



Journal of Work and Organizational Psychology

<http://journals.copmadrid.org/jwop>



Moderated Mediation between Work Life Balance and Employee Job Performance: The Role of Psychological Wellbeing and Satisfaction with Coworkers

Sajid Haider, Shaista Jabeen, and Jamil Ahmad

COMSATS Institute of Information Technology, Vehari, Pakistan

ARTICLE INFO

Article history:

Received 23 July 2017

Accepted 11 January 2018

Keywords:

Work-life balance

Job performance

Psychological wellbeing

Satisfaction with coworkers

Moderated mediation

ABSTRACT

This research examined a moderated mediation model for answering how and why work-life balance affects employee job performance, and how satisfaction with coworkers is contingent upon it by enhancing employee's psychological wellbeing. Data were collected from subordinates and their supervisors in the banking sector ($N = 284$). Empirical results indicate that psychological wellbeing mediates the link between work-life balance and job performance, and employees' satisfaction with coworkers enhances job performance by strengthening the effect of work-life balance on psychological wellbeing. This research contributes to personnel management literature by describing moderated mediation mechanisms through which work-life balance influences employee job performance, and guides practitioners by emphasizing that employees with greater work-life balance perform better when their psychological wellbeing is reinforced by their satisfaction with coworkers.

La mediación moderada entre el equilibrio vida-trabajo y el desempeño laboral: el papel del bienestar psicológico y de la satisfacción con los compañeros

RESUMEN

Esta investigación examina un modelo de mediación moderada para responder cómo y por qué el equilibrio entre vida personal y laboral afecta el desempeño del trabajo de los empleados y cómo la satisfacción con los compañeros de trabajo influye en ello al mejorar el bienestar psicológico de los empleados. Se recabaron datos de subordinados y sus supervisores del sector bancario ($N = 284$). Los resultados empíricos indican que el bienestar psicológico media el vínculo entre el equilibrio de vida personal y laboral y el desempeño del trabajo, y la satisfacción de los empleados con los compañeros de trabajo mejora el desempeño del trabajo, fortaleciendo el efecto de este equilibrio en el bienestar psicológico. La investigación contribuye a los estudios sobre gestión de personal mediante la descripción de mecanismos de mediación moderada, a través de los cuales el equilibrio entre la vida personal y la vida laboral influye en el desempeño laboral de los empleados, y sirve de guía a los gestores de personal al destacar que los empleados con mayor equilibrio entre vida personal y laboral obtienen mejor desempeño cuando su bienestar psicológico se ve reforzado por su satisfacción con los compañeros de trabajo.

Palabras clave:

Equilibrio vida personal y laboral

Desempeño en el trabajo

Bienestar psicológico

Satisfacción con los compañeros de trabajo

Mediación moderada

In response to growing health and productivity problems resulting from employees' lack of work-life balance, many organizations are taking serious steps to reduce conflict in their employees' work and family roles (Fapohunda, 2014; Working Families, 2017). This has led to increasing researchers' and managers' interest in this area of study. Organizations not permitting work-life flexibility tend to negatively impact their employees' job performance, whereas enhancing work-life balance may benefit both employees and organizations (Kelly et al., 2014). A recently published report in Forbes (an American

business magazine) suggests that work-life balance matters much for higher creativity, productivity, and performance (Kruse, 2017).

A variety of studies have delineated a strong relationship between work-life balance and employee job performance (Kim, 2014; Smith, Smith, & Brower, 2016). Despite researchers' growing interest in examining the relationship between work-life balance and employee job performance, little work has described the mechanisms which explain this relationship. Outside of Kim's (2014) study supporting the mediating role of employee's affective commitment

Cite this article as: Haider, S., Jabeen, S., & Ahmad, J. (2018). Moderated mediation between work life balance and employee job performance: The role of psychological wellbeing and satisfaction with coworkers. *Journal of Work and Organizational Psychology*, 34, 29-37. <https://doi.org/10.5093/jwop2018a4>

Correspondence: sajidhaider@ciitvehari.edu.pk; sajidhaider2004@yahoo.com (S. Haider).

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in the relationship between work-life balance and employee job performance, little research has paid attention to examining how and why work-life balance predicts job performance. So, an analysis of intervening mechanisms in determining this relationship requires researchers' attention.

The first objective of this research was to examine an explanation of the relationship between employees' perceptions of work-life balance and job performance by testing what may happen within the psychological processes of a worker to stimulate job performance. Precisely, we investigated the mediating role of psychological wellbeing in relating work-life balance and job performance.

Employee wellbeing is greatly embedded in a system of social exchange among supervisors, subordinates, and coworkers (Kim, Lee, & Wong, 2016; Obschonka & Silbereisen, 2015), and for that reason is facilitated and constrained by support from supervisors and coworkers. It implies that employees' satisfaction with supervisors and colleagues allows them to obtain feelings of empathy, respect, and trust (Haider, Fernandez-Ortiz, & de Pablos, 2017) which lead towards greater psychological wellbeing (Kim et al., 2016). This viewpoint suggests that employee satisfaction with supervisors and coworkers is simply as important as other human resource practices to enhance employee wellbeing.

