

Impact of work from home on work-life balance: Mediating effects of work-family conflict and work motivation

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Abstract

In the aftermath of the recent pandemic, organizations around the world had the opportunity to assess the benefits and drawbacks of allowing a bulk of their employees to work from home (WFH). As a result, many organizations realize that through use of technology it is possible to shift a significant percentage of their workforce to permanently function from any location without being physically present at a designated workplace. Although the economic benefits for organizations that allow WFH seem to be clear, yet how factors related to perceptions of employees such as their work motivation (WM) and also their work-life balance (WLB) caused by blurred boundaries between work and family at home is not clearly understood.

Therefore, the primary goal of this study is to determine how WFH impacts WLB through the possible mediating effects of work-family conflict (WFC) and WM.

A cross-sectional survey instrument was developed using Likert type measurement scales that were adopted from top-tier journals. The data was collected through convenient sampling from 249 managerial and non-managerial employees in Omani business organizations. The relationships were tested through structural equation modelling. The results indicate that WFH increases WFC and also WM, while the relationship between WFH and WLB is mediated by WFC, but not by WM. The findings of this study have implications for both theory and practice.

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1. Introduction

The pandemic induced by the novel coronavirus (i.e., Sars-Cov-2 or Covid-19) has brought about sweeping changes in the world of work [1]. To mitigate the threat of spread of infections, a large portion of the workforce were restricted from commuting to the physical workplace [2]. This forced both the employers and employees to switch to work-from-home (WFH) arrangements on an unprecedented scale [3]. As a result, based on the social distancing guidelines by the World Health Organization in July 2020, WFH became the only way out for most organizations [4]. Towards the end of 2021, it appeared that administering vaccines on a mass scale were showing tangible results and most economies started to re-open. However, new variants of the virus were emerging, putting organizations on the edge about resuming work as usual from the normal workplace [5]. As a result, many organizations considered re-engineering their business models and mode of operations to create sustainable organizational resilience against such potentially recurring phenomena. One possible measure being

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considered by many organizations, especially those that have operational models that can work without the employee being physically present at the office, is to shift to permanent arrangements for employees to work remotely (i.e., work-from-home) [6].

According to an article in The Guardian Newspaper in UK, “while most employers are seeing such arrangements as temporary measures until the situation allows for return to business as usual, other organizations are discovering the benefits of such arrangements and are considering formulating long-term policies regarding allowing employees to opt for WFH on a permanent basis” [7]. However, there appears to be a dearth of sufficient published empirical evidence to support long-term policy decisions. For this to happen, it is necessary to develop and test conceptual frameworks that provide evidence on how WFH as a permanent measure is likely to impact outcomes in the personal domains of employees.

WFH as a context in the era of the COVID-19 pandemic has brought back a renewed interest in phenomena such as Work-Family Conflict (WFC) and Work-Life Balance (WLB), that were studied previously in reference to workplace arrangements such as telecommuting, e-working, telework, flexible work practices, etc., that all represent various forms of working from remote locations using technology [8]. Studies conducted prior to Covid-19 indicate that relationships between WFH and outcomes such as WFC have been studied in the past under different nomenclatures such as Work-Home Interference or Work-Home Conflict, etc. [8]. Nevertheless, WFH as a temporary solution is likely to be adopted by many employers on a permanent basis. Despite the evolution of work arrangements, the impact of such changes on the personal domains of employees is not sufficiently understood [9].

Prior studies in extant literature have mostly looked at the consequences of working from a remote location, mostly a result of pre-determined agreements between the employer and employee (e.g., [10] Gajendran and Harrison, 2007; [11] Nilles, 1988). However, in the post-pandemic era, the context is quite different because the WFH practice has been implemented out of necessity and is primarily being driven by global and national health policies [2]. Employers initially considered WFH as temporary, however, many organizations are mulling the possibility of switching to such arrangements on a permanent basis.

In an insightful article in the Harvard Business Review titled “Our Work-From-Anywhere Future” by [2], WFH as potentially permanent option, is likely to bring about massive disruption in the future of the workplace. The idea of allowing employees to work from their home permanently has the potential of bringing benefits to both the employers and the employees; some of the benefits of WFH measures are quite obvious. For instance, outcomes such as need for less office space, reduction in commuting time, avoidance of office politics, more gender diversity as women can balance career and family responsibilities more effectively, less absenteeism, and an overall healthier workforce are some of the apparent advantages [6].

However, all aspects of WFH are not expected to be positive. For instance, employees staying home often experience blurred boundaries between work and family, due to distractions and social isolation [12]. Another study shows that family circumstances such as the presence of young children at home can be an unavoidable source of distraction from being able to focus on work [13]. Furthermore, many employees feel that they are overworked as their supervisors and colleagues can access them online beyond their normal office hours, and this has the potential for creating personal distress, anxiety and family conflicts leading to potential impact on their work-life balance. In a study, prior to the pandemic, on management of boundaries due to remote work, it was discovered that many employees were unable to disengage from work when they worked from home, leading to stress and burnout [14]. Nevertheless, the consequence of prolonged WFH on work motivation (WM), work-family conflict (WFC) and work-life balance (WLB) are not well understood. Hence, further empirical investigation into how WM, WFC and WLB are being impacted by WFH practices seems to be warranted. Therefore, the primary goal of this study is to investigate the impact of working from home on WLB of employees, and whether the above relationship is parallelly mediated by WFC and WM. The next section presents a summary of the extant literature along with discussions on the theoretical lens for proposing the

conceptual framework in this study. The subsequent sections delve into the hypothesis development, followed by research methodology, data analysis, discussions along with future research directions and conclusion.

2. Literature review

The following section presents an overview of the conservation of resource (COR) theory as the foundational theory. This is followed by elaboration on the discourse in the literature with regards to the above constructs and their proposed relationships.

2.1. Conservation of resources theory (COR)

Early literature related to work- and personal-domain studies indicate that researchers have primarily relied on theories such as the role theory by [15], even though some studies have used other frameworks such as spillover theory and segmentation models [16]. The role theory argues that when people try to perform multiple roles, they will experience conflict within a role (i.e., intra-role), because of the conflicting demands placed on energy they have to devote and the time they must give to satisfactorily perform these roles [17]. Subsequent studies reveal that role theory poses certain limitations when studying work-family conflict and work-life balance [18], [19], [20]. For instance, the role theory has paid less attention to family roles, which is vital for understanding WFC and consequently WLB. Furthermore, Jackson (1989) points out that the role theory omits several pertinent variables that play a role between stressors and family-stress outcomes. Since, this study looks at WFH as a possible stressor, and WFC, WM and WLB, the conservation of resources (COR) model, provides a more suitable theoretical lens to predict the possible impact of WFH on WFC, WM and WLB.

