

# Work from home during COVID-19: the role of perceived hope, intrinsic spirituality and perceived supervisor support on job involvement

Work from  
home during  
COVID-19

57

Received 21 December 2021  
Revised 19 February 2022  
Accepted 13 April 2022

Muhammad Shariat Ullah and Muhaiminul Islam  
*Department of Organization Strategy and Leadership, University of Dhaka,  
Dhaka, Bangladesh, and*  
Minhajul Islam Ukil  
*Department of Management and Marketing,  
King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia*

## Abstract

**Purpose** – This study aims to explore the influence of perceived hope, intrinsic spirituality and supervisor support on job involvement at the time of work from home during the COVID-19 pandemic.

**Design/methodology/approach** – The sample included 263 employees working from home (WFH) for the first time in their careers due to COVID-19. The authors applied structural equation model and multigroup analysis (MGA) in SmartPLS3 to examine the hypothesized relationships, and artificial neural network (ANN) analysis to determine the relative influence of the antecedents.

**Findings** – Results indicate that both personal (such as perceived hope and intrinsic spirituality) and job (supervisor support) resources determine job involvement during remote working, with a moderating impact of age on the relationship between intrinsic spirituality and job involvement. The ANN analysis shows that perceived hope is the most influential determinant of job involvement when employees work from home.

**Practical implications** – This study suggests that when employees work remotely, organizations can generate higher job involvement by conveying a higher perception of hope and spirituality and providing supervisor support through planned hope interventions, promoting prosocial behavior and making changes in leadership style (check on instead of check-in).

**Originality/value** – This study extends the job demands-resources (JD-R) model with new insights into the impact of personal and job resources on job involvement during the new normal remote working era.

**Keywords** COVID-19, Work from home, Job involvement, Perceived hope, Intrinsic spirituality, Supervisor support

**Paper type** Research paper

## 1. Introduction

As the COVID-19 pandemic led to lockdowns in many countries, working from home (WFH) has become a new normal work method in the corporate world. A report by Ipsos in January 2021 revealed that 52% of the employees around the globe started WFH. A paradigm shift has occurred because organizations have realized that WFH is a viable work method. In this



© Muhammad Shariat Ullah, Muhaiminul Islam and Minhajul Islam Ukil. Published in *Management Matters*. Published by Emerald Publishing Limited. This article is published under the Creative Commons Attribution (CC BY 4.0) licence. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this licence may be seen at <http://creativecommons.org/licenses/by/4.0/legalcode>

Management Matters  
Vol. 19 No. 1, 2022  
pp. 57-72  
Emerald Publishing Limited  
e-ISSN: 2752-8359  
p-ISSN: 2279-0187  
DOI 10.1108/MANM-12-2021-0005

paper, we argue that employees WFH may feel more trusted by their employer as the working relationship is not closely monitored, and employees are allowed certain degrees of autonomy when WFH; it builds trust and may improve their productivity, performance and job involvement.

Job involvement refers to employees' perception of the overall job situation as being an important element of their life and identity (Kanungo, 1981; Lawler and Hall, 1970; Scrima *et al.*, 2014) that results in a broad spectrum of positive outcomes, including an elevated level of commitment, satisfaction and citizenship behavior (Qureshi *et al.*, 2019), and thus had long been a research focus. The widespread of COVID-19 pandemic has rapidly altered the working landscape, with most organizations except essential service providers shifting to remote working. The drastic transition to WFH compels researchers to revisit forces that may contribute to job involvement (Pattnaik and Jena, 2021). This study seeks to answer that call.

To investigate the job involvement forces when WFH, this study applied the job demands-resources (JD-R) model (Schaufeli and Bakker, 2004). The JDR model explains both motivational and health impairment pathway of workplace performance and employee well-being. The model conceptualizes relationships between job resources and job demands and their interaction, leading to either employee engagement or employee burnout. With regard to the extended JD-R model, the study conceptualizes that (1) WFH is a proxy to job demands, (2) perceived supervisor support is a proxy to job resources and (3) perceived hope and intrinsic spirituality are proxies to personal resources.