However, employee satisfaction with supervisor and its effect on individual and organizational outcomes has been widely studied in past research (Sturman & Park, 2016; Tepper & Tylor, 2003). The variable of satisfaction with coworkers has received relatively less attention (Oshagbemi, 2000). So, we focus on satisfaction with coworkers and argue that work-life balance is likely to have a greater influence on employee's psychological wellbeing if it interacts with his or her satisfaction with coworkers. The effect of satisfaction with coworkers, its interplay with employee's work-life balance, and the mediating mechanisms through which this interplay improves employee job performance has received little attention in past research. We understand that the reason for this lack of attention is that the effect of work-life balance on employee's psychological wellbeing has been examined in isolation from employee's satisfaction with coworkers. Consequently, the interconnectedness of work-life balance and satisfaction with co-workers remains poorly understood. We believe that both the researchers and managers need to know these issues to understand the phenomena affecting the metaphorical relationship between work-life balance and psychological wellbeing, and consequently, job performance.

The second objective of this research was to examine how employee's satisfaction with coworkers reinforces the wellbeing obtained from work-life balance. Specifically, we examined the moderating effect of satisfaction with coworkers on the relationship between work-life balance and psychological wellbeing. This allowed us to test the mediating role of psychological wellbeing in the relationship between the interaction of work-life balance and satisfaction with coworkers, and employee job performance. In other words, we examined a moderated mediation relationship; satisfaction with coworkers enhances employee job performance by increasing the effect of work-life balance on psychological wellbeing.

Theory and Hypothesis

For the purpose of this research, we are focused on developing two hypotheses. The first hypothesis is related to the mediating effect of psychological wellbeing on the relationship between work-life balance and employee job performance. The second hypothesis looks at the moderated mediation, i.e., a discussion on how employee's satisfaction with coworkers enhances employee job performance by strengthening the effect of work-life balance on psychological wellbeing. Figure 1 shows our research model.

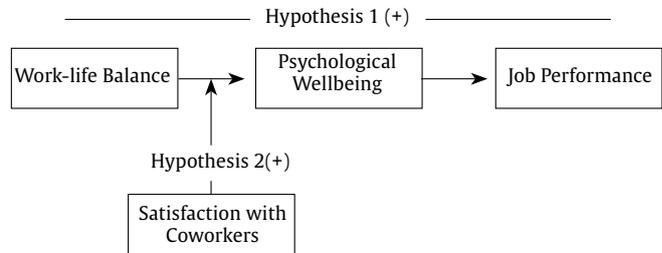


Figure 1. Research Model.

The Mediation Hypothesis

A typical rule of mediation analysis (Baron & Kenny, 1986) suggests that implicit in this hypothesis are three additional sub-hypotheses: a) the relationship between work-life balance and job employee job performance, b) the relationship between work-life balance and psychological wellbeing, and c) the relationship between psychological wellbeing and job performance. Existing research has already developed these three relationships (Kim, 2014; Peng, Ilies, & Dimotakis, 2011). Therefore, we remained focused on developing an argument for the mediating role of psychological wellbeing in the relationship between work-life balance and employee job performance.

Employees' work-life balance allows organizations to enhance performance of their employees mainly because a supportive and flexible work environment positively affects their psychological wellbeing (Greenhaus & Powell, 2006). The happy/productive worker hypothesis (Lucas & Diener, 2003) suggests that psychologically-well people perform better (Wright & Cropanzano, 2004). Organizations' ability in minimizing work-life conflicts enables them to create a positive psychological capital in their employees which enhances their creative performance (Hao, Wu, Liu, Li, & Wu, 2015). So, any link between employees' work-life balance and job performance passes greatly through psychological processes related to employee wellbeing.

The affective events theory (AET) (Weiss & Cropanzano, 1996) can also be used as a tool for explaining the mediating effect of psychological wellbeing. According to the AET, human emotions have many personal and work related consequences. Positive emotions emerge from many internal and external forces, and one of them is work-life balance (Pradhan, Jena, & Kumari, 2016). Psychological wellbeing is a direct response of a person's positive emotions (Fredrickson, 2001). So, it can be stated that positive emotions emerging from a person's work-life balance enhance his or her wellbeing which, in turn, improves that person's job performance.

Thus, a greater work-life balance is likely to enhance positive psychological capital and emotions which increase an employee's job performance by strengthening her/his psychological wellbeing. We expect that a direct effect of work-life balance on job performance is less likely to happen because interventions for obtaining work related outcomes generally operate through their impact on employee's psychological states (Hackman & Oldham, 1976). The benefits from work-life balance emerge mainly because of the enhanced employee psychological wellbeing that it produces. Employee performance benefits of work-life balance transpire basically because the absence of conflict in work and family roles enhances employee's psychological wellbeing. The above discussion leads us to following hypothesis.

Hypothesis 1. Psychological wellbeing mediates the relationship between work-life balance and employee job performance.

The Moderated Mediation Hypothesis

Employees' satisfaction with coworkers provides a basis for problem solving, conflict resolution, and creativity enhancement at

workplace, and predicts an employee's commitment with team and organization (Bishop & Scott, 2000; Hackman, 1986; Mathieu & Zajac, 1990). Existing literature does not provide a formal definition of satisfaction with coworkers. Following the concept of employee job satisfaction from Robbins and Judge (2013, pp. 74), we can describe satisfaction with a coworker as a positive feeling about a coworker, resulting from an evaluation of her or his characteristics. Higher satisfaction with coworkers may lead to positive feelings about that worker, and vice versa. Prior research suggests that greater satisfaction with coworkers promotes positive attitudes and behaviors in employees (Avery, McKay, & Wilson, 2007), which result in positive thinking, optimism, and psychological wellbeing (Conversano et al., 2010). Since psychological wellbeing is highly embedded in positive attitudes and behaviors derived from satisfaction from coworkers, we expect that employee satisfaction with coworkers can enhance psychological wellbeing.