The COR theory developed by [16] encompasses multiple stress models. The foundation of COR is that people seek to acquire and preserve resources. Hence, people will experience stress when there is the possibility of loss of a resource, or actual loss, or even lack of an expected gain in resources [16]. The definition of resources is not limited to tangible objects only, but it also includes conditions, personal characteristics, and energy [18]. In the context of the current study related to WFC, WM and WLB, resources as conditions, personal characteristics and energy are all relevant. In this case conditions such as WFH for a prolonged period and possible distractions at home perhaps due to family circumstances of the employee are relevant to the amount of stress the individual will experience in their work- and personal-domains, that are likely to influence their work-life balance through intervening influence of work motivation and work-family conflict. Hence, the conservation of resources model is quite a robust in that it encompasses both intra-role and inter-role conflicts [16].

2.2. Work-from home

Although the global spotlight on WFH is now being attributed to measures for minimizing risks of infections due to COVID-19, yet the concept of WFH is nothing new [21]. The practice of allowing employees to perform their duties without physically being present at a designated workplace can be traced to research undertaken several decades ago when terms such as “telecommuting” or “teleworking” were in vogue. In fact, the literature indicates that terminologies such as remote work, e-working, teleworking, flexible workplaces, etc. have been looked at by several studies in the past (e.g., [10], [22], [23]).

Studies published at the height of the pandemic indicate that 37% of the work done by office workers can be done from home [21]. The study argues that people working in the financial industry, scientific and professional services, business management, accounting, and work that do not require face-to-face interaction with people on a regular basis, can all be done from home. In fact, the authors suggest that other than the healthcare services, farming, hospitality and other frontline jobs, most jobs can either be done by people from remote locations or be done by intelligent machines. Other publications such as Choudhury (2020) allude to the possibility that remote work may actually be the future workplace for a very large population in many countries.

Prior to the pandemic, discourse on the future of WFH was not clear and was not widely considered by organizations in general, and in fact was considered suitable for specific industries such as the information

technology sector [3]. However, prolonged effects of the pandemic have forced organizations of all industry types to rapidly adopt WFH practices with the possibility that a good portion of their workforce will continue to do so for much longer period or even permanently. The measures have been so widely implemented, that in the United States, 35.2% of the workforce was reported to be working from home in May 2020 ([24]). In many countries, WFH as a practice was implemented through government orders where most organizations had to comply [5].

2.3. Work-family conflict

The concept behind work-family conflict (WFC) focuses on the negative spillover of people's work-life into their family lives. The literature indicates that the same concept has been referred to as work-home interference and work-home conflict, which basically conveys the same idea (Smith et al., 2022). All these terms bring to fore various influences of work in an individual employee's life that impacts their relationships with those they live with at home [17].

Different types of conflicts between work and family have been studied in the literature. A general classification distinguishes such conflicts into four types based on direction and valence of one domain over another [25]. When the effect of family domain over the work domain is negative, it is referred to as family-to-work conflict. In the event that the relationship is positive, it is termed as family-to-work enrichment. When the effect of work domain is negative over the family domain, it is referred to as work-to-family conflict. On the other hand, if the effect of work on family is positive, then it is referred to as work-to-family enrichment [17]. However, the literature indicates that an overwhelming majority of the studies on conflict between work and family domains have been studied in a negative form [26].

Among the noted work on WFC is by [27] that discusses three types of conflicts: time-based conflict (T-WFC), which results from the family time that is sacrificed due to asymmetric amount of time devoted to work, strain-based conflict (S-WFC) that results from stress created at work, which impedes one's ability to take part in important family commitments, and general work family conflict (G-WFC) [27]. Additionally, the three types of WFC mentioned above, are further classified into six (6) sub-categories that are based on either work affecting family life, or family life affecting work. These are referred to as: T-WFC, T-FWC, S-WFC, S-FWC, G-WFC, and G-FWC [28]. The current study utilizes the above conceptualization of work-family conflict.

2.4. Work motivation

Motivation in general is defined as a psychological force that drives thoughts and behaviours that are goal directed. Such processes are based on a person's internal psychological forces along with contextual and external environmental forces that influence the intensity and direction of an individual's behaviour directed towards a specific goal [29]. Particularly in relation to the work domain of an individual, work motivations tend to be internal energy that determines the direction, form, duration and intensity of their work-related behaviour [30]. Therefore, work motivation is a derivative of the interaction between a person's internal energy and the external environment based on society, culture and organization that a person works in [31]. Extant literature indicates that work motivation is influenced by factors such as personality traits and needs, while it leads to various outcomes such as satisfaction and engagement [32].

The seminal work by [32] on self-determination theory (SDT) breaks down the concept of work motivation into two constructs: intrinsic and extrinsic motivation. It presents intrinsic motivation as an internal driver where employees feel inclined to work out of joy, excitement and personal satisfaction derived from their work-related functions. Whereas extrinsic motivation represents an employee's personal drive towards work that is primarily because of factors that represent their perceptions about their organization, the work itself, and the working environment. Such factors range from peer influence, leader-member exchange quality, social norms, rewards, etc. Basically, an extrinsically motivated individual focuses on the utility of the work rather than the work itself [32]. In an insightful analysis of the SDT by [33], the authors address the conceptualization of work motivation and argue that work motivation is better represented by intrinsic motivation, rather than extrinsic motivation.

2.5. Work-life balance

With increased emphasis on corporate welfare, the term work-life balance (WLB) has become a popular theme in human resources management practices, especially amongst large organizations that struggle to retain their high-performance employees. Despite the wide popularity of the topic in industry practice, academic knowledge around the concept of WLB appears to be lagging behind [34]. A review article by Gragnano et al. (2020) reveals that majority of the studies are skewed towards understanding WLB from the perspective of working parents with young children, and their struggle to balance their work-related obligations with their obligations towards their family. A meta-analytic review by Casper et al. (2018) indicates that about 66% of the empirical studies are related to correlations between work and non-work domains. In this context, Keeney et al. (2013) identified eight non-work domains that are relevant to WLB: education, health, leisure, friendships, romantic relationships, family, household management, and community involvement. The importance a person gives to each of these domains differs from person to person, which are likely to change over time within the same person due to changes in their own circumstances.

A plethora of different definitions seem to exist in the literature, and there appears to be a dearth of a commonly agreed-upon definition of WLB [35]. Among the most cited definitions in the extant literature is: "Work-life balance is the individual perception that work and non-work activities are compatible and promote growth in accordance with an individual's current life priorities" [36]. Furthermore, in ref. [37] they argue that WLB not only leads to job satisfaction and performance, but also parallelly fosters satisfaction with one's personal and family life. The aforesaid authors also found that employees who measured high on the WLB scale reported reduced levels of stress, emotional exhaustion and anxiety.

