work-life balance, and social support plays both mediating and moderating role between remote working and work-life balance, positively impacting the work-life balance. The study reveals that the work-life balance is better if social support is high. Specifically, social support from colleagues and family strengthened the positive impact of remote working on work-life balance. Mishra and Bharti (2023) examined the relationship between social support, work-life balance, and satisfaction with life in the context of hybrid work. The authors concluded that hybrid work is positively related to social support and work-life balance. The study further established the mediating role of social support between hybrid and work-life balance, and our results are in line with this study.

Palumbo (2020) carried investigated the side effects of remote working on work-life balance using an empirical and quantitative research design. The author reported the negative effect of work-life balance on public servants, and the employees who worked remotely suffered from role conflict issues. However, social support and work engagement positively mediated the negative effects of remote working and work-life balance. The outcome of the reported study is similar to the results reported by the author.

Building on the Affective Events Theory, Ugwu et al. (2023) examined the relationship between work engagement with work-life balance (WLB) and studied the mediating effects of home demands. The authors reported the positive effects of work engagement on home demands and home demands negatively associated with work-life balance. The results further revealed that work engagement related negatively to WLB and that home demands mediated the negative work engagement-WLB connection. Our study reports similar effects of remote work on work-life balance with social support's mediating and moderating role.

Slavković et al. (2021) carried out a similar study on remote work for the sustainability of the organization during the Covid-19 pandemic studying the mediator-moderator role of social support. The author studied the role of social support in the context of the relationship between negative work-home interaction (NWHI) and negative home-work interaction (NHWI) using the PLS-SEM approach. The results indicate a strong and positive direct association between social support and work engagement and job performance, while mediation and moderation of the role of social support were mostly confirmed but with some results opposite to what was expected. Social support could not buffer a negative home-work interaction and loneliness within remote working. This study confirms our results on mediating and moderating the role of social work on work-life balance with remote working.

The study's findings highlight the importance of social support for employees working remotely and suggest that companies should provide opportunities for remote workers to interact and connect with their colleagues and support systems. Additionally, the study highlights the need for companies to adopt policies and practices that support work-life balance for their remote workers. The results show that remote working positively impacts work-life balance, providing employees greater flexibility and autonomy in managing their

work and personal time. However, social support plays a crucial role in determining the extent to which remote workers experience positive work-life balance outcomes. Specifically, employees who received high social support from their colleagues and supervisors were likelier to report better work-life balance.

Conclusion

In conclusion, the study provides valuable insights into the impact of remote working on work-life balance and the mediating and moderating role of social support. Companies can use the results to enhance their remote work policies and practices, improving their employees' work-life balance and overall job satisfaction. Our study offers insight into the role of social support and recommendations for managing the antecedents and consequences of remote working, intending to determine a sustainable model for extensive application, not only during the COVID-19 pandemic but in regular times. However, workplace isolation, interaction with colleagues, and missing fun during routine breaks are the issues that need to be addressed during remote working.

While remote work offers a range of benefits, such as increased flexibility and autonomy, it can also present challenges that workers need to navigate. These include issues such as isolation, blurred work-life boundaries, and a lack of social support. In this context, work-life balance and social support have emerged as critical mediating factors in ensuring the success of remote work arrangements. Remote work can blur the boundaries between work and personal life, making it difficult for workers to switch off from work and relax. This can increase stress and burnout, impacting job satisfaction and overall well-being. Effective work-life balance strategies such as setting clear work hours and establishing a dedicated workspace can help remote workers manage these challenges. Social support is another critical factor that can impact the success of remote work arrangements. Remote workers may feel isolated and disconnected from their colleagues and supervisors, which can impact their ability to collaborate effectively and feel motivated. They may also lack the support of family and friends outside of work, which can impact their overall well-being. Providing remote workers access to social support, such as regular team meetings and virtual social interaction opportunities, can help address these challenges.

The remote working offers numerous benefits but challenges that must be managed effectively. Work-life balance and social support have emerged as critical mediating factors in ensuring the success of remote work arrangements. Employers should prioritize the development of effective work-life balance strategies for remote workers, such as providing access to resources and support for managing workloads, establishing clear communication protocols, and encouraging regular breaks and downtime. They should also offer opportunities for social interaction and collaboration, such as virtual team meetings and social events. At the same time, remote workers should proactively manage their work-life balance and seek social support. This may involve establishing clear boundaries between work and personal life, taking regular breaks and engaging in self-care activities, and reaching out to colleagues and friends for support when needed. By prioritizing work-life balance and social support, remote workers can maximize the benefits of remote work while minimizing its challenges. Ultimately, remote work can transform the way we work and live, but only if we can manage its challenges effectively.

Recommendations

Based on our study and its outcomes, the authors recommend the following recommendations for industry, particularly those who are still employing remote workers.