Ryff's (1989) theory of psychological wellbeing suggests that positive relations with others are important for obtaining psychological wellbeing. Coworkers satisfied with each other are likely to develop positive interactions. Consequently, their likelihood to achieve psychological wellbeing increases. Previous research informs that satisfying relations at workplace predict quality of life and wellbeing (Biggio & Cortese, 2013). In line with Ryff (1989) and Ryff and Singer (2000) and self-determination theory (Ryan & Deci, 2000), intimacy theory (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000) also suggests that meaningful and satisfying relationships with others predict human flourishing and psychological wellbeing (Ryan & Deci, 2001).

We argue that the benefits of work-life balance in enhancing employees' psychological wellbeing are enlarged when it interacts with employees' satisfaction with coworkers. In other words, differences in satisfaction with coworkers matter for determining the effect of work-life balance on psychological wellbeing. The logic behind this moderating effect can be found in fit theories of interactional psychology (Lewin, 1951; Terborg, 1981), such as person-environment fit theory (Edwards, Caplan, & Harrison, 1998).

Work-life balance reflects person-environment (PE) fit with respect to work and family domains (Edwards & Billsberry, 2010). Person environment-fit with respect to coworkers is what Kristof-Brown, Zimmerman, and Johnson (2005) call person-group fit. Misfit in one domain may affect the fit in other domain (Bhagat, McQuaid, Lindholm, & Segovis, 1985), and this is where it can be stated that an employee's fit with both domains of PE fit will enhance its effect on the target variable, and any misfit will reduce the effect of other. A situation of fit (i.e., work-life balance) creates wellbeing, while a situation of misfit (i.e., dissatisfaction with coworkers) predicts stress (Edwards & Rothbard, 1999). So, employees with greater work-life balance are less likely to achieve a greater level of psychological wellbeing if they are not satisfied with their work group.

This is because fit or misfit does not occur in person to person or person to situation phenomena. It may occur in situation to situation phenomena also. So, when the interaction of two or more situations occurs, a new situation may result in mismatch or a better match with respect to previous situation. The person environment fit theory, however, is less explicative for the phenomena occurring from the interaction of two or more situations, and how a new situation disturbs or improves person environment fit.

Evolutionary mismatch theory (Riggs, 1993) in biology better explains such phenomena. This theory describes that changes in the environment of an organism may create a mismatch between the environment and that organism, and a previously advantageous situation may turn into disadvantageous. Applying the same sense here, it can be proclaimed that the state of psychological wellbeing may be negatively affected if a situation of dissatisfaction with coworkers evolves, or vice versa.

The matching theory (Gale & Shapley, 1962; Roth, 1982, 1984) in economics/mathematics emphasizes establishing those interactions

which are mutually advantageous. In the presence of work-life balance, an employee's satisfaction with coworkers creates a mutually beneficial situation which leads to greater psychological wellbeing. We argue that a favorable work-life balance when it interacts with greater satisfaction with coworkers may improve the favorable relationship between work-life balance and psychological wellbeing, while a dissatisfaction may worsen it. In other words, work-life balance, when mismatched with other organizational phenomena, may create unfavorable situation regarding employee's psychological wellbeing and job performance. This discussion also suggests that organizations need to create favorable conditions for positive interpersonal relationships among their coworkers, so that the benefits of work-life practices could be enhanced by creating positive interactions between them.

The above discussion suggests that performance enhancing benefits of work-life balance can be magnified by a greater employee satisfaction with coworkers. Although work-life balance provides a basis for improving employee job performance, such benefit cannot be effectively realized unless other organizational factors positively interact with it. Since jobs are designed by integrating different interdependent activities performed by many stakeholders, employee wellbeing and performance is less likely to improve in the absence of his or her satisfaction with coworkers. Therefore, higher employee satisfaction with coworkers enlarges the benefits of work-life balance by strengthening employee's psychological wellbeing. This discussion leads us to the following moderated mediation hypothesis.

Hypothesis 2. Employee satisfaction with coworkers enhances employee job performance by reinforcing the effect of work-life balance on psychological wellbeing.

Method

Sample and Procedures

The survey was administered among employees of commercial banks in Vehari district (Pakistan). These organizations are suitable for the survey of this study because an organized team-based work environment, with supervisor-subordinate relationships, exists in these organizations. Two data sources were used: the evaluation of employees' job performance was performed by their supervisors and employees' self-ratings were used to measure their work-life balance, psychological wellbeing, and satisfaction with coworkers. In order to minimize common method bias (Podsakoff, MacKenzie, & Podsakoff, 2012), we followed Bormann and Rowold (2016) and carried out a survey in two waves of time.

The first wave of the survey obtained employees' self-ratings about their work-life balance, and supervisor ratings for these employees' job performance. Individualized employee codes were used to match supervisor and employee ratings. Printed survey questionnaires were provided to 400 randomly selected employees and their respective supervisors. Supervisors returned responses for 346 subordinates. So, only those employee responses were considered for whom the supervisor ratings were received. It took about one month to complete the first wave of the survey. After looking for missing values and matching supervisor-subordinate responses, 311 responses were usable (78%).

The second survey was conducted after about fifteen days of the completion of first survey. This time, we intended to approach only those 311 employees for whom we received supervisor-matched usable responses. However, we remained unable to approach all of them because two employees had left their jobs and four were on long-term leave. So, the second wave questionnaires were distributed among 305 employees. In this wave of survey, the employees rated questionnaires related to their psychological wellbeing and satisfaction with coworkers.

