

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

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ABSTRACT

Work from home or remote working has been seen as a buzzword during pre-Covid-19 times has become a reality during Covid-19 Pandemic starting March 2020 and will stay for a longer period in India. In this empirical study the researchers present outcome an empirical study carried out surveying the employees of International Agricultural Research Institute, Hyderabad. This research was carried out during the pandemic period because of its nature – novelty, innovation and challenging and this is the first research study that was carried out in the agricultural research sector. The predictor variables of remote working challenges — social/ workplace isolation, career development, work schedule, ergonomic issues, infrastructure dependencies, personal habits, additional costs to employee, the factors that influence the work-life balance a dependent variable on employees working in an international agricultural research institute employee are presented. The seven said independent variables that effect the work-life balance a dependent variable because of remote working of an employee are measured. using a five-point Likert-type scale. The work-life balance was measured with a modified questionnaire based on the survey instrument by Lisa Yang and Hock Tan and Cook. The multiple regression analysis reveal that employee personal habits, ergonomic issues and work schedules are significantly influencing the employee work-life balance. The most important concern and challenge expressed by employee is Post-Covid-19 to work back plan is explained.

Key words: Work-life balance, remote working, Covid-19, work schedule, personal habits

Cite this Article: Budumuru Muralidhar, KDV Prasad and Mruthyanjaya Rao Mangipudi, 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), 2020, pp. 281-297.
<http://www.iaeme.com/IJARET/issues.asp?JType=IJARET&VType=11&IType=6>

1. INTRODUCTION

The remote working buzz has become a reality during Covid-19 Pandemic in India, starting March 2020 and will remain for a longer period. The remote working or work from home has become a new normal in almost all the sectors and in particular information technology sector. However, it was observed during the survey period several private, public, government, research, pharma, non-governmental organizations, and even super markets carried out the routine jobs wherever possible, using the options working from home or remote working. It was observed that super-markets like D-Mart and More Supermarket employees started working from home taking online orders and delivering to the customers. Remote working employees working in information technology sector have experienced occupational stress and low psychological well-being (Prasad et al. 2020) [1].

1.1. Work-life Balance

Work-life balance is a state equilibrium between work and life roles. An employee who is giving equal importance both family life office work and balancing both well with adequacy of family roles and employee role will have work-life balance in both professional and personal life. The flexible working hours, crèche facilities to the women employees, breakups for feeding babies to carry out other than the office works even during office hours will have more positive effect on an employees work life balance, but the more things can be added to. The term was 'work-life balance' used during 1970-1980s is used to describe a state of equilibrium that an employees' time allocated between work and other aspects of personal life. Sirgy and Lee, (2018) [2] reported the antecedents of work-life balance and enhanced employee performance, reduced occupational stress, commitment to the organization and work, career development and success.

Work life balance policies and strategic initiatives are needed for an organization, to increase employee working efficiency, reduce absenteeism, achieving better service, enhanced psychological wellbeing, flexible work and happy and motivation, particularly in the banking sector (Goyal and Agrawal, 2015) [3]. Singh (2013) [4] emphasized the the negative side of the work- family association and suggested the shifted towards the investigation of the positive interaction between work and family role as well as roles outside work and family lives, and the researchers have started to deliberate on the essence of work-life balance. Organizations use work life balanced as a strategic strategy to recruit and reduce the retention of the work force, to help them achieve a state of equilibrium with equal focus professional life and personal life success (Shalini et. al. 2012) [5].

In the past, time spent on job and personal life were seen as two different aspects. The globalization and stiff competition in the recent times the aspect of preserving work-life balance has drawn the attention of organization. The globalization also resulted that workers need to spend their critical amount in whole day at work or even work longer hours are faced

with the challenge of work-life balance and sandwiched between professional and personal life. The sharp rise of working women professionals on them having children in tender age groups envisaged the demand for maintaining a work-life balance among the women employees is significant under the current scenario, the management given due significance.

Now-a-days the work-life balance is one of the hot topics of conversation in the boardrooms and will be a significant area of concern for managers and HR professionals. Work-life balance is necessary even though job is remunerated profession and personal life is once own time. The work-life balance improves the employee performance and enhances the productivity. The benefits of work-life balance are reduced health care costs, better employee engagement, positive impact on growth and productivity, and better talent management (MSG, 2020) [6].