3. Hypotheses development

Leveraging the support of the theory of conservation of resources and evidence from empirical research, the following subsections present the hypotheses for positing relationships between the constructs in the framework.

3.1. Work-from home and work-family conflict

Employees that have been directed to be away from their physical workplaces and work from home (WFH) may experience conflict between their work- and family-roles especially when the WFH measures are prolonged over an indefinite period and in many cases permanently. Despite the apparent return to normalcy in most countries around the world in the aftermath of the pandemic, many companies have decided to delay allowing employees to return back to their offices and are mulling WFH as a permanent measure for a large percentage of their employees. Such a paradigm shift in the concept of the workplace may have both positive as well as negative outcomes for employees both in their work and personal domains. In this regard, in ref. [38] they argue that WFH can lead to stress because there is a perceived loss of resources in the process of juggling between responsibilities at work and home, which has a spillover effect on WFC while being constantly present at home. The blurred boundaries that are likely to be created by being present at home along with other family members during working hours is expected to cause overlaps between the work domain and the personal domain thus contributing to tensions in terms of time, strain and behavior. In terms of Carlson et al.'s dimensions of WFC based on time, strain and behavior, it is not clear how each of these dimensions is likely to be affected by WFH, however, it may be posited that WFC as a second order construct will be significantly influenced by WFH. Formally stated:

H-1: Work from home will influence work-family conflict.

3.2. Work-from home and work motivation

In the aftermath of the COVID-19 pandemic numerous organizations implemented WFH as a measure to prevent spread of infections. The experience of enabling employees to work remotely without requiring them to be physically present at the office has brought to the surface many benefits from the organization's perspectives in

terms of cost savings on office overheads and space, constant availability of employees often beyond working hours, etc. However, in terms of the impact of such measures on the work motivation of employees, the few studies published during the pandemic show mixed findings in terms of effect of WFH on work motivation ([39], [40]). Furthermore, there appears to be a dearth of sufficient empirical evidence on how work motivation of employees is affected by WFH. Nevertheless, based on the premise of COR theory, prolonged absence from one's regular workplace and being away from network of colleagues to interact may be perceived as a loss of resource, and such uncertainty is likely to induce negative emotions such as anxiety regarding potential loss of income that may impact their family obligations. Such negative emotions are likely to influence one's work motivation. Therefore, it may be inferred that WFH will have an impact on work motivation of employees. Formally stated:

H-2: Work from home will influence work motivation.

3.3. Work-from home, work-family conflict, work motivation and work-life balance

Distress caused by time-based WFC, strain-based WFC and general WFC, have been found to impact life- and work-satisfaction, and hence will act as stressors that are liable to impact the balance a person tries to achieve in their work and personal domains. Based on the COR theory, the stress caused by conflict between work and family responsibilities taxes a person's energy resources and is expected to lead to negative outcomes in terms of their work motivation (WM), the quality of the relationships at home leading to WFC, and their overall work-life balance (WLB). Past research shows that stresses that emerge due to conflicting demands in terms of time and energy from work and family roles lead to undesirable emotions such as enhanced job-tension and lower levels of job satisfaction [41], and at the same time they increase tensions within the family, leading to lower levels of satisfaction with life [42]. In a study by [43], the authors show that WFC has a negative relationship with WLB. Furthermore, [44] provides evidence that work-family conflict mediates the relationship between stress created due to situation at work (i.e., perceived loss of resources) and satisfaction with work and personal domains. Hence, it may be inferred that WFH is likely to influence WLB, and at the same time may affect an individual's WM. Furthermore, there is a possibility that the relationship between WFH and WLB is also transmitted through both WFC as well as WM as mediators. Therefore, based on the preceding discourse, the following hypotheses are posited:

H-3: Work from home influences work-life balance.

H-4: Work-family conflict influences work-life balance.

H-5: Work motivation has a significant relationship with work-life balance.

H-6: Work-family conflict mediates the relationship between work from home and work-life balance.

H-7: Work motivation mediates the relationship between work from home and work-life balance.

The discourse presented in the preceding sections, are depicted in the conceptual framework shown in Figure 1.0.

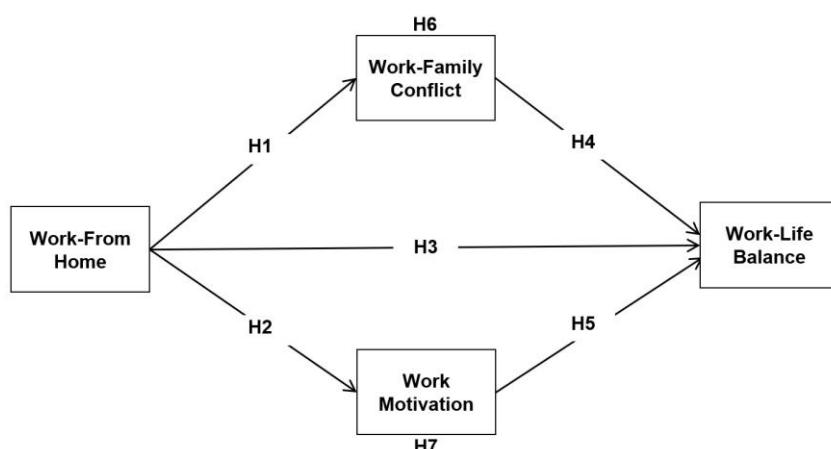


Figure 1. Conceptual framework

4. Research methodology

To test the hypotheses posited in the preceding section, a convenient sampling approach with cross-sectional survey technique was used to collect data from individuals who qualified as eligible participants for this study. Based on the objectives of this study, the target respondents were employees working in various public and private organizations in the Arabian Gulf country of Oman. Considering the native language being Arabic [85] [86], both English and Arabic versions of the survey were made available to the respondents. To ensure accuracy of the translation, we followed a back-translation procedures suggested by [45].

4.1. Sample selection and sampling technique

To test our proposed model, data was collected from 249 employees and managers of various organizations in both the public and the private sector. Two research assistants helped in the data collection processes where three regions in the Sultanate of Oman were targeted including Muscat, the most populated region in the country. Except for WFH, all other constructs were measured using 7-point Likert scale with anchor points ranging from 1 = strongly disagree to 7 = strongly agree. The scales deployed in this study were taken from established scales published in top-tier journals with sufficiently high reported values of Cronbach's alpha.