The responses of both surveys were matched by using individualized employee codes assigned during the first wave of the survey. The second survey received 296 responses. After matching the first and second wave responses, and looking for missing values, only 284 responses were usable (71%). Of the 284 subordinates, 224 were male (79%) and 60 (21%) were female. The mean age of subordinates was 27 years and the mean experience was 6.5 years. These 284 responses represent 20 supervisors (17 males). On average, 14 individual employees on the job performance scale and 13 coworkers (as a whole) on the satisfaction with coworkers scale were rated by each supervisor and employee, respectively.

Measures

Data were collected by using established questionnaires in existing literature (see Table 2). Job performance was measured by adapting the 2-item questionnaire used by Wright, Cropanzano, and Bonnett (2007). A five-point Likert scale was used which ranged from *never* (1) to *always* (5) for the first item, and from *poor* (1) to *excellent* (5) for the second item. Psychological wellbeing was measured by adapting a 7-item questionnaire used by Hess, Kelloway, Francis, Catano, and Fleming (2005). Wu, Rusyidi, Claiborne, and McCarthy's (2013) 8-item questionnaire was adapted to measure work-life balance. For both of these measures, a five-point Likert scale, ranging from *strongly disagree* (1) to *strongly agree* (5), was used. The measure of satisfaction with coworkers was adapted from Bishop and Scott (2000). For this instrument, a five-point Likert scale, ranging from *extremely dissatisfied* (1) to *extremely satisfied* (5), was used.

Analytical Approach

Data were analyzed by using structural equation modeling with partial least squares (PLS-SEM) in the latest release of SmartPLS 3 (3.2.6). PLS path modeling is an iterative algorithm which, at first step, evaluates measurement model including internal consistency (composite reliability), convergent validity (indicator reliability and average variance extracted), and discriminant validity. The second step involves the evaluation of the structural model and requires testing collinearity among constructs, and assessing the significance and relevance of hypothesized relationships.

Results

Evaluation of Measurement Model

Table 1 shows inter-item correlations, while Table 2 exhibits the factor loadings of individual items, Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE) for the latent variables. Values in Table 2 indicate that our data are valid and reliable at item and construct level except for the factor loading of the last item of the work-life balance construct (.39). Hair, Hult, Ringle, and Sarstedt (2016) recommend that items with loadings below .40 should not be considered for analysis. So, this item was deleted.

In Table 2, we reported both Cronbach's alpha and composite reliability (CR) to show the internal consistency of constructs. Although Cronbach's alpha is less preferred than composite reliability when applying structural equation modeling for data analysis, "it may be used as a conservative measure of internal consistency reliability" (Hair et al., 2016, pp. 101). Alpha and CR values above .70 indicate internal consistency reliability of a construct. However, in the case of CR, the value above .95 is not desirable (Hair et al., 2016). In our case, CR values are satisfactory. However, in the case of the job performance measure, the alpha value is slightly lower than the desired one (.69).

One can note from Table 2 that there is a significant difference between alpha and CR values of 'job performance' and 'satisfaction with coworkers' constructs. This difference, however, is not abnormal. Coefficient alpha can be lower than the CR value because it underestimates internal consistency for being a lower bound estimate of reliability (Peterson & Kim, 2013; Raykov, 2001).

In addition to the above validity measures, discriminant validity was tested to assess that the measures of one construct do not correlate with other constructs (Ringle, Sarstedt, & Mooi, 2010). Traditionally, it is evaluated through two approaches: cross-loadings and Fornell and Larcker's (1981) criterion. In the cross-loadings approach, "an indicator's outer loading on the associated construct should be greater than all of its loadings on other constructs (i.e., the cross loadings)" (Hair et al., 2016, pp. 105). Table 3 shows that all indicators' outer loadings on their associated constructs are greater than their loadings on other constructs. So, discriminant validity has been established.

Table 1. Inter Item Correlation Matrix

	CWS1	CWS2	CWS3	CWS4	JP1	JP2	PWB1	PWB2	PWB3	PWB4	PWB5	PWB6	PWB7	WLB1	WLB2	WLB3	WLB4	WLB5	WLB6	WLB7	
CWS1	1.0																				
CWS2	.52	1.0																			
CWS3	.57	.48	1.0																		
CWS4	.52	.35	.79	1.0																	
JP1	.55	.56	.59	.49	1.0																
JP2	.30	.45	.40	.39	.52	1.0															
PWB1	.40	.39	.21	.17	.48	.36	1.0														
PWB2	.36	.34	.18	.20	.40	.35	.77	1.0													
PWB3	.41	.29	.19	.27	.38	.16	.71	.89	1.0												
PWB4	.49	.23	.37	.36	.40	.20	.61	.61	.66	1.0											
PWB5	.49	.23	.34	.47	.45	.32	.47	.54	.61	.70	1.0										
PWB6	.38	.28	.30	.31	.53	.40	.65	.58	.57	.68	.71	1.0									
PWB7	.28	.14	.21	.28	.27	.28	.54	.56	.51	.62	.59	.67	1.0								
WLB1	.38	.37	.49	.42	.38	.34	.40	.34	.34	.32	.35	.43	.34	1.0							
WLB2	.48	.46	.47	.49	.44	.44	.41	.32	.34	.30	.36	.42	.33	.83	1.0						
WLB3	.41	.46	.58	.49	.45	.43	.41	.34	.31	.34	.35	.42	.32	.82	.79	1.0					
WLB4	.36	.37	.44	.44	.30	.34	.50	.36	.34	.32	.27	.37	.38	.62	.69	.76	1.0				
WLB5	.27	.27	.34	.36	.25	.34	.43	.36	.31	.26	.28	.36	.40	.68	.69	.69	.72	1.0			
WLB6	.31	.24	.39	.41	.20	.19	.24	.21	.26	.27	.29	.26	.28	.64	.69	.60	.69	.63	1.0		
WLB7	.23	.22	.36	.41	.25	.34	.22	.18	.19	.21	.33	.33	.29	.59	.58	.70	.60	.67	.72	1.0	

Note. JP = Job performance; WLB = Work-life balance; PWB = Psychological wellbeing; CWS = Satisfaction with coworkers.