1.2. Remote Working

Remote working is working away from work place or company/organizations office. An employee can work at his/her home, company's partner office, or a designated place. However, because of Covid-19 pandemic the remote working is reduced to working from an employee's home. There are several merits, challenges, demerits both for employee and for organization. The benefits for organization are reduced operation cost, transport cost, allowing an employee to work though he is not the office during the Covid-19 pandemic and other similar situations. The challenges for employer are lack of supervision, irregular work schedules, communication, delayed decision making, an additional investment on communication technologies. As employee per se, workspace isolation, additional investment on communication channels, working too much or too little, absence of visibility from the management side to quantify the outputs, delayed decisions, lack of trust with the organization management, career development issues, job insecurity, no work-life balance, social isolation and family disturbances and increased occupational stress (Prasad et al. 2020) [7].

Forbes reported that remote work improved performance and business outcomes. The telecommuting and more job control by employee resulted in more efficient work and with less interruptions. The greater control of resources by the staff, better work-life balance and child care arrangements are contributors for enhanced employee performance. The elimination of commuting and flexibility of working enhanced employee performance (Dean Scaduto, 2020) [28]. The success of remote working depends on the trust between employee and employer and remote working is nothing but working from home meet the goals, vision and mission of an organization.

2. REVIEW OF LITERATURE

2.1. Work-life Balance

The employees who have a better work-life balance contribute most to the organization's performance by providing effective and efficient staff the company can provide better service to customers. Changes in the family environment that have influenced people's work-life balance in today's context include nuclear families, single-parent households and dual-earning parents, and parents working in different working locations also influences the work-life balance of an employee (Kumaraswamy and Ashwinin, 2015) [8]. Santosh and Jain (2016) [9] reported that long work and commuting hours impair the work-life balance of an employee that flexible working hours and commuting hours required maintain the equilibrium between professional and personal life and have competitive advance in particular for the employees working in metro cities. Further the emotional intelligence of parents also plays a vital role in having work-life balance. The same researchers reported that. The role of parents is vital as

they directly involve in children's education and spending more time with the children leads to more work-life balance.

The introduction of work-life balance systems has individual as well as organizational advantages and it will create a mutual benefit among employee and employer. Employees who are in the state of equilibrium will be more satisfied and content, and perform better (Purohit and Paril, 2015) [10] shown that male employees are less satisfied than female employees because f). Bhandari and Soni (2015) [11] observed that male employees less satisfied because they do not have paternity leave in comparison to maternity leave to the women employees. In the recent past the paternity leave also included by some employers for enhancing work-life balance and motivation. The introduction of work-life systems has individual as well as organizational advantages. Successful work-life systems foster a symbiotic partnership for mutual benefit between employee and employer. Employees who are better at balancing their demands on time are more satisfied and content. In turn they can perform better.

Marta Mas-Machuca et al. (2016) [12] studied the relationship between work-life balance, job satisfaction and organization pride and reported that autonomy and supervisor are the major factors that influence the work-life balance of an employee and there is a positive relation of organization, job satisfaction with work-life balance. Robertson et al. (2017) [13] measured the burnout and work-life balance among primary care health physicians using burnout and work-life balance survey and reported that time spent in work place more directly resulting the burnout and reduced work-life balance. Johanim Johari (2018) [14] studied the influence workload, autonomy and work-life balance on employee job performance among the teachers applying a survey on teachers in public schools in Peninsular Malaysia. The results reveal significant influence of work-life balance on employee job performance. The restricted conception about work and life without considering the recent developments and changes in employment relations. The researcher further reported that the present theory provides a partial view of work-life requirements of the employees and there is a need to extend this concept beyond workforce across social groups.

2.2. Remote Working

A remote worker operates beyond the conventional procedures and place anywhere which suits his needs from home or nearby net centre or co-working room with the supervisor's acceptance (Remote work, 2020) [15]. Melanie (2020) [16] presented the required tools for remote working like Microsoft remote desktop, own, and other essential communication tools. It is being evident from a study that 99% of information technology workforce has the capacity to perform remote working (SCIKY Mind Match, 2020) [17]. Trust between the employee and employer is the major concern for remote working as the employee and superior has similar ambitions and perceptions of performance and job satisfactions (Standee Staples, 2001) [18]. Hickman (2019) [19] reported from the Gallup Research data business outcomes improvement, attraction of talent, and an better engaged workforce has the best financial outcomes through remote work. The author suggested lack of supervision of a remote work employee is major concern and further suggested to develop policies and procedure on remote work. Prasad et al. 2020 reported the factors such as role ambiguity, climate of an organization, job satisfaction, supervisor has significantly influencing the psychological well-being and work life balance of the employee of informational technology sector. The researchers further suggested if possible to continue the present form of remote working wherever possible.