4.2. Measures

To measure work-from-home (WFH), respondents were asked to answer two single-item questions following the scale developed by [46]. "On average I spend ...% of my normal work hours at home since the COVID-19 restrictions have been applied" with the answers ranging from 0% to 100%. The second question was as follow "On average, since the beginning of the pandemic, how many hours on a weekly basis did you work from home considering that the total working hours per week is 40 hours." The reported average internal consistency reliability for this scale was $\alpha = 0.77$. Work-family conflict (WFC) was measured by using the 18-item scale developed by [47]. This scale consists of 6 dimensions; time-based work interference with family, time-based family interference with work, strain-based work interference with family, strain-based family interference with work, behavior-based work interference with family and behavior based family interference with work. Participants were asked questions such as how often they: "Feel too tired after work to enjoy the things you would like to do at home?" and "Keep worrying about work problems when you are not working?" The reported internal consistency reliability based on Cronbach's α for the dimensions of this scale were between 0.79 to 0.88, which are all well above the recommended acceptance level of 0.70 [48].

To measure work-life balance (WLB) a 4-item scale developed by [49] was deployed. The extant literature indicates that there exist several different conceptualizations of WLB because of which there are numerous scales that have been developed based on these conceptualizations. However, in study by Brough and colleagues, the authors addressed shortcomings of these scales, especially focusing on several items that mentioned balance in terms of interaction between work and family. On this issue, [49] asserts that these scales automatically assume that each individual has constant presence of family that influences perception of balance between work and personal life. This automatic assumption has been questioned, as many employees may not be such a situation. As a result, Brough and colleagues proposed and validated a 4-item scale that focuses exclusively on balance between a person's work and personal life. The current study deems it appropriate to utilize the aforesaid scale that has a reported Cronbach's $\alpha = 0.83$.

The last construct that needs to be measured is work motivation (WM). For this purpose, an 8-item scale developed by [50] was used to measure this variable. Examples of the items: "I enjoy my work very much" and "I want to do the best in my job". The Cronbach's α value reported for this scale was 0.84.

4.3. Control variables

Extant literature on WLB research indicates that employees' demographics (i.e., age, gender, educational level, and relationship status), employment status, types of organization, number of staff in organization, position, and

tenure are likely to be affecting work-life balance [51]. Hence, this study considers these factors as possible control variables.

5. Data analysis

The data analysis starts with information on demographic characteristics of the respondents, followed by a summary of the descriptive statistics for each of the variables. The next section delves into demographic and descriptive statistics, followed by confirmatory factor analysis, and finally testing of the hypothesis using SEM through the statistical package R.

5.1. Demographic characteristics

Demographic features of the employees are shown in Table 1. Out of 249 surveyed employees, there were 78 (31%) female employees, and 171 (69%) male employees. Nearly half of them, 115 (46.2%) reported age category between 35 to 44 years, 29.7% between 25 to 34 years, and the rest were between either 18 to 24 years group or 45 years and older. Most of the participants, 59% were university graduates with bachelor's degree, 24.5% with masters, and the remaining refrained from providing information on education. The majority of employees, 132 (53%), reported having work experience of more than 10 years. 27% had 6 to 10 years of experience, and 20% reported having less than 5 years of experience.

Table 1. Demographic characteristics of respondents

Feature	Quantity	Percentage
Gender: Female	171	31%
Male	78	69%
Age: 18 to 24 years	24	9.6%
25 to 34 years	74	29.7%
35 to 44 years	115	46.2%
45 and older	36	14.5%
Education: Bachelor's	146	58.6%
Master's	61	24.5%
Did not specify	42	16.9%
Work Experience: < 5 yrs	50	20.1%
5 -10 yrs	67	26.9%
> 10 years	132	53%

N = 249

5.2. Descriptive statistics

The Table 2 below presents the central tendency and dispersion for the data collected for each variable except for WFH, which is measured in terms of percentage of time spent working at home. It may be noted that based on convergent validity tests to be presented in section 5.5 later, WFC (work-family conflict) is captured through four dimensions (TWIF = time-based work interference with family, SWIF = strain-based work interference with family, SFIW = strain-based family interference with work, and BFIW = behavior-based family interference with work). These four dimensions of WFC showed that values are: TWIF ($\alpha = .90$; $M = 3.5$; $SD = 1.65$), SWIF ($\alpha = .91$; $M = 3.8$; $SD = 1.74$), SFIW ($\alpha = .91$; $M = 3.0$; $SD = 1.50$), and BFIW ($\alpha = .88$; $M = 3.2$; $SD = 1.40$). The results also show WLB ($\alpha = .92$; $M = 4.5$; $SD = 1.5$) and WM ($\alpha = .93$; $M = 5.0$; $SD = 1.3$).

Table 2. Descriptive Statistics

Variable	M	SD	Cronbach's α
Work-Family Conflict (WFC): 4 dimensions	TWIF = 3.5 SWIF = 3.8 SFIW = 3.0 BFIW = 3.2	TWIF = 1.65 SWIF = 1.74 SFIW = 1.50 BFIW = 1.4	$\alpha = 0.90$ $\alpha = 0.91$ $\alpha = 0.92$ $\alpha = 0.88$
Work-Life Balance (WLB)	4.5	1.5	$\alpha = 0.92$
Work Motivation (WM)**	5.0	1.3	$\alpha = 0.93$

M = Mean, SD = Standard Deviation

5.3. Statistical power analysis and data screening

We tested whether our sample size of N = 249 was sufficient to perform structural equation modeling by using find RMSEA sample size and find RMSEA power functions in SEM Tools R package [52]. We used the values of .05 and .07 for null RMSEA and alternative RMSEA, respectively, $df = 233$ power of .8, and alpha of .05. The minimum accepted sample size resulted in N = 130 and a power of .98. Our sample of N = 249 is larger than 130 and larger than the minimum sample of 120 for SEM studies.

Thereafter, factors such as: possible missing data, extreme values, and violations of normality, were checked. We did not detect any missing values for all variables. The skewness and kurtosis of almost all items ranged from -1.0 to 1.0, meeting the recommended cutoff [53]. An exception was for one item of work motivation with skewness and kurtosis of -1.4 and 1.8 consecutively. As a result, we multivariate skewness and kurtosis were examined at the multivariate level by performing Mardia's normalized coefficient [54]. Estimates of Mardia's skewness and kurtosis were (3590, $p < 0.01$) and (39, $p < 0.01$) consecutively, violating normality at the multivariate level, as both Mardia's coefficients were higher than the recommended cutoff point of 5.0 as suggested by [55]. [56] found that multivariate non-normality could result in erroneous estimates. We, therefore, used Satorra-Bentler scaled statistic (S-B χ^2), and robust standard error using MLM estimator to minimize the effects of non-normal data as suggested in the literature [57].