Table 2. Evaluation of Measurement Model

Construct	Item	Indicator	λ^1	A ²	CR ³	AVE ⁴
Work-life Balance (WLB)	There is a good fit between my personal life and work life	WLB1	.88	.93	.94	.73
	There is a good fit between my family life and work life	WLB2	.89			
	I receive support and recognition from family members	WLB3	.91			
	There is a good fit between my job and my personal health	WLB4	.85			
	I am able to do my job and not burnout	WLB5	.85			
	This job enables me to continue living where I live now	WLB6	.80			
	I have sufficient emotional energy for the job	WLB7	.79			
Psychological Wellbeing (PWB)	In the last six months, I have been feeling.....			.92	.93	.68
	motivated	PWB1	.83			
	cheerful	PWB2	.85			
	enthusiastic	PWB3	.85			
	lively	PWB4	.84			
	joyful	PWB5	.80			
	in good spirit	PWB6	.85			
energetic	PWB7	.77				
Job Performance (JP)	To what extent this employee developed and maintained high performance goals over the past (one year) evaluation period.	JP1	.91	.69	.85	.75
	Overall, how would you rate this employee's performance over the past (one year) evaluation period?	JP2	.82			
Satisfaction with Coworkers. (CWS)	How satisfied are you with...			.82	.88	.65
	how you get along with others on your team	CWS1	.81			
	how you and your teammates work together	CWS2	.73			
	the opportunity to make friends with your teammates	CWS3	.87			
	the decisions made by you and your teammates	CWS4	.81			

Note. ¹Factor loadings; ²Cronbach's alpha; ³CR = Composite reliability; ⁴AVE = Average variance.

Table 3. Cross Loadings

	CWS	JP	PWB	WLB
CWS1	.81	.51	.49	.42
CWS2	.73	.51	.33	.41
CWS3	.87	.58	.32	.52
CWS4	.81	.51	.35	.51
JP1	.68	.91	.51	.39
JP2	.47	.82	.36	.42
PWB1	.36	.48	.83	.44
PWB2	.33	.43	.85	.36
PWB3	.36	.33	.85	.35
PWB4	.45	.36	.84	.34
PWB5	.47	.45	.80	.37
PWB6	.39	.54	.85	.44
PWB7	.28	.31	.77	.39
WLB1	.51	.41	.44	.88
WLB2	.59	.49	.43	.89
WLB3	.60	.51	.43	.91
WLB4	.49	.36	.44	.85
WLB5	.38	.33	.41	.85
WLB6	.41	.22	.31	.80
WLB7	.37	.33	.31	.79

Note. JP = Job performance; WLB = Work-life balance; PWB = Psychological wellbeing; CWS = Satisfaction with coworkers.

Table 4. Fornell and Larcker's (1981) Criterion

	CWS	JP	PWB	WLB
CWS	.81¹			
JP	.68 ²	.87		
PWB	.46	.52	.83	
WLB	.58	.46	.47	.85

Note. ¹Square root of AVE (diagonal); ²Off diagonal are Pearson correlations; JP = Job performance; WLB = Work-life balance; PWB = Psychological wellbeing; CWS = Satisfaction with coworkers.

In **Fornell and Larcker (1981)** criterion, the square root of each construct's average variance extracted (AVE) is compared with its bivariate correlations with all opposing constructs (**Grégoire & Fisher, 2006**). Discriminant validity exists if AVE square root for each construct is greater than the values of its bivariate correlations (**Ringle et al., 2010**). For example, **Table 2** shows that the AVE value for the

work-life balance (WLB) construct is .73, and its square root is .85, which has been shown in **Table 4**. This value is greater than WLB's bivariate correlations with all opposing constructs and shows that discriminant validity has been established for the WLB construct.

Table 5. Heterotrait-Monotrait Ratio (HTMT)

	CWS	JP	PWB	WLB
CWS				
JP	.88			
PWB	.52	.61		
WLB	.64	.56	.49	

Note. JP = Job performance; WLB = Work-life balance; PWB = Psychological wellbeing; CWS = Satisfaction with coworkers.

However, these methods have been considered insufficiently sensitive to detect discriminant validity, and a more sensitive new criterion, named as Heterotrait-Monotrait Ratio of Correlations (HTMT), has been introduced in literature (**Henseler, Ringle, & Sarstedt, 2015**). So, we used this criterion for establishing discriminant validity between constructs. HTMT "is the average of the heterotrait-heteromethod correlations (i.e., the correlations of indicators across constructs measuring different phenomena), relative to the average of the monotrait-heteromethod correlations (i.e., the correlations of indicators within the same construct)" (**Henseler et al., 2015**, pp. 121). HTMT, in fact, estimates the correlation between constructs. If two constructs' indicators have an HTMT value clearly smaller than 1, it shows that these constructs are different from each other because their true correlation is different from 1 (**Henseler et al., 2015**). Using a more conservative approach (considered as the strictest criterion), the HTMT value between two constructs must be lower than .85 (HTMT_{.85}).