2.3. Research Question

Are there is association between concerns and challenges work-life balance among the remote working employees at International Agricultural Research Institute during Covid-19 lockdown?

2.4. Research Gap

The Government of India has announced first lockdown from March 24 to April 14 and extended till May 31, 2020 to contain the spread of the virus, maintaining social distance among human beings. Several organizations to contain the virus spread provided an option of remote working or working from home to perform their routine assignments remotely. The pandemic was reported December 2019, there are no specific research articles, literature in particular, work-life balance associated with remote working employee of agriculture research sector. Therefore, the researchers carried out this empirical study surveying the remote working employees of international agricultural research institute during March 25 to June 10, 2020, and reported the results.

3. OBJECTIVES OF THE STUDY

- To study the effect of factors associated with remote working on employees work-life balance in the international agricultural research institute, Hyderabad
- To study if there are gender and age differences that influence the work-life balance of international agricultural research institute employees

4. RESEARCH METHODOLOGY

Theoretical Framework: The author followed theoretical framework proposed by Prasad et al (2018), (2020) [1, 20, 21] on remote working, occupational stress, and coping.

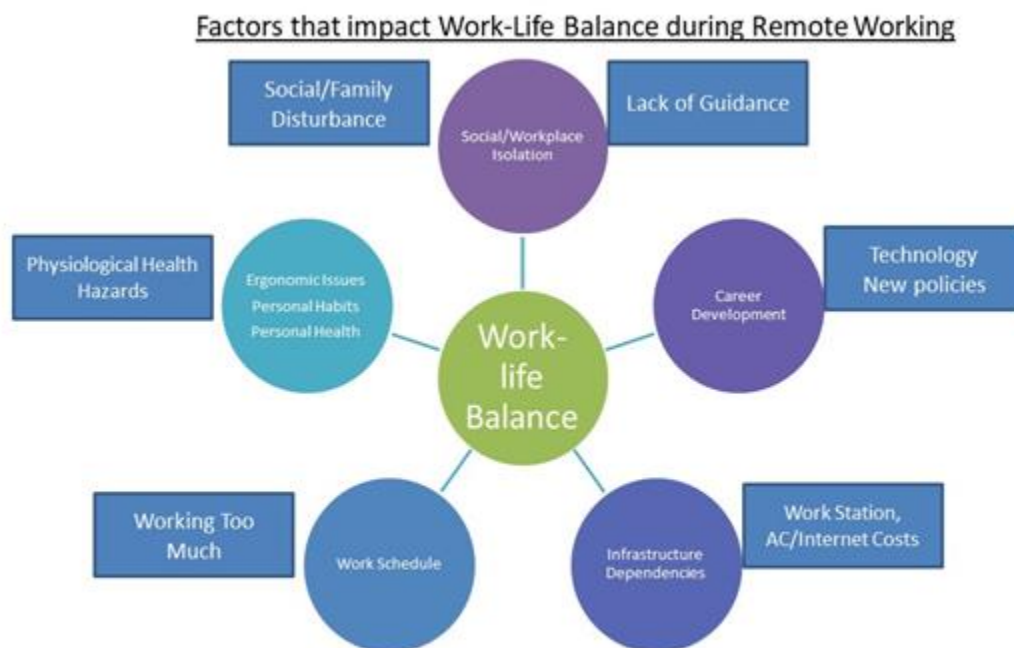


Figure 1: Employee work-life balance is dependant on 5 major factors, in turn influence professional and personal life during remote working.

The following hypotheses were framed, after reviewing the literature and identifying the challenges and concerns of remote working:

H_{a1}: The seven said factors are statistically significant on the work-life balance of the employees of International Agricultural Research Institute during the Covid-19 Pandemic.

H_{a2}: There are significant gender and age differences among the respondents on the remote working factors that effect the work-life balance of International Agricultural Research Institute, Hyderabad

4.1. Estimation of Sample Size

Yamane (1967) [22] formula was used to estimate the sample size as the population is finite and know, where the research study is carried out i.e. at International Agricultural Research Institute and at 95% confidence level and $p = 0.5$ size of the sample size selected is

$$N = \frac{N}{1+N(e^2)}$$

Where, N is the population size (i.e. total employees in IARI) and e is the level of precision.

N = 500 with $\pm 5\%$ precisions, assuming 95% confidence level and $p = 0.5$ the sample size is

$$n = \frac{500}{(1+500(0.05)^2)} = 399 \text{ so } 400 \text{ was used}$$

The description and demography of the sample are presented in Tables 1 and 2 and the study variables both dependent and independent are presented in Table 3.