5.4. Process deployed for data analysis

We performed all analyses using the R program [58] along with lavaan package for SEM analysis (Jorgensen et al., 2021), psych package for descriptive analysis [59], and user-friendly science package for testing reliability [60]. We first estimated the measurement model by running Confirmatory Factor Analysis (CFA) followed by the structural model (SEM). We defined all latent models using a marker variable method by fixing the loading of the first item to 1.0.

We used the following cutoff values to evaluate model fit indices: values larger than or equal to .9 for CFI and TLI ([61]; [62]), RMSE values below .07, CMIN/DF values below two and not larger than 5 (Byrne, 2016), and values less than .08 for SRMR. Two models are deemed significantly different if the change in CFA values Δ CFI is more than 0.01, and the RMSEA change is more than 0.015 [63].

To estimate the indirect effects of working from home on WLB above and beyond work-family conflict and work motivation, we took a product term of paths a1 and b1 (a1*b1), and paths a2 and b2 (a2*b2) as shown in Figure 1. Following suggestions by [64] to correlate two mediating variables in the case of multiple mediations, we correlated WFC and WM variables. As suggested in the literature, we computed 95% bootstrapped

confidence intervals (CIs) with 5000 samples and adjusted bootstrap percentile (BCa) using an ML estimator to account for symmetric CIs problems (e.g., like that found in the case of the Sobel test) [65]; [66].

Finally, convergent validity was considered acceptable if AVE's estimates were equal to or higher than 0.5, and construct reliability was deemed acceptable with values of 0.7 and higher. We tested discriminant validity if a heterotrait-monotrait ratio of correlations (HTMT) values were less than .85 [67]; [68].

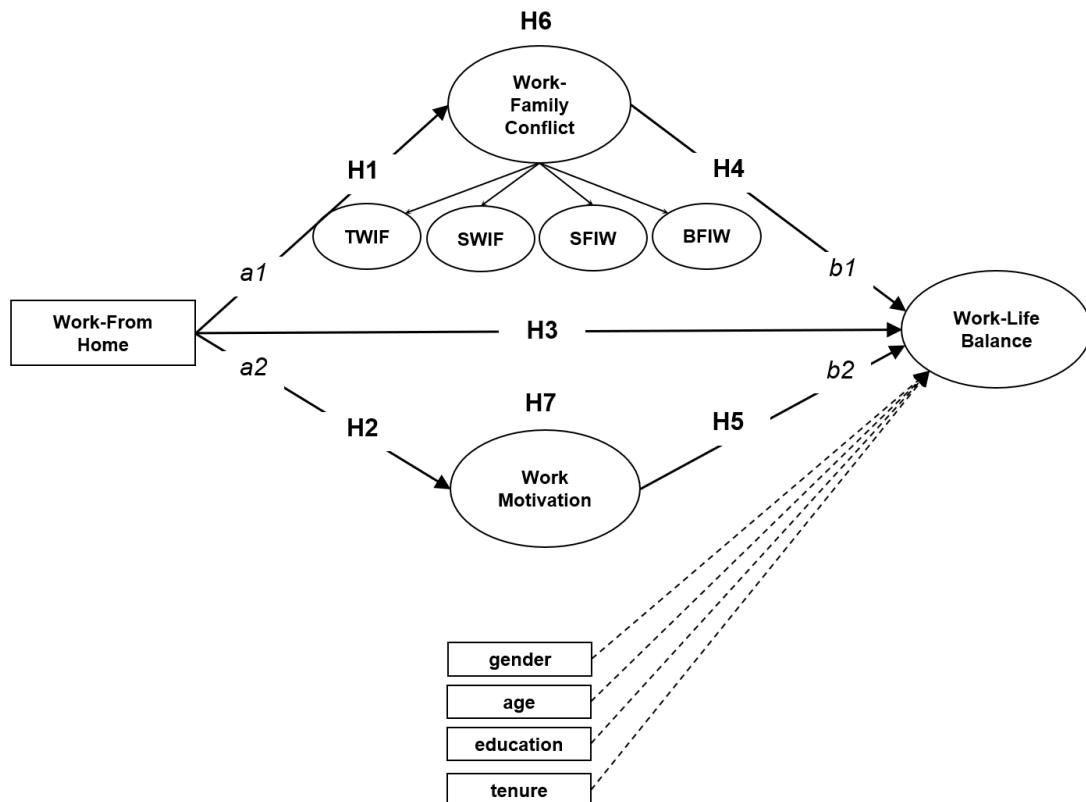


Figure 1. Research framework with paths and relationships

5.5. Measurement model

Before testing the path model, we first examined whether the WFC construct is measured by the six dimensions proposed by Carlson et al. (2000): time-based work interference with family (TWIF), time-based family interference with work (TFIW), strain-based work interference with family (SWIF), strain-based family interference with work (SFIW), behavior-based work interference with family (BWIF), and behavior-based family interference with work (BFIW). We performed CFA on three models of WFC: 6-factor, 5-factor, and 4-factor. As shown in *Table 3*, the original 6-factor model is not significantly different from the 5-factor model $\Delta S-B\chi^2 = 41.90$, $\Delta df = 40$, $p > .05$. Knowing that χ^2 is sensitive to sample size, we relied on the values of $\Delta CFI = 0.005$, and $\Delta RMSEA = 0.012$, indicative that the models are not significantly different.

Table 3. Nested Models of WFC Dimensions

Model	S-B χ^2 (df)	RMSEA	CFI	Model Comp	$\Delta S-B\chi^2$ (Δdf)	ΔCFI	$\Delta RMSEA$
M1: Six-Factor	193.00(120)	.062	.967				
M2: Five-Factor	151.06(80)	.074	.963	M1	41.90(40)	.005	.012
M3: Four-Factor	76.58(48)	.060	.982	M2	74.40(32)***	.019	.015

*p<.05, **p<.01, ***p<.001. All values are scaled using MLM and robust standard errors

M1 is defined by TWIF, TFIW, SWIF, SFIW, BWIF, and BFIW; *M2* is defined by TWIF, SWIF, SFIW, BFIW, and TFIW; *M3* is defined by TWIF, SWIF, SFIW, and BFIW.

On the other hand, a 4-factor model outperformed a 5-factor model $\Delta S-B\chi^2 = 74.4$, $\Delta df = 32$, $p < 0.001$, and supported by the larger change in ΔCFI and $\Delta RMSEA$ with values of 0.019 and 0.015, respectively. Based on the above findings, it was deemed appropriate to utilize a 4-factor model to measure WFC. This decision is also supported by Principal Axis Factoring (PAF) where we extracted factors using an Eigenvalue higher than 1.0 with a direct oblimin rotation. PAF analysis did not result in a good factor solution for 5- and 6-factor models (e.g., cross-loadings and low factor loadings) compared to a four-factor solution (see Table 4).