The organization should address the issues of workplace isolation, absence of peer support, interaction with colleagues, and missing fun during routine breakups. Encourage routine and effective communication of colleagues and peers through technology and online interactions. Support the employees with flexible work schedules. Therefore, employees can attend to the needs of the family and get adequate social support. The employers should provide adequate technology to have routine peer-colleague interactions, and open communications, foster a supportive work culture, and develop policies on establishing clear work-life boundaries addressing role ambiguity issues. The recommendation may mitigate the problems during remote work and maximize its benefits. Employers can also benefit from improved productivity and employee retention by providing a supportive work environment that prioritizes work-life balance and social support. Ultimately, the success of remote work depends on the ability of both employers and remote workers to work together to manage its challenges effectively.

Declarations

Acknowledgements

Not applicable.

Disclosure Statement

No potential conflict of interest was reported by the authors.

Ethics Approval

Not applicable.

Funding Acknowledgements

Not applicable.

Citation to this article

Prasad, K. D. V., & Satyaprasad, V. K. (2023). The relationship between remote working and work-life balance with mediating and moderating effects of social support: an empirical study of information technology employees. *International Journal of Organizational Leadership*, 12(3), 235-253. <https://doi.org/10.33844/ijol.2023.60366>

Rights and Permissions



© 2022 Canadian Institute for Knowledge Development. All rights reserved.

International Journal of Organizational Leadership is published by the Canadian Institute for Knowledge Development (CIKD). This is an open-access article under the terms of the [Creative Commons Attribution \(CC BY\) License](#), which permits use, distribution, and reproduction in any medium, provided the original work is properly cited.

References

- AlAzzam, M., AbuAlRub, R. F., & Nazzal, A. H. (2017, October). The relationship between work–family conflict and job satisfaction among hospital nurses. *Nursing Forum*, 52(4), 278–288.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411.
- Aras, R. A., Wahyuni, S., & Thalib, A. H. S. (2022, February). Contribution of social support to work-life balance on working women during work from home. *Interdisciplinary Conference of Psychology, Health, and Social Science (ICPHS 2021)*, 24–30. Atlantis Press.
- Aruldoss, A., Kowalski, K. B., & Parayitam, S. (2021). The relationship between quality of work life and work-life-balance mediating role of job stress, job satisfaction and job commitment: evidence from India. *Journal of Advances in Management Research*, 18(1), 36–62.
- Azim, M. T., & Al-Halawani, F. M. J. (2020). Perceived non-work social support and employee engagement: the mediating role of self-efficacy. *Middle East Journal of Management*, 7(2), 166–184.
- Bellmann, L., & Hübler, O. (2021). Working from home, job satisfaction and work–life balance—robust or heterogeneous links? *International Journal of Manpower*, 42(3), 424–441.
- Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88(3), 588.
- Blakely, G. L., Andrews, M. C., & Moorman, R. H. (2005). The moderating effects of equity sensitivity on the relationship between organizational justice and organizational citizenship behaviors. *Journal of Business and Psychology*, 20, 259–273.
- Bloom, N., Liang, J., Roberts, J., & Ying, Z. J. (2015). Does working from home work? Evidence from a Chinese experiment. *The Quarterly Journal of Economics*, 130(1), 165–218.
- Bollen, K., & Lennox, R. (1991). Conventional wisdom on measurement: A structural equation perspective. *Psychological Bulletin*, 110(2), 305.
- Brown, M., Tucker, P., Rapport, F., Hutchings, H., Dahlgren, A., Davies, G., & Ebdon, P. (2010). The impact of shift patterns on junior doctors' perceptions of fatigue, training, work/life balance and the role of social support. *Quality and Safety in Health Care*, 19(6), e36–e36.
- Cheung, G. W., & Lau, R. S. (2008). Testing mediation and suppression effects of latent variables: Bootstrapping with structural equation models. *Organizational Research Methods*, 11(2), 296–325.
- Chin, W. W., Peterson, R. A., & Brown, S. P. (2008). Structural equation modeling in marketing: Some practical reminders. *Journal of Marketing Theory and Practice*, 16(4), 287–298.
- Cochran, W. G. (1977). *Sampling techniques*. John Wiley & Sons.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297–334.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50.
- Giauque, D., Anderfuhren-Biget, S., & Varone, F. (2019). Stress and turnover intents in international organizations: social support and work–life balance as resources. *The International Journal of Human Resource Management*, 30(5), 879–901.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM) (3rd ed.)*. Sage.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice*, 19(2), 139–152.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long Range Planning*, 46(1-2), 1–12.
- Hair, Jr, J. F., Sarstedt, M., Matthews, L. M., & Ringle, C. M. (2016). Identifying and treating unobserved heterogeneity with FIMIX-PLS: part I—method. *European Business Review*, 28(1), 63–76.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43, 115–135.
- James, G. A., Kelley, M. E., Craddock, R. C., Holtzheimer, P. E., Dunlop, B. W., Nemeroff, C. B., ... & Hu, X. P. (2009). Exploratory structural equation modeling of resting-state fMRI: applicability of group models to individual subjects. *Neuroimage*, 45(3), 778–787.
- Kline, R. B. (2011). *Principles and practice of structural equation modeling*. (3rd Edition). Guilford publications.