Table 1 Demography of the sample		
Gender	Frequency	Percent
Men	240	60
Women	160	40
Total	400	100
Source: Primary data		
The research study consists of women (40%) and men (60%).		

Table 2 Sample description	
Age group	Number of respondents
20-29	100
30-39	110
40-49	120
>49	70
Source: Primary data	

Table 3. The independent and dependent factors associated with remote working

Factor	Description	No items
1	Social/workplace isolation	6
2	Infrastructure deficiencies	5
3	Personal habits/health issues	6
4	Career development	5
5	Work Schedule	6
6	Ergonomic Issues	5
7	Additional costs or working from home	5
Dependent factors – Work-life Balance*		
Factor	Description	No items
1	Workplace benefits, policies, programs	4
2	Workplace environment	4
3	Workplace harassment	5
4	Current Job of employee	5
5	Job Control	5
6	Work Overload	6

*Based on modified version of Lisa Yang and Hock Tan survey instrument (2014)

4.2. Research Instrument

Measurement- Remote Working Factors: A standardized, undisguised research instrument based on five points Likert type scale, with a rating scale of Strongly agree =5; Agree = 4; Neutral =3; Disagree =2; Strongly disagree =1 were used to measure the seven independent remote working factors that influence the work-life balance as per the model of Prasad et al [1, 20] and Rao et. al. [21] and the total measured items are 38.

Measurement of Work-life Balance factors: A modified version of survey instrument developed by Institute of Employment, Cornell University researchers (K. Lisa Yang and Hock E. Tan, 2014 [23], Cook L, 2014[24]) using a five-point Likert type scale and values ranging from Strongly agree =5 to strongly disagree =1) were used and the total items measured are 29.

4.3. Data Analysis

The appropriate statistical methods applied on data to draw inferences and conclusions from the analysis of primary data using statistical package for social sciences (SPSS) version 26 (SPSS Inc., Chicago, Ill., USA) [24]. The researchers have carried out the correlation studies and it was noted that most of the correlations are positive and significant (Table 4).

Table 4 Correlation Coefficients of the Study Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1												
2	.33**	1											
3	.53**	.37**	1										
4	.40**	.67**	.53**	1									
5	.28**	.60**	.26**	.47**	1								
6	0.08	.70**	.18**	.48**	.69**	1							
7	0.20*	.51**	0.12	.34**	.50**	.75**	1						
8	-0.02	.67**	0.06	.30**	.50**	.66**	.66**	1					
9	0.06	.34**	.24**	.25**	.20*	.48**	.45**	.33**	1				
10	.17**	.54**	.32**	.30**	.31**	.56**	.31**	.48**	.64**	1			
11	.13**	.39**	.23**	.25**	.15**	.27**	.36**	.54**	.57**	.71**	1		
12	0.09	.22**	.17**	.18**	.17**	.36**	.29**	.44**	.64**	.58**	.78**	1	
13	.24**	.39**	.10**	.32**	.36**	.48**	.39**	.42**	.77**	.71**	.79**	.74**	1

1. Social/workplace isolation 2. Infrastructure deficiencies 3. Personal habits 4. Career development; 5. Work Schedule 6. Ergonomic Issues 7. Additional costs or working from home 8. Workplace benefits, policies, programs 9. Workplace environment 10. Workplace harassment 11. Current Job of employee 12. Job Control 13. Work Overload
 *. Correlation is significant at the 0.05 level (2-tailed); **. Correlation is significant at the 0.01 level (2-tailed).

4.4. Reliability of Methods

The reliability statistic Cronbach’s alpha was used to assess the internal consistency, the reliability of the survey instrument questionnaire (Cronbach, 1951, [26], Troche, W [27] Split-Half (odd-even) Correlation, Split-Half with Spearman-Brown Adjustment also measured to further confirm the consistency of the survey instrument . The values in Table 5 indicate that the survey instrument is reliable and consistent.