Job demands refer to the physical, psychosocial and/or organizational conditions of a job that involves sustained physical and psychosocial efforts and costs (Schaufeli and Bakker, 2004). We consider WFH as a job demand because it results in workplace isolation (Toscano and Zappalà, 2020) that subsequently elevates levels of loneliness (Wang *et al.*, 2021), and thus may affect work outcomes (Allen *et al.*, 2015).

Personal resources refer to an individual's perception of their ability to successfully control and influence their surroundings (Schaufeli and Taris, 2014). Bakker (2011) identified personal resources as a form of psychological capital, exemplified by feelings of self-efficacy, optimism, hope and resilience. These personal resources represent employees' intrinsic characteristics that affect job involvement (Shih *et al.*, 2009). We reason that individual characteristics such as perceived hope (Sunardi and Putri, 2020) and intrinsic spirituality may be more effective tools for improving positive work-related outcomes when employees work under unusual working conditions. Employees' strong sense of hope demonstrates their increased levels of autonomous motivation (Zhang and Li, 2020), and intrinsic spirituality reflects an individual's perception of their life significance (de Klerk, 2005) and guides their way of doing things (Hong *et al.*, 2015).

Job resources are the physical, psychosocial and organizational characteristics of a job that essentially minimize job demands (Schaufeli and Bakker, 2004), simultaneously increase work motivation, personal fulfillment and improvement (Hakanen *et al.*, 2006). Job resources facilitate active learning processes and enhance individual competencies in attaining work goals (Balducci *et al.*, 2011; Schaufeli *et al.*, 2009). We argue that perceived supervisor support is an effective job resource, because it helps foster employee job involvement by reducing stress (Horan *et al.*, 2018) and improving the quality of work-life (Wan and Chan, 2013). Therefore, this study addresses the following research questions:

- RQ.* Whether or not employees' perceived hope, intrinsic spirituality and perceived supervisor support enhance their job involvement when they work from home, and if so, what matters most?

This study advances theory and knowledge in several ways by bringing new insights and empirical evidence. Firstly, the study provides new insights into the forces that contribute to

job involvement when employees work from home; it adds a new dimension to the JD-R model (Schaufeli and Bakker, 2004) by showing how employees' personal resources (perceived hope and intrinsic spirituality) coupled with job resources (perceived supervisor support) facilitate new role expectations resulting from remote working. Secondly, the study focuses on employees' intrinsic spirituality (Pawar, 2009), an underexplored concept with regard to job involvement, and suggests that intrinsic spirituality could be more effective than that of workplace spirituality when employees work remotely, because employees lack direct supervision and face a high degree of uncertainty in such a situation. Finally, the study finds that the perceptions regarding personal and job resources substantially differ from employees aged over 30 to employees aged under 30 when they work from home.

## 2. Literature and development of hypotheses

### 2.1 *Perceived hope and job involvement*

Hope is "an existential human need, directed at matters of vital interest" (Krafft *et al.*, 2020, p. 4); it provides individuals with purpose, meaning and belief to constitute their psychological capital (Luthan *et al.*, 2005; Peterson and Seligman, 2004; Youssef and Luthans, 2007). It induces individuals toward goal attainment at the time of difficulties (Luthans *et al.*, 2005). Psychological capital is a set of human capacities that generate a positive attitude and help to minimize mental strain during challenging circumstances such as COVID-19 (Turliuc and Candel, 2021). As an element of psychological capital, hope exemplifies an internal resource (Ng *et al.*, 2014); it can promote a positive job attitude including job involvement and contribute to positive organizational behavior (Ribeiro *et al.*, 2021) when employees face a higher degree of job uncertainty, a threat to life, poor mental health and a shortage of resources due to remote working.

Prior studies underscore the importance of hope in adverse or difficult situations, suggesting that hope outweighs an individual's knowledge and coping abilities (Fredrickson, 2013; Hong *et al.*, 2015; Peterson and Seligman, 2004; Pruyser, 1986). While a higher perceived hope contributes to job satisfaction and employee well-being (Hasson-Ohayon *et al.*, 2009), low perceived hope causes employees to experience negative emotions and limit openness and personal innovativeness. Since the COVID-19 pandemic has isolated employees from their office environment and forced them to work from home with a lot of uncertainty, we argue that perceived hope can be an effective tool to determine job involvement. Thus, we postulate the following hypothesis:

*H1.* Perceived hope (PH) has a significant positive effect on job involvement (JI).