Table 5 shows that all HTMT values between constructs are below .85, except for values between CWS and JP. However, in a more liberal criterion (HTMT_{.90}), the HTMT value above .85 but below .90 is acceptable (**Henseler et al., 2015**). So, according to HTMT_{.85} and HTMT_{.90} criteria, discriminant validity has been established.

Evaluation of the Structural Model

Before hypothesis testing, collinearity between each set of predictor variables must be checked (**Hair et al., 2016**)¹. Variance inflation factor

(VIF) is frequently used for detecting collinearity. Its value should be 5 or lower. Below, equation 3 in our mediation analysis and equations 5 to 6 in the moderated mediation analysis involve more than one construct predicting a criterion variable, and require a collinearity test. The SmartPLS results in Table 6 indicate that all VIF values are below 5, indicating the absence of collinearity among predictors.

Table 6. Collinearity Assessment (Inner VIF Values)

Equation 3 (Criterion: JP)		Equation 4 (Criterion: JP)		Equation 5 (Criterion: PWB)		Equation 6 (Criterion: JP)	
Predictor	VIF	Predictor	VIF	Predictor	VIF	Predictor	VIF
WLB	1.29	WLB	1.51	WLB	1.50	WLB	1.95
PWB	1.31	CWS	1.74	CWS	1.49	CWS	1.69
		WLB*CWS	1.22	WLB*CWS	1.08	WLB*CWS	1.57
						PWB	1.63
						PWB*CWS	1.37

Note. JP = Job performance; WLB = Work-life balance; PWB = Psychological wellbeing; CWS = Satisfaction with coworkers; VIF = Variance inflation factor.

Mediation test (hypothesis 1). Based on Baron and Kenny (1986), Muller, Judd, and Yzerbyt (2005) suggested a three-step process for testing mediation effect. Each step involves a distinct regression equation. So, we performed multiple linear regression analyses to estimate the following equations (1 to 3), where, JP = Job performance, WLB = Work-life balance, and PWB = Psychological wellbeing.

$$JP = \beta_{10} + \beta_{11} (WLB) + \epsilon_1 \tag{1}$$

$$PWB = \beta_{20} + \beta_{21} (WLB) + \epsilon_2 \tag{2}$$

$$JP = \beta_{30} + \beta_{31} (WLB) + \beta_{32} (PWB) + \epsilon_3 \tag{3}$$

Table 7 shows the summarized results of the estimated structural model from PLS-SEM analysis. Muller et al. (2005) suggested that a variable functions as mediator when it fulfills four conditions. The first condition is that in the absence of a potential mediator the relationship between independent and dependent variable must be significant (equation 1). The second condition is that the predictor (WLB) in equation 2 must significantly impact the mediator (PWB). The third condition is that in equation 3, controlling for the effect of the predictor (WLB), the mediator (PWB) must significantly influence the outcome variable (JP). Table 7 shows that our mediation model the above three conditions. In addition, the indirect effect through the mediating variable (the entire path from WLB to JP) must be significant after including a mediator in PLS path model. The bootstrapping of indirect path in SmartPLS provided results about indirect effect (Table 7), and we found it significant ($\beta = .18, t = 4.90, p < .01$). The fourth condition is that the previously significant path coefficient between the independent and dependent variables (WLB to JP) must significantly change its value (magnitude) in the presence of the mediator. Estimates of equation 3 in Table 7 indicate that, by including the mediator in the model, the value of path coefficient was reduced significantly, from .47 to .28. However, the significant relationship between WLB and JP in equation 1 (t -value = 9.95) remained significant in the presence of mediator in equation 3 (t -value: 4.61). The significance of WLB and JP relationship in both models (Equation 1 and 3), but a considerable reduction in the magnitude of path coefficient for this relationship in equation 3 suggests partial mediation (Baron & Kenny, 1986; Muller et al., 2005). In addition to this, variance accounted for (VAF) was calculated to assess the strength of mediation effect. Hair et al. (2016) suggested the calculation of VAF instead of applying a commonly used Sobel test because the distributional assumptions of Sobel test do not hold for indirect effect, and lacks statistical power. Calculating VAF

is considered only if the indirect effect is significant. Table 6 shows that the indirect effect is significant in our mediation model. VAF determines the size of the indirect effect (.18) in relation to the total effect (direct effect + indirect effect, which is .28 + .18 = .46): $VAF = .18/.46 = .39$. VAF between .20 and .80 indicates partial mediation (Hair et al., 2016), which is the case in our model.

Table 7. PLS Regression Results for Mediation Model

Equation 1 (Criterion: JP)		Equation 2 (Criterion: PWB)		Equation 3 (Criterion: JP)		
Direct Effects						
Predictors	β	t -value	β	t -value	β	t -value
WLB	.47 (β_{11})	9.95**	.47 (β_{21})	8.35**	.28 (β_{31})	4.61**
PWB					.37 (β_{32})	7.39**
Indirect Effects						
Indirect Path		β		t -value		
WLB → PWB → JP		.18		4.90**		

Note. JP = Job performance; WLB = Work-life balance; PWB = Psychological wellbeing; CWS = Satisfaction with coworkers.
** $p < .01$.