Table 4. Standardized factor loadings for 4-factor model of WFC

Var	TWIF	SWIF	SFIW	BFIW
WFI1	0.86			
WFI2	0.92			
WFI3	0.83			
WFI7		0.85		
WFI8		0.91		
WFI9		0.9		
WFI10			0.91	
WFI11			0.89	
WFI12			0.84	
WFI16				0.85
WFI17				0.82
WFI18				0.85
AVE	0.76	0.78	0.77	0.71
CR	0.9	0.92	0.91	0.88

The 4-factor model showed a good model fit $S-B\chi^2 (48, N = 249) = 76.58$, $p < 0.001$, Robust RMSEA = 0.06 [90% CI = 0.03, 0.08], Robust CFI = 0.98, Robust TLI = 0.97, Robust SRMR = 0.037, CMIN/df = 2.3. Moreover, dimensions of the four factors indicated acceptable convergent and discriminant validity (see Table 5). As shown in Table 5.0, all AVEs values were more than the cutoff of 0.5, an indication of convergent validity. Moreover, all AVEs values are larger than the squared inter-construct correlations (values above the diagonal), an indication of meeting discriminant analysis. These findings are also supported by HTMT test where all heterotrait-monotrait ratio of correlations are less than 0.85.

Table 5. Testing for discriminant and convergent validity

Var	CR	AVE	MSV	ASV	TWIF	SWIF	SFIW	BFIW
TWIF	0.9	0.76	0.54	0.33	-	0.54	0.24	0.22
SWIF	0.92	0.78	0.54	0.4	0.74	-	0.37	0.28
SFIW	0.91	0.77	0.50	0.37	0.49	0.61	-	0.49
BFIW	0.88	0.71	0.50	0.33	0.47	0.53	0.7	-

Note. Values below the diagonal are correlations, and values above the diagonal are squared correlations

Given that the 4-factor model showed a good fit and that the inter-construct correlations were found to be high, ranging from $r = 0.5$ to $r = 0.74$, we treated WFC as a second-order factor defined by four first-order factors (TWIF, SWIF, SFIW, and BFIW). Table 6 shows discriminant validity through HTMT.

Table 6. Discriminant validity using HTMT

Var	TWIF	SWIF	SFIW	BFIW
TWIF	1			
SWIF	.76	1		
SFIW	.50	.61	1	
BFIW	.46	.52	.71	1

The second order factor showed a good model fit, $S-B\chi^2 (50, N = 249) = 105.2$, $p < 0.001$, Robust RMSEA = 0.067 [90% CI = 0.05, 0.08], Robust CFI = 0.97, Robust TLI = 0.95, Robust SRMR = 0.07. The above analysis provided statistical justification to treat WFC as a second order factor.

We proved that WFC is a second-order factor and entered it into the CFA model. The CFA model consisted of three latent variables, WFC (mediator 1), WM (mediator 2), WLB (dependent variable), and WFH as an observable variable (independent variable). This measurement model showed a good fit, $S-B\chi^2 (145, N = 249) = 249.16$, $p < 0.001$, Robust RMSEA = 0.061 [90% CI = 0.048, 0.07], Robust CFI = 0.97, Robust TLI = 0.96, Robust SRMR = 0.062, CMIN/df = 2.2. Evidence of good fit of measurement model lead us to perform structural model and answer substantive hypotheses, presented in the next section.

5.6. Results of SEM

Latent variables in the previous CFA model (Figure 2) were entered into the SEM model along with four additional control variables: gender, age, education, and tenure at work. SEM model showed acceptable model fit, $S-B\chi^2 (304, N = 249) = 522.034$, $p < .001$, Robust RMSEA = 0.059 [90% CI = 0.05, 0.067], Robust CFI = 0.94, Robust TLI = 0.93, Robust SRMR = 0.06, CMIN/df = 2.0 (See figure 3.0).

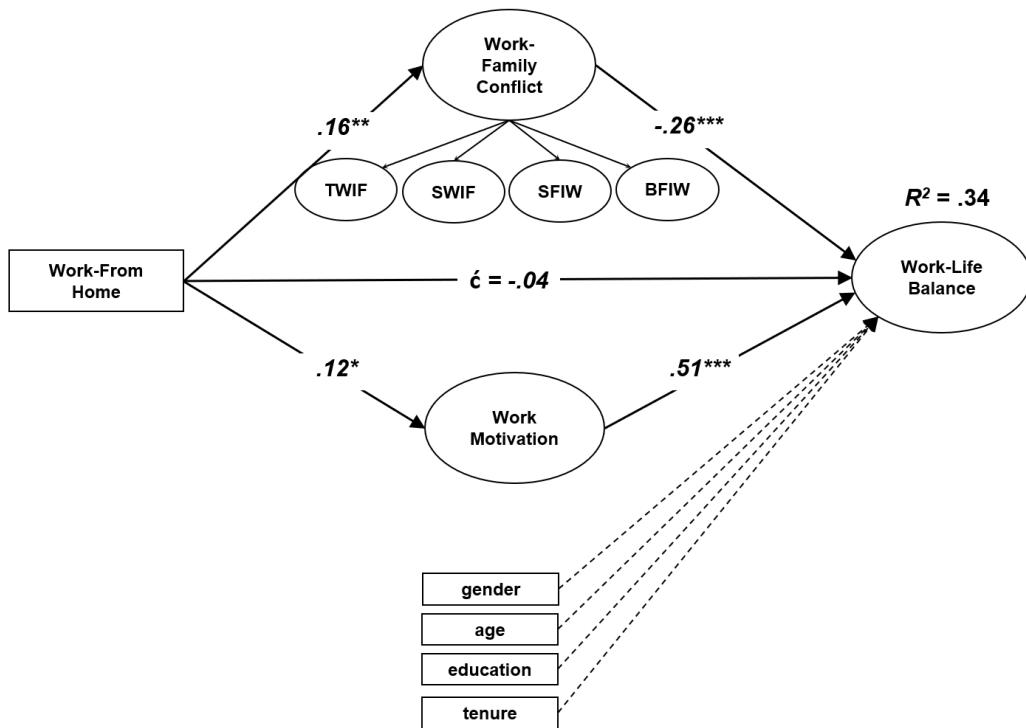


Figure 2. SEM Model with Standardized Coefficients

Note All estimates are standardized regression weights. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$. \acute{c} = direct effect. TWIF = time-based work interference with family; SWIF = strain-based work interference with family; SFIW = strain-based family interference with work; BFIW = behavior-based family interference with work

Supporting H1, we found that WFH positively influenced WFC ($\beta = 0.16$, $p < .01$). Additionally, employees who reported spending longer time working from home also reported higher levels of WM ($\beta = 0.12$, $p < 0.05$), in support of H2. On the other hand, there appeared to be no significant relationship between WFH on WLB controlling for the effect of WFC, WM, and four control variables ($\beta = -0.04$, $p > 0.05$); hence, H3 was not supported.