### 2.2 *Intrinsic spirituality and job involvement*

Spirituality is a relational construct that indicates a wide range of values such as a pursuit for meaning and purpose in life (de Klerk, 2005; Henningsgaard and Arnau, 2008), connecting oneself with the sacred and the divine power (Hong *et al.*, 2015; Kolodinsky *et al.*, 2008; Milliman *et al.*, 2003). Intrinsic spirituality measures "the degree to which one's spirituality guides and directs one's life" (Hong *et al.*, 2015).

Prior findings suggest that spirituality positively influences job involvement by engaging employees in meaningful ways (Word, 2012). In this study, we conceptualize employees' intrinsic spirituality as a vital personal resource (Moon *et al.*, 2020) that may enable them to be resilient in adverse situations (Kim and Seidlitz, 2002). Intrinsic spirituality functions as a source of personal motivation (Hong *et al.*, 2015) and subsequently mitigates the damages of negative work experiences during difficult times (Cash and Gray, 2000). The rapid transmission of COVID-19 pandemic has affected employees physically and emotionally, and

thus intrinsic spirituality might play a vital role in promoting job involvement when people work from home. Therefore, we posited the following hypothesis:

*H2. Intrinsic spirituality (IS) has a significant positive effect on job involvement*

### *2.3 Perceived supervisor support and job involvement*

Perceived supervisor support refers to the perception of the degree to which a supervisor assists employees, recognizes employee contributions and cares for employee well-being (Rhoades and Eisenberger, 2002). Past studies (Eisenberger *et al.*, 2002; Kurtessis *et al.*, 2017) demonstrate that supervisor support promotes positive employee attitudes (Ahmed *et al.*, 2014). According to the social support theory (Shumaker and Brownell, 1984), supervisors are a key source of social support; they provide rewards, protection and motivation to their employees (Phungsoonthorn and Charoensukmongkol, 2019). In particular, supervisor support plays a positive role when employees face a difficult or new work condition (Kumar and Mokashi, 2020).

During the COVID-19 pandemic, employees in many countries such as in Bangladesh worked from home for the first time in their life. Since the COVID-19 pandemic brought a sudden change in the work condition, employees in those countries had mostly been underprepared to work effectively from home due to a lack of proper physical work setting. In addition, several recent studies suggest that employees WFH suffer from severe work-life conflicts and psychological exhaustion (Palumbo, 2020). Prior literature suggests that supervisor support contributes to positive work-life balance (Kumar and Mokashi, 2020). In particular, supervisor support plays a vital role in improving work morale and employees' psychological well-being during a crisis such as COVID-19 pandemic (Cole *et al.*, 2006; Kumar and Mokashi, 2020). Supervisors help employees cope with job demands (Hu *et al.*, 2016) and connect employees with organizational values. Thus, supervisor support can improve job involvement when employees work from home. We, therefore, propose the following hypothesis:

*H3. Perceived supervisor support (PSS) has a significant positive effect on job involvement*

### *2.4 Moderating effect of age*

Demographic characteristics are essential factors in the degree of job involvement (Lawler and Hall, 1970). A link between demographic factors such as age, gender, ethnicity and educational level and job involvement is evident in previous research (Rabinowitz and Hall, 1977; Sekaran and Mowday, 1981). For example, Sekaran and Mowday (1981) indicated that job involvement has a negative association with education and a positive relationship with age. Since the COVID-19 has affected older individuals more severely than their younger counter part, understanding the role of age at work when individuals work from home is necessary (Kniffin *et al.*, 2021). In this study, we investigate the moderating role of age on the effects of perceived hope, intrinsic spirituality and perceived supervisor support on job involvement. Although the pre-COVID-19 research found no evidence of age differences in hope (Feldman *et al.*, 2009), a few studies demonstrate that hope varies considerably with age; it is significantly associated with favorable outcomes when it comes to young adults or teenagers (Supervía *et al.*, 2020). Genç and Arslan (2021) reveal that young individuals have lower optimism and hope during coronavirus infection and propose that hope and optimism serve as promotional resources for minimizing the harmful effect on individual mental well-being. Similarly, we believe that young employees may require more support from their supervisor because of their lack of experiences. Therefore, we propose the following three hypotheses. The hypothesized relationships have been shown in Figure 1.