Moderated mediation test (hypothesis 2). Muller et al. (2005) suggested a three-step process for testing moderated mediation. Each step involves a distinct regression equation. So, we performed multiple linear regression analyses to estimate the following three equations (4 to 6), where, JP = Job performance, WLB = Work-life balance, PWB = Psychological wellbeing, and CWS = Satisfaction with coworkers; * shows the interaction or multiplication of two variables (i.e., interaction term for testing moderating effect).

$$JP = \beta_{40} + \beta_{41} (WLB) + \beta_{42} (CWS) + \beta_{43} (WLB*CWS) + \epsilon_4 \tag{4}$$

$$PWB = \beta_{50} + \beta_{51} (WLB) + \beta_{52} (CWS) + \beta_{53} (WLB*CWS) + \epsilon_5 \tag{5}$$

$$JP = \beta_{60} + \beta_{61} (WLB) + \beta_{62} (CWS) + \beta_{63} (WLB*CWS) + \beta_{64} (PWB) + \beta_{65} (PWB*CWS) + \epsilon_6 \tag{6}$$

Equation 4 estimates the moderating effect of satisfaction with coworkers on the relationship between work-life balance and job performance. We estimated this equation by using product-indicator (standardized) approach in PLS path model (Chin, Marcolin, & News- ted, 2003). In order to determine moderated mediation, the first condition is that β_{41} must be significant, while β_{43} is not (Muller et al., 2005). Table 8 shows that β_{41} is significant, while β_{43} is not.

Table 8. PLS Regression Results for the Moderated Mediation Model

Equation 4 (Criterion: JP)		Equation 5 (Criterion: PWB)		Equation 6 (Criterion: JP)		
Direct Effects						
Predictors	β	t -value	β	t -value	β	t -value
WLB	.14 (β_{41})	2.16*	.35 (β_{51})	5.8**	.06 (β_{61})	0.84 ^{ns}
CWS	.65 (β_{42})	11.28**	.33 (β_{52})	5.13**	.58 (β_{62})	9.89**
WLB*CWS	.07 (β_{43})	0.97 ^{ns}	.26 (β_{53})	4.49**	.11 (β_{63})	2.32*
PWB					.21 (β_{64})	3.97**
PWB*CWS					.002 (β_{65})	0.04 ^{ns}
Indirect Effects						
Indirect Paths		β		t -value		
(WLB*CWS) → PWB → JP		.01		1.97*		
WLB → PWB → JP		.07		2.73**		
CWS → PWB → JP		.07		3.24**		

Note. ns = Non-significant; JP = Job performance; WLB = Work-life balance; PWB = Psychological wellbeing; CWS = Satisfaction with coworkers.
* $p < .05$; ** $p < .01$

In order to determine the moderated mediation, beta coefficients of equations 5 and 6 are examined. Muller et al. (2005) suggested that either (or both) of following two patterns should exist: either both β_{53} and β_{64} are significant or both β_{51} and β_{65} are significant, in equations 5 and 6. Table 8 shows that our β_{53} and β_{64} are significant, while only β_{51} is significant in case of β_{51} and β_{65} .

Once either or both of these conditions are satisfied, determining moderated mediation requires that the moderating effect of residual WLB on JP, i.e., β_{63} , be significant. Table 8 shows that our β_{63} is significant.

The results indicate that a moderated mediation pattern exists in our model, supporting our hypothesis 2, i.e., employee satisfaction with coworkers enhances employee job performance by reinforcing the effect of work-life balance on psychological wellbeing.

Discussion

This research was initiated by recognizing the need for clarifying why and how work-life balance affects employee job performance. Based on the affective events theory, we developed the idea that work-life balance enhances employee's job performance by positively influencing her or his psychological wellbeing. Furthermore, by taking insights from Ryff's (1989) theory of psychological wellbeing, the person-environment fit theory, the evolutionary mismatch theory in biology, and the matching theory in economics/mathematics, we developed a theoretical idea that greater satisfaction with coworkers increases employee job performance by strengthening the effect of work-life balance on psychological wellbeing.

The main conclusions of this research are that psychological wellbeing mediates the relationship between work-life balance and employee job performance, and this mediation process is moderated by satisfaction with coworkers. The findings of this research suggest that psychological wellbeing and satisfaction with coworkers are key variables in enhancing researchers' understanding about how and why work-life balance is most likely to increase employee job performance.

Theoretical Implications

This research contributes to the existing theory by explaining why and how a greater work-life balance leads to greater employee performance. Prior research has examined the relationship between work-life balance and psychological wellbeing, and also between psychological wellbeing and job performance. But an analysis of how psychological wellbeing explains the underlying relationship between work-life balance and job performance has been neglected. The findings of this research indicate that psychological wellbeing is an important mediator of the effect of work-life balance on job performance, and that the mediating process would depend on employees' satisfaction with coworkers. It is important because the process of advancement in theory requires researchers to integrate moderators in the mediating processes (Karazsia, Berlin, Armstrong, Janicke, & Darling, 2013).

The results of our hypothesis 1 indicate that the relationship between work-life balance and job performance is well explained through mediating processes, rather than a direct relationship. This finding is consistent with previous primary and meta-analytical studies. For example, in his research based on data from 293 Korean workers, Kim (2014) found that the relationship between work-life balance and job performance was explained by affective commitment. Similar findings have been found with respect to work-family conflict rather than work-life balance. Based on data collected from 110 full-time frontline hotel employees and their managers, Karatepe (2012) found that emotional exhaustion fully mediates the relationship between work-family conflict and job performance. Judge, Thoresen, Bono, and Patton's (2001) meta-analysis suggests that 'psychological processes' play an important role in explaining a

person's job performance. Implicit in our mediation hypothesis is the assumption that psychological wellbeing predicts job performance. Our results show that work-life balance increases employee job performance by strengthening their psychological processes such as psychological wellbeing.