Table 5: Independent and Dependent Factors of the Study				
Factor	Description	C-alpha	Split-Half (odd-even) Correlation	Split-Half with Spearman-Brown Adjustment
Remote working factors that influence work-life balance (independent factors)				
1	Social/workplace isolation	0.67	0.57	0.63
2	Infrastructure deficiencies	0.70	0.61	0.77
3	Personal habits	0.73	0.62	0.77
4	Career development	0.63	0.60	0.75
5	Work schedule	0.81	0.68	0.81
6	Ergonomic uses	0.73	0.54	0.61
7	Additional costs	0.8	0.73	0.84
Work-life balance factors (dependent factors)				
Factor	Description			
1	Workplace benefits, policies, programs	0.73	0.67	0.71
2	Workplace environment	0.73	0.66	0.71
3	Workplace harassment	0.87	0.69	0.81
.4	Current Job of employee	0.82	0.76	0.83
5	Job Control	0.84	0.66	0.89
6	Work Overload	0.84	0.73	0.72
	Overall remote working factors	0.94	0.93	0.94
	Overall Work-life balance	0.91	0.88	0.97
Overall C-alpha:0.94.				
Source: Primary data				

5. RESULTS

Influence of demographic variables, personal habits and personal health on employee work-life balance in terms of overall sample: The association between demographic variables, personal health and characteristics, physiological and psychological factors are presented in Table 6. A significant association between gender ($p=0.028$), age group ($p<0.001$), having children ($p<0.01$), diabetes ($p<0.01$), physiological factors ($p<0.001$), psychological factors ($p=0.03$) and experience (tenure of employment, $p<0.01$) with work-life balance was observed. The employee health component hypertension shown no statistically significant association with employee work-life balance($p=0.612$), and hypertension is not predictor of the employee work-life balance in this study. However, smoking and alcoholism are significant predictors of work-life balance. Further, the relation among the general characteristic age group, having children, health factor diabetes and tenure of employment are significant predictors are the work-life balance. More experienced employees will have better work-life balance than the younger ones, because the state of equilibrium developed by the experienced one.

Table 6 The association between demographic variables, personal habits and personal health characteristics, stress factors, physiological and psychological factors, and its effect of employee performance (n=400)

Gender	N ²	%	Effect on Performance		
			Numbers	%	p-value ¹
Women	260	60	236	61.9	0.028
Men	140	40	208	55.5	
Age (Years)					
20-29	100	25	26	11.5	<0.01
30-39	110	27.5	157	59.2	
40-49	120	30	87	50.2	
>49	70	17.5	57	62	
Marital status					0.09
Married	330	82.4	236	71.3	
Unmarried	70	17.6	50	45.5	
Children					<0.01
Yes	287	71.7	228	79.5	
No	113	29.3	14	5.8	
Diabetic					
Yes	184	46	157	85	<0.01
No	216	54	79	36.2	
Hypertension					
Yes	152	38	134	57.5	0.612
No	248	62	152	61.2	
Physiological					<0.01
Yes	198	49.6	114	58.9	
No	202	50.4	65	29.4	
Psychological					0.03
Yes	93	23.1	43	46.3	
No	307	76.9	87	28.22	
Smoking					<0.01
Yes	192	48	150	83	
No	208	52	80	35	
Alcohol					<0.01
Yes	185	47	181	85	
No	215	54	79	36.2	
Experience (Years)					<0.01
0-5	100	25	10	10	
6-10	168	42	100	62.2	
11-15	84	21	45	53.5	
>15	48	12	30	61.5	

¹Comparison by chi-square test
²All numbers are based on weighed frequencies
Source: Primary data

6. RESULTS OF MULTIPLE REGRESSION ANALYSIS

The multiple regression analysis was carried out to examine if there is correlation between remote working factors and work-life balance in the employees of International Agricultural Research Institute in the overall sample (n=400). The required assumptions to run the multiple regression analysis was carried out. The value of Durbin-Watson statistic indicate the independence of residuals (Durbin Watson statistic of 1.744). The multiple correlation coefficient, R is the Pearson correlation coefficient between the scores predicted by the regression model (i.e., the predicted scores) and the actual values of the dependent variable. The value of R 0.547 (Table 7), in this example, indicates a moderate level of association. The

R^2 is equal to 0.299 in Table 7 which indicates that the addition of all our independent variables into a regression model explained 29.9% of the variability of our dependent variable, psychological well-being (compared to the mean model).

Statistical significance of the model: The significance value in ANOVA (Table 8) is 0.000 which actually means that $P < 0.0005$, and $P < 0.05$ is a statistically significant result, and addition of all independent variables leads to a model that is statistically significant and outcome variable will be predicted. The results are $F(2, 397) = 48.443$, $P < 0.0005$; where F indicated that a comparison with F -distribution (F -test) is made, 2 in (2, 397) is degrees of freedom, 397 in (2, 397) indicate the residual degree of freedom, 48.443 is obtained value of the F -statistic i.e., F -value and $P < 0.0005$ is the probability of obtaining the observed F -value if the null hypothesis is true (Table 8).