As expected, employees who reported having experienced higher degrees of WFC reported lower levels of WLB ($\beta = -.26$, $p < 0.001$) in support of H4. While WFC reduced levels of WLB among the employees, WM stimulated more positive outcomes of WLB ($\beta = 0.51$, $p < 0.001$), which means that H5 was supported.

The last two relationships, H6 and H7 are mediation hypotheses. The mediation effect for both paths were investigated by assessing the indirect effect of WFH on WLB through the intervention of both WFC and WM. The unstandardized results showed that WFC mediated the relationship between WFH and WLB, controlling for the effect of both WM and the control variables ($a1*b1 = -.002$, S.E. = .001) and bootstrapped 95% CI (-0.005, -0.0004), meaning that the CI values did not straddle a zero value. Hence, H6 was supported. However, the unstandardized estimates indicated that there was no significant indirect effect between WFH and WLB through WM ($a2*b2 = 0.003$, S.E. = 0.002) and bootstrapped 95% CI (-0.0001, 0.006). The CI value in this case crosses a zero value, suggesting non-significance. Therefore, H7 was not supported. Table 7 shows a summary of all hypotheses based on standardized estimates.

Finally, the coefficient of determination R2 value ($R^2 = 0.34$) in the hypothesized framework shows that 34% of the variability in WLB is accounted for the exogenous variables used in this study.

6. Discussions

The *first hypothesis (H1)* shows that higher levels of WFH leads to greater WFC for the employees. This finding suggests that when employees spend a greater percentage of their typical working hours working from home, they are liable to face pressure in all the four types of work-family conflict examined in this study. The idea of WFC has been broadly defined as “a form of interrole conflict in which role pressures from work and family domains are mutually incompatible in many aspects” [17]. The demands on a working individual from the work domain are related to commitments and responsibilities connected to work performance are sources of stress.

Such job-related stress may spillover into family life due to imbalance in allocation of time between family and work, or strain caused by the nature of the work that makes it difficult to pay attention to family needs, or behavioral issues encountered at work that also spillover into the family domain. Similarly, family stressors may emanate from demands on an individual to take care of children, care for elderly, or even necessary housekeeping chores. Such responsibilities place a demand on resources such as time and attention, whereas the resources available in fulfilling balancing the two domains are finite. Hence, the spillover may be work interfering with family life or family responsibilities interfering with the need to devote time and effort to work.

Therefore, the results of the tested hypotheses are in alignment with the notion of conservation of resources (COR), where an individual employee may feel a loss of resource in both work and family domains, when the boundary between work and family becomes blurred due to more time spent at work while being at home or vice versa. The first impact is felt on time allocation between work and family. Due to more prolonged presence at home, family related stressors may place more demand on the individual, which is likely to lead to higher intensity of role conflict. The second source of imbalance that prolonged hours at work engagement at work is due to the conflict that emerges from strain created by work that interferes with family demands, and the strain created by family responsibilities that interfere with work demands. Finally, behaviour of people at work and in the family, environment is generally quite different.

The *second hypothesis (H2)* indicated that WFH has a positive influence on WM. In this regard, past literature shows that employees working remotely were more satisfied with the flexibility of working from home as it enables them to attend to their private affairs while being at work [69]. Furthermore, the option to work from

home attracts more qualified employees, especially talented working-mothers with small children [70]. Furthermore, [71] discovered that the flexibility employees gain from WFH is perceived as a resource gain, and thus it influences their perception of well-being. Hence, the finding of this study related to WFH and WM is corroborated by studies that have looked at similar positive employee outcomes.

The *third hypothesis (H3)* indicates that work from home does not directly influence work-life balance. This finding may be explained through the lens of the COR theory, which assumes that employees perceive WLB as a resource, and people can gain or lose this resource based on the nature of their work environment. As a result, it was expected that WFH would have some significant impact on WLB. However, it is built on [72] [73] COR theory and argues that the value of a resource and its loss or gain is subjective and would depend on an individual's subjective appraisal of their work and non-work activities. As a result, the outcome may be dependent on the context of the study in terms of people being surveyed and their cultural values regarding work and personal life. In this case the employees are people from Oman, who generally adhere to the Islamic culture of gratefulness and being content with one's circumstances [72] [86]. Therefore, there is a possibility that cultural factors that are unique to Oman, has an influence on how people view WLB in terms of its relationship with WFH.

The *next two hypotheses (H4 (WFC to WLB) and H5 (WM to WLB))* were both supported. Both these results are also corroborated by findings from previous empirical studies. WFC having a significant but inverse relationship with WLB is aligned with the COR theory in terms of perception of loss of resources and is supported by evidence from prior literature (e.g., [51] [43]). Furthermore, [74] found that employees experience higher degrees of stress when greater degrees of role conflicts exist in the work and personal domains, which suggests that such stressors are liable to diminish their perceptions of work-life balance. With regards to work motivation, having a positive and significant relationship with WLB. A systematic literature review by [75] shows that that majority of the empirical studies have theorized WLB as an antecedent of WM. On the other hand, in an insightful empirical study by [76], the authors show that employee motivation drives WLB. Therefore, it appears that both the variables are correlated. Hence, the positive influence of WM on WLB is justified.

The first *mediation hypothesis (H6)* posited that WFC mediates the relationship between WFH and WLB. This relationship was found to be significant, suggesting that the impact of work from home on work-life balance is transmitted through work-family conflict. A study by [77] on employees working in the manufacturing sector in an emerging economy shows that WFC is a significant mediator in the relationship between stressors and turnover intention. Similarly, a study by [1] finds that WFC mediates the relationship between supervisor support and job satisfaction. Furthermore, [78] conducted a study during the time of the Covid-19 pandemic, that shows that WFC mediates the relationship between technostress and psychological well-being. All the three studies mentioned above demonstrate that stressors and employee outcomes are accounted for through the mediating effect of WFC. In the case of the current study, WFH may be considered as a stressor, which influences WFC that eventually impacts WLB.