Empirical results from our hypothesis 2 explain how the interaction effect of work-life balance and satisfaction with coworkers on employee job performance is explained (mediated) by psychological wellbeing. Satisfaction with coworkers enhances job performance because it positively influences employees' psychological wellbeing. Our findings suggest that employees with greater work-life balance perform better when their psychological wellbeing is reinforced by their satisfaction with coworkers. Insights from Kristof-Brown et al.'s (2005) meta-analysis suggest that satisfaction with coworkers enhances employee job performance by strengthening the psychological processes of person-group fit. Previous primary studies also indicate that satisfaction with coworkers enhances a person's psychological meaningfulness and commitment at work and, consequently, job performance (Bishop & Scott, 2000; May, Gilson, & Harter, 2004). Avery et al.' (2007) study also suggests that greater satisfaction with coworkers provides employees with psychological conditions favorable to job engagement and performance.

Based on employer-employee data from the Workplace Employment Relations Survey 2011, a recent research by UK's department of business innovation and skills (Bryson, Forth, & Stokes, 2015) has emphasized that a worker's positive interpersonal relationships with coworkers enhance their subjective wellbeing, which tends to improve employee performance. Hence, increasing satisfaction with coworkers enlarges employee's wellbeing derived from other organizational variables such as work-life balance, and consequently greater job performance is obtained.

This study found that the interaction of psychological wellbeing and satisfaction with coworkers had a small and nonsignificant effect on employee job performance. It suggests that the same phenomena which enhance psychological wellbeing are less likely to strengthen its effect on job performance unless other interventions (for example, improving employee skills, his or her sense of responsibility, etc.) are introduced as interacting variables. So, this research opens up a new avenue of theoretically investigating and empirically testing the variables which moderate the effect of psychological wellbeing on job performance.

Practical Implications

Organizational leaders must realize that improving work-life balance enhances job performance by increasing employee's psychological wellbeing. However, introducing work-life balance practices may also bring costs. So, the cost-effectiveness of such programs and their long-term impact on employee and organizational performance must be analyzed.

Satisfaction with coworkers causes an obvious increase in employee's psychological wellbeing when it interacts with work-life balance. This finding suggests that costly work-life balance practices may turn useless if managers are unable to create positive coworker interactions through a culture of respect, fairness, and trust. So, if organizations want to obtain performance benefits of work-life balance practices, their leaders must invest time and energy in building a culture of support, derived not only from leaders but also from coworkers. Moreover, organizations focused on obtaining greater employee performance by improving their psychological wellbeing should recognize that wellbeing benefits of work-life balance are contingent upon employees' satisfaction with coworkers. In other words, the impact of work-life balance on psychological wellbeing will flourish in an environment of satisfaction with coworkers, and a better person-organization fit can be obtained.

Limitations and Future Research

As every research, this study also has some limitations. First, our sample was from the banking sector, and this context may be idiosyncratic enough to restrict the external viability of our results. Second, supervisors' rating of more than one employee might have created systematic variance into the ratings of job performance. Third, we did not correct the job performance measure for interrater reliability. Although some researchers, such as [Murphy and DeShon \(2000\)](#), argue against practicing interrater reliability (on the grounds that interrater disagreement may be due to rater effect rather than random error), most researchers suggest considering this issue ([Judge et al., 2001](#)). Given the low value of Cronbach alpha (.69), and the measurement of job performance with only two items, the interrater reliability can be expected to have a value lower than the average levels (.52) reported in previous meta analytical work ([Salgado & Moscoso, 1996](#); [Viswesvaran, Ones, & Schmidt, 1996](#)). Based on the insights from [Salgado and Moscoso \(1996\)](#) and [Viswesvaran et al. \(1996\)](#), we recommend future researchers to use composites with five or more items to overcome the issue of interrater reliability.

Contrary to previous research, this study found a significantly high correlation between satisfaction with coworker and job performance (.68, [Table 4](#)). Although the purpose was not to test direct relationship between these two variables, a high correlation calls for attention. Satisfaction with coworkers is a facet of employee job satisfaction. Previous meta-analytical work has reported a mean true correlation of .30 between job satisfaction and job performance ([Judge et al., 2001](#)). However, in [Judge et al.'s \(2001\)](#) meta-analysis, this correlation was above .57 in 10% of the studies, and among these 10% studies many had the correlation coefficient above .68. [Vroom's \(1964\)](#) meta-analysis also found correlations higher than .68. In [Petty, McGee, and Cavender's \(1984\)](#) meta-analysis, the weighted mean correlation between satisfaction with coworker and job performance for one study was .57. Given that high correlations exist in previous research and vary across contexts, an examination of the strengths or weaknesses of contextual/situational factors could have explained the size of this correlation ([Bowling, Khazon, Meyer, & Burrus, 2015](#); [Kaplan, Bradley, Luchman, & Haynes, 2009](#)). We recommend future researchers to consider also the situational strengths and weaknesses for understanding true correlations among study variables.

While theory and evidence support our conceptual model, we cannot ignore other possible illustration of our results. For instance, employees who perform better may be more likely to receive greater work-life balance from their organization. One recommendation for future scholars is to establish and examine a more comprehensive characterization of the viable antecedents of employee job performance and psychological wellbeing, and to also discover the level of mutual cause-effect relationships.

Despite its limitations, we believe that our study considerably contributes to the existing body of knowledge as it developed a moderated mediation model for answering the question of why work-life balance affects employee job performance and how satisfaction with coworkers is contingent upon it by enhancing employee's psychological wellbeing.

Conflict of Interest

The authors of this article declare no conflict of interest.

Note

¹PLS-SEM also requires collinearity test at item level in formative measurement models. However, in case of reflective measurement model, collinearity test is not required (see [Hair et al., 2014](#)). As we used reflective measurement model, the collinearity test was performed only at construct level.

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