Table 7: Model Summary of Remote Working and Work-Life Balance – Overall (n=400)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.547 ^a	0.299	0.295	0.7321	1.744

a. Predictors: (Constant), Remote work
b. Dependent Variable: work-life balance

Table 8: ANOVA Summary of the Remote Working and Work-Life Balance ^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	55.097	2	23.544	48.443	.000 ^b
	Residual	220.263	397	0.557		
	Total	275.36	399			

a. Dependent Variable: Work-life balance overall
b. Predictors: (Constant), Remote work factors

Interpreting the coefficients: The regression equation for the model can be expressed as:

Work life balance = b_0 (b_1 x remote working factors)

Work life balance $1.370 + (-0.204)_{\text{remote working factors}}$.

Remote working factors significantly influencing the dependent variable of work-life balance. The coefficient value of stress 0.750 represented the change in the dependent variable of work-life balance being for one-unit change in the independent variable, remote working factors overall. For one unit of increase of remote working issues 0.750 units of work-life balance will be affected. If we consider standardized coefficients a beta value of 0.521 it indicates that a change of one standard deviation in the independent variable, remote working factor, results in 0.521 change of standard deviations in work-life balance (Table 9).

Table 9 Regression Coefficients for Remote work-factors and Work life balance overall Sample (n=400)^a

Model		Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.
		B		Beta		
1	(Constant)	1.370	0.226		6.021	0.000
	Remote work factors	0.750	0.121	0.521	6.275	0.000

a. Dependent Variable: Work-life balance overall

The researchers further carried out the analysis with all individual independent variables to see the causal effect on the dependent variable. The adjusted R^2 is equal to 0.437. Table 10 indicates that the addition of all independent variables into a regression model explained 44% of the variability of the dependent variable of psychological well-being.

Table 10: Model Summary^b Remote Working, and Work-life balance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.665 ^a	0.442	0.437	0.69381	1.878

a. Predictors: (Constant), Social/workplace isolation, Infrastructure deficiencies, Personal habits, Career development; Work Schedule Ergonomic Issues; Additional costs or working from home
 b. Dependent Variable: Work-life balance

Statistical significance of the model: The significance value in ANOVA (Table 11) is 0.000 which actually means that $P < 0.0005$, and $P < 0.05$ is a statistically significant result and addition of all independent variables leads to a model that is statistically significant and predicts the dependent variable better than the mean model, and statistically significantly better fit the data than the mean model. The results are $F(2, 397) = 22.881$, $P < 0.0005$; where F indicated that a comparison with F-distribution (F-test) is made, 2 in (2, 397) is degrees of freedom, 397 in (2, 397) indicate the residual degree of freedom, 22.882 is obtained as value of the F-statistic i.e., F-value and $P < 0.0005$ are the probability of obtaining the observed F-value if the null hypothesis is true (Table 11).

Table 11: ANOVA Summary of the Remote Working and Work-life balance^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	88.120	8	11.005	22.881	.000 ^b
	Residual	188.220	391	0.480		
	Total	276.340	399			

a. Dependent Variable: Work-life balance
 b. Predictors: (Constant),

Table 12 Regression Coefficients for Remote Working factors and Work-life Balance (n=400)^a

Model	Factors	Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.
		B		Beta		
1	(Constant)	1.598	0.226		7.076	0.000
	Social/workplace isolation	0.061	0.072	0.060	0.828	0.408
	Infrastructure deficiencies	0.038	0.056	0.038	0.699	0.485
	Personal habits	0.176	0.048	0.202	3.675	0.000
	Career development	-0.056	0.068	-0.052	-0.845	0.399
	Work schedule	-0.267	0.061	-0.266	-4.385	0.000
	Ergonomic uses	0.390	0.083	0.382	4.726	0.000
	Additional costs	-0.090	0.062	-0.111	-1.554	0.121

a. Dependent Variable: Work-life balance

Interpretation: Using the multiple regression analysis (Table 12), it was found that the independent remote working factors personal habits and work schedules are significantly influencing the employee work-life balance. The work-life balance can be predicted as:

$$\text{Work-life balance} = 1.598 + 0.061(\text{social/workplace isolation}) + 0.038(\text{infrastructure}) + 0.167(\text{Personal habits}) - 0.056(\text{career development}) - 0.267(\text{work schedule}) - 0.390(\text{ergonomic uses}) - 0.090(\text{additional costs})$$

Gender differences: A separate regression analysis was carried out to see if there are any gender differences affecting work-life balance. From Table 12, 34 and 26 percent respectively variation are observed in male and female employees in the model. The ANOVA results are significant for both male and female employees (Table 13).