- Kossek, E. E., Lautsch, B. A., & Eaton, S. C. (2006). Telecommuting, control, and boundary management: Correlates of policy use and practice, job control, and work–family effectiveness. *Journal of Vocational Behavior*, 68(2), 347–67.
- MacCallum, R. C., Wegener, D. T., Uchino, B. N., & Fabrigar, L. R. (1993). The problem of equivalent models in applications of covariance structure analysis. *Psychological Bulletin*, 114(1), 185.
- Mahfud, T., Triyono, M. B., Sudira, P., & Mulyani, Y. (2020). The influence of social capital and entrepreneurial attitude orientation on entrepreneurial intentions: the mediating role of psychological capital. *European Research on Management and Business Economics*, 26(1), 33–39.
- Metselaar, S. A., den Dulk, L., & Vermeeren, B. (2022). Teleworking at different locations outside the office: Consequences for perceived performance and the mediating role of autonomy and work-life balance satisfaction. *Review of Public Personnel Administration*, 0734371X221087421.
- Mishra, N., & Bharti, T. (2023). Exploring the nexus of social support, work–life balance and life satisfaction in hybrid work scenario in learning organizations. *The Learning Organization*. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/TLO-08-2022-0099>
- Muralidhar, B., Prasad, D. K., & Mangipudi, D. M. R. (2020). Association among remote working concerns and challenges on employee work-life balance: an empirical study using multiple regression analysis with reference to international agricultural research institute, Hyderabad. *International Journal of Advanced Research in Engineering and Technology*, 11(6).
- Palumbo, R. (2020). Let me go to the office! An investigation into the side effects of working from home on work-life balance. *International Journal of Public Sector Management*, 33(6/7), 771–790.
- Palumbo, R., Manna, R., & Cavallone, M. (2021). Beware of side effects on quality! Investigating the implications of home working on work-life balance in educational services. *The TQM Journal*, 33(4), 915–929.
- Prasad, K. D. V. (2018). A study on causes of stress among the employees in IT sector and its effect on employee performance at the workplace with special reference to International Agricultural Research Institute, Hyderabad [Doctoral Dissertation, Rashtrasant Tukadoji Maharaj Nagpur University]. Nagpur, India.
- Prasad, K. D. V., & Mangipudi, M. R. (2021). A general linear model approach: development of psychological well-being, remote working, employee engagement, job satisfaction, scales, data analysis and reporting concerning to information technology sector. *Journal of Contemporary Issues in Business and Government*, 27(1).
- Prasad, K. D. V., Vaidya, R., & Rani, R. (2023). Remote working and occupational stress: Effects on IT-enabled industry employees in Hyderabad Metro, India. *Frontiers in Psychology*, 14, 998.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891.
- Shirmohammadi, M., Au, W. C., & Beigi, M. (2022). Remote work and work-life balance: Lessons learned from the covid-19 pandemic and suggestions for HRD practitioners. *Human Resource Development International*, 25(2), 163–181.
- Slavković, M., Sretenović, S., & Bugarčić, M. (2021). Remote working for sustainability of organization during the covid-19 pandemic: The mediator-moderator role of social support. *Sustainability*, 14(1), 70.
- Tejero, L. M. S., Seva, R. R., & Fadrilan-Camacho, V. F. F. (2021). Factors associated with work-life balance and productivity before and during work from home. *Journal of Occupational and Environmental Medicine*, 63(12), 1065.
- Tucker, L. R., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika*, 38(1), 1–10.
- Ugwu, F. O., Enwereuzor, I. K., & Mazei, J. (2023). Is working from home a blessing or a burden? Home demands as a mediator of the relationship between work engagement and work-life balance. *Applied Research in Quality of Life*, 18(1), 341–364.
- Wolor, C. W., Nurkhin, A., & Citriadin, Y. (2021). Is working from home good for work-life balance, stress, and productivity, or does it cause problems? *Humanities and Social Sciences Letters*, 9(3), 237–249.
- Xiao, Y., & Cooke, F. L. (2012). Work–life balance in China? Social policy, employer strategy and individual coping mechanisms. *Asia Pacific Journal of Human Resources*, 50(1), 6–22.