The final *hypothesis (H7)* suggested that the relationship between WFH and WLB is mediated by work motivation (WM). This hypothesis was not supported, meaning that work motivation has no mediating role between work from home and work-life balance. This finding suggests that although WM has a positive influence on WLB, it does not have any significant role in linking WFH and WLB. In this regard, it appears that although WFH has a positive association with WM, and WM also leads to greater WLB, yet WM does not necessarily transmit the effect of WFH to WLB. This may be explained through the COR theory, where employees feel greater motivation due to the flexibility, they gain from WFH, and at the same time their WLB increases because they perceive WM as a gain in resources. However, both relationships are independent, and hence WM does not play any role in accounting for any relationship between WFH and WLB. Furthermore, this finding may be substantiated by empirical studies such as [79] that found that human resource practices

impact both work motivation and work life balance, but both are shown as dependent variables. Therefore, WM not being a mediator in the above relationship is justified.

The above-stated relationships between WFH, WFC, and WM toward work-life balance were examined, considering the effects of potential confounder variables such as age, tenure, gender, and education. Employees who reported more work experience also reported higher levels of work-life balance. This indicates that the longer employees spend in their organizations, the more they might understand organizational culture, coping mechanisms, and the nuances of tensions between work and life. Controlling the effect of tenure was essential to understand the dynamics the hypothesized predictors of work-life balance. While tenure levels influenced the relationship between the hypothesized predictors towards work-life balance, we did not find a significant effect of the other control variables, such as age, education, and gender. An indication that age, gender, and education play a minimal role in the variations of work-life. This might be explained due to the fact that work-life balance is a concept that is impacted by environmental factors, situational factors, and other macro-level factors.

6.1 Limitations of the study and future research directions

Despite best efforts, this study suffers from some limitations. The first limitation is that it is based on cross-sectional survey data collected where all the information on each variable is collected from the same respondent at one point in time. Therefore, future researchers are encouraged to undertake a longitudinal study to determine whether the relationships remain static over time. The second challenge is that all respondents were all working individuals with full-time jobs in business organizations in Oman. A more robust set of findings may emerge if a multi-country study were to be conducted in future studies.

Furthermore, it may be argued that the research framework does not include other exogenous variables that are likely to play a role in influencing the endogenous variables. For instance, in the context of WFH, past studies on teleworking and remote work, have taken into consideration constructs such as perceived organizational support, family life stages, supervisor support, and even personality traits of individuals. Hence, there are possibilities that other variables may act as moderators or mediators in the relationships stipulated in the current study. Therefore, future studies are encouraged to consider other constructs not considered in the current study.

Finally, future studies may consider sustainability of human capital, which can be examined as the response variable in relationship with WLB, WFH, WLC, and WM. This is important because the primary goal of organizations is long-term business sustainability, where the role of sustainable human capital is crucial.

7. Conclusion

The primary goal of this study was to determine the impact of work from home (WFH) on the personal domains (i.e., work-life balance-WLB and work-family conflict-WFC) and work domains (i.e., work motivation-WM) of employees. The context of this quantitative research was based on managerial and non-managerial employees working in medium to large business organizations in Oman. The discoveries made in this study are likely to have significant implications for both theory and industry practice.

In terms of contribution to the body of knowledge, this study presents a finer-grained understanding of how the degree to which an individual employee engages in WFH in terms percentage of their total time spent on working from home, has negative consequences for role conflicts between work-domain and family-domain. Particularly, the study presents a nuanced analysis of how each dimension of WFC plays a role in this relationship. Additionally, the significant role of WFC as a mediator in the association between WFH and WLB is possibly a significant contribution to the extant literature on work environment and desired employee outcomes. Finally, the fact that WFH positively influences WM, and that WM has a positive impact on WLB, without any mediation by WM, brings more clarity to the role of WM between WFH and WLB.

Finally, the study's contribution to industry practice is also significant. Organizations around the globe are strategizing over various work models such as fully implementing WFH on a permanent basis for a bulk of their

employees to migrate them to hybrid work models, that combines both physical presence at work and working remotely through use of technology. Such organizations are weighing advantages and disadvantages of such measures beyond financial implications. In fact, factors such as employee satisfaction and personal wellbeing are also being given sufficient importance. Therefore, the findings of this study may provide empirical evidence to organizational leaders on how WFH is likely to influence work motivation of their employees, and also how their WLB is likely to be impacted through imbalances created due to conflicting demands of work and family (i.e., WFC). Based on such nuanced understanding, senior management can design suitable interventions to ensure that if they choose to pursue WFH as a policy, they need to take measures to reduce potential conflicts between work and family domains of their employees.

As far as the HR policy is concerned, it is necessary to mention the importance of human capital in the above circumstances. According to [80] the best HR practices that are likely to ensure happiness and loyalty of employees, is through implementation of strategies that emphasize sustainability of human capital. In this context, [81] reported that appropriate human resource management strategies implementations would increase employees' mental well-being, satisfaction, productivity, motivation, and health safety at the workplace. Therefore, if all the above are a firms' reality, sustainability of human resources (human capital) is less likely to be in peril. Moreover, decreasing employee turnover in order to retain talented and skilled personnel within an organization is challenging during unpredictable situations. To alleviate stress and foster increased job satisfaction during crisis periods such as the recent pandemic, employees were given the option to work from home with the flexibility to schedule their daily tasks in coordination with their supervisors [82]. Such measures were considered as an alternative to *in place* work schedule [83]. Despite good intentions, switching to the WFH option suddenly met with numerous challenges (e.g., space constraints, poor internet connectivity and frequent interruption, adapting to new technology platforms, etc.) [83]. Such challenges indicate that practices such as WFH can negatively influence the ability of employees to cope with work models, unless they are applied prudently. Not addressing such circumstances may jeopardize the long-term sustainability of human capital (i.e., retention of talented and skilled workers) even in a flexible work environment. Nevertheless, the relationships between the variables analyzed in this study (e.g., WFH, WFC, WLB, and WM) made theoretical and practical contributions to the understanding of human capital sustainability in organizations.

Presumably, employees who have motivation and satisfaction with their current job and have flexibility in how they will perform their jobs (e.g., through WFH), are likely to be loyal to their organization. Hence, they are likely to experience less conflict between work and personal lives. Furthermore, organizations should keep in mind that sustainable competitive advantage depends to a great extent on sustainable human capital (i.e., retention of skilled and talented personnel). To keep the current employees and to attract new talent, it is necessary for organizations to pay attention to people's satisfaction and wellbeing. Otherwise, as [84] argued, human capital (skilled and talented employees) will fly out and find better alternatives in terms of their work and lives.

Declaration of competing interest

We examined all points listed in your "Disclosure of potential conflicts of interest" list and we hereby confirm that there is no conflict of interest.

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