Table 13: Model Summary of the Male and Female Employees on Remote working factors and work-life balance^b

Model R	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson Statistic
Male	.604 ^a	0.365	0.342	0.6638	2.01
Female	.548 ^a	0.301	0.263	0.7303	1.74

a. Predictors: (Constant), Social/workplace isolation, Infrastructure deficiencies, Personal habits, Career development; Work Schedule Ergonomic Issues; Additional costs or working from home
c. Dependent Variable: Work-life balance

Table 14: ANOVA Summary of the, Remote Working and Work-life balance^{a,b}

Model		Sum of Squares	Df	Mean Square	F	Sig.
Male	Regression	58.095	7	7.262	16.4812	.000 ^c
	Residual	100.895	232	0.441		
	Total	158.990	239			
Female	Regression	35.060	7	4.382	8.2171	.000 ^c
	Residual	81.600	152	0.533		
	Total	116.660	159			

a. Dependent Variable: Work-life balance
c. Predictors: (Constant), Social/workplace isolation, Infrastructure deficiencies, Personal habits, Career development; Work Schedule Ergonomic Issues; Additional costs or working from home

Table 15: Regression Coefficients^{ab} for Remote Working, and Work-life balance of Overall Sample (n=400)

Model	Factor	Unstandardized coefficients	Coefficients Standard Error	Standardized Coefficients Beta	t	Sig.
Male	(Constant)	1.663	0.284		5.849	0.000
	Social/workplace isolation	0.107	0.079	0.108	1.348	0.179
	Infrastructure deficiencies	-0.063	0.099	-0.063	-0.635	0.526
	Personal habits	0.184	0.069	0.216	2.663	0.008
	Career development	-0.115	0.082	-0.106	-1.393	0.165
	Work schedule	-.0.328	0.080	-0.336	-4.108	0.000
	Ergonomic uses	0.617	0.113	0.631	5.466	0.000
	Additional	-0.151	0.073	-0.185	-2.076	0.039

Model	Factor	Unstandardized coefficients	Coefficients Standard Error	Standardized Coefficients Beta	t	Sig.
	costs					
	(Constant)	1.330	0.398		3.343	0.001
Female.	Social/workplace isolation	-0.017	0.091	-0.015	-0.185	0.853
	Infrastructure deficiencies	0.114	0.117	0.111	0.978	0.330
	Personal habits	0.169	0.073	0.183	2.323	0.022
	Career development	0.029	0.121	0.025	0.242	0.809
	Work schedule	-0.177	0.098	-0.169	-1.814	0.072
	Ergonomic uses	0.217	0.131	0.197	1.656	0.100
	Additional costs	-0.001	0.117	-0.002	-0.013	0.990

a. Dependent Variable: Work-life balance

From the results of the multiple regression analysis, it can be observed that only remote working factor personal habits is common and significantly influencing the work-life balance. Whereas remote working ergonomics and work schedule is significantly influencing the work-life balance in the male employees of the institute. Therefore, no significant gender differences were observed (Table 15).

The Post-hoc comparisons were carried out to see any age group differences, which were statistically significant and influenced the work-life balance of employees (Table 16).

	20-29 (n = 100)	30-39 (n = 110)	40-49 (n = 120)	>49 (n = 70)
Social/workplace isolation	3.69 ± 0.062 ^{ab}	3.9 ± 0.068 ^a	3.48 ± 0.11 ^b	3.77 ± 0.11 ^{ab}
Infrastructure deficiencies	3.2 ± 0.064 ^b	3.6 ± 0.071 ^a	3.27 ± 0.13 ^{ab}	3.6 ± 0.098 ^a
Personal habits	3.4 ± 0.072	3.67 ± 0.10	3.3 ± 0.11	3.4 ± 0.12
Career development	3.3 ± 0.058 ^b	3.47 ± 0.076 ^{ab}	3.41 ± 0.093 ^{ab}	3.68 ± 0.087 ^a
Work schedule	3.12 ± 0.069 ^b	3.37 ± 0.081 ^{ab}	3.44 ± 0.091 ^a	3.37 ± 0.093 ^{ab}
Ergonomic uses	3.11 ± 0.062 ^b	3.51 ± 0.071 ^a	3.43 ± 0.099 ^a	3.49 ± 0.11 ^a
Additional costs	2.97 ± 0.076 ^b	3.23 ± 0.094 ^{ab}	3.22 ± 0.11 ^{ab}	3.35 ± 0.10 ^a
Work-life balance overall	2.98 ± 0.081 ^b	3.35 ± 0.076 ^a	3.15 ± 0.10 ^{ab}	3.26 ± 0.11 ^{ab}
	3.42 ± 0.070 ^b	3.74 ± 0.074 ^a	3.54 ± 0.10 ^{ab}	0.089 ^{ab}

(Values are means ± SEM.)

Means in a row without a common superscript letter differ (P<0.05) as analysed by one-way ANOVA and the TUKEY test.

The Tukey HSD post-hoc analysis was carried out to find out which group is significantly different from other groups. The results are presented in Table 16, where statistically significant groups are superscripted. For the factor social/work isolation, there was a statistically significant difference observed among the age group 20 to 29, 40-49; whereas for work schedule, statistically significant differences were observed among the age group of 20-29, 30-39, and so on. This indicated that the age group differences were not statistically significant across the age groups for independent variables.

Therefore, we partially agree to the hypothesis

H_{a1}: The seven said factors are statistically significant on the work-life balance of the employees of International Agricultural Research Institute during the Covid-19 Pandemic as only three factors are influencing the work-life balance.

In the similar way there are no age and gender differences as revealed by multiple regression analysis and post-hoc comparisons.

H_{a2}: There are significant gender and age differences among the respondents on the remote working factors that effect the work-life balance of International Agricultural Research Institute, Hyderabad

7. DISCUSSION

The following concerns and challenges were observed from this research survey and their conceptual characteristics presented in details.

In general, work from home has worked tremendously for most of the employees who can perform the jobs outside the physical working area and most of the staff believe it is the future of work and new normal for working class. *The negative side is work has become 24/7 situation and there is no demarcation between professional and personal time during remote working at the institute*

During physical working in the office the commutation time is more than 4 hours and if the working hours included every employee is on official business for more than 13-14 hours and work obligations are spilled into personal time and was very challenging to maintain work-life balance. *However due to remote working most of the employees who responded believe that remote working has allowed staff to manage far better way between professional and personal obligations.*

Some employees perceive that remote working outputs not perfectly quantifiable and may be a bottleneck for career growth and promotions. In addition, the remote working employees need to spend from their after tax income for additional cost of power bill and internet usage which not case while working in the physical work place. *Therefore, there is an urgent need to address these issue suitably modifying HR policies and practices covering these concerns and a scope for reimbursing partial cost to reduce the burden is the need of the hour.*

Loneliness and lack of human interaction, workplace isolation and social isolation are downsides of working from home is that it can be more difficult for employees to connect with their co-employees and supervisors whenever require. Lack of supervision is another issue need to be addressed to carry out the assignment when employee stuck at one place. This can be addressed proving more job control and autonomy to the remote working employees. To a certain extent, co-employees are our social circle. Sometimes it is hard to explain to others that all our friends are online.

The most important COVID 19 Back to Workplace Plan: There is a concern among the respondents that the International Agricultural Research Institute is located outskirts of the study and staff are using staff busses to reach the office back to home safely. The restoration of the staff transport is a challenge to the institute because of infectious nature of the disease and social distancing protocol. *Staff transport is very essential as public transport is one pressing matter that requires keen observation and strategy. Public transport is not at all safe and it may create more problems. It takes almost two hours on average to commute to and from work. Logistical challenges like traffic, train delays, or missing office bus can lead to a stressful start to our day. So the main challenge is that institute should continue staff busses to bring staff and also to carry the brand image of institute. Staff coming on their own using*

personal vehicles and of long travel time results in health issues, accidents, delayed arrival due to breakdowns, and monetary burden.

8. CONCLUSION

The author opined that more sectors need to be researched to address this new and challenge issue of remote working during pre and post-Covid19 Pandemic. The sector wise research results need to be collared and a manual/protocol should be developed to face the similar situations in future. The remote working will be successful only if there is trust between employee and employer. Suitable modification in Human Resource policies including to address the issues of remote working and the associated employee/employer costs need to be documented. Flexible policies, on-line training, career development issues need to be addressed during this pandemic to motivate and raise the confidence of employees.

ACKNOWLEDGMENT

We thank all the respondents to our survey questionnaire during the Covid-19 Pandemic Period.

CONFLICT OF INTEREST

The authors have NO affiliations with or involvement in any organization or entity with any financial or non-financial interest in the subject matter or materials discussed in this manuscript.

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