- H4. The influence of perceived hope on job involvement would be more substantial for young adults than for older adults.
- H5. The influence of perceived intrinsic spirituality on job involvement would be more substantial for young adults than for older adults.
- H6. The influence of perceived supervisor support on job involvement would be more substantial for young adults than for older adults.

### 3. Methods

#### 3.1 Sample and procedure

The sample of this study consisted of working professionals who did home office for the first time in their life as a result of COVID-19 outbreak. Using an online survey in Qualtrics, a self-reported questionnaire was conveniently sent through e-mails to approximately 400 professionals. Each e-mail included a cover letter outlining the study’s purpose and essential instructions. A total of 284 responses were received over a 90-day period (July–September 2020) at a response rate of 71%; 21 responses were eliminated because they were either incomplete or identified as outliers. A sample size of 263 was sufficient because over 100 samples were required for reliable PLS-SEM path modeling (Nitzl, 2018).

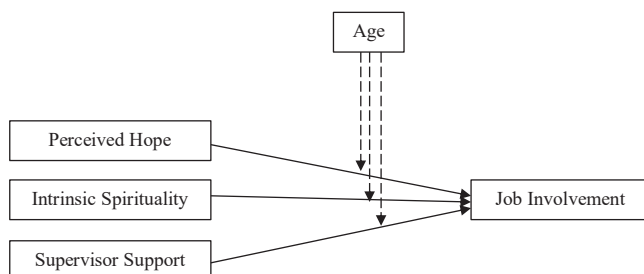
Respondents’ demographic information analyzed with SPSS v25 is presented in Table 1, showing that 76% of the participants were male, just over 48% of them held a mid-level position, 70% had a postgraduate degree and 73% had grown up in urban communities. Approximately 44% respondents were under 30 years of age.

#### 3.2 Measurement

All measures were derived from previous studies; some of the statements were slightly rephrased to fit into the current context. It is worth mentioning that such modifications demonstrated no validity issues while doing a pilot testing. In order to accommodate a diverse group of respondents, the questionnaire was translated from English to Bengali by a professional translator; respondents were offered a choice of language before they began the survey. Experts were consulted to determine the questionnaire’s applicability. Altogether, there were 25 statements that the respondents rated on a Likert-type response key ranging from 1 to 7. Table 2 provides details about the study’s measurement.

#### 3.3 Bias concern and data normality

We applied several techniques to determine any potential method and response biases. First, as a precautionary measure, the respondents were assured of their anonymity, which enabled them to respond with greater accuracy (Uddin *et al.*, 2019). Second, Table 4 shows that the



**Figure 1.**  
Proposed research  
framework

**Table 1.**  
Respondents'  
demographic  
information ( $n = 263$ )

Variables	Category	Percent (%)
Gender	Male	76.0
	Female	24.0
Age (years)	<30	43.5
	30–34	29.5
	35–39	9.5
	≤40	17.4
Community	Urban	73.0
	Suburban	13.3
	Rural	12.9
Job position	Entry level	44.3
	Mid-level	48.1
	Top-level	7.3
Level of education	Undergraduate and others	23.9
	Postgraduate	70.5

**Table 2.**  
Origins of constructs

Constructs	Sources	Sample item	Total items
Job involvement	Cyphert (1990)	“Even in the current pandemic, I consider my job to be very central to my existence”	5
Perceived hope	Krafft <i>et al.</i> (2019)	“In my life, hope outweighs anxiety even in the current pandemic”	6
Intrinsic spirituality	Hodge <i>et al.</i> (2015)	“Spirituality is a master motive of my life, directing every other aspect of my life”	6
Supervisor support	Eisenberger <i>et al.</i> (2002)	“My supervisor is willing to help me if I need a special favor during the current pandemic”	8

largest correlation between two variables (0.384) is lower than 0.90, indicating no response bias (Spector and Brannick, 2010). Third, Harman’s single factor test shows that no single factor explains a major portion of the variance, and thus there is no concern for common method bias (Uddin *et al.*, 2019). However, Mardia’s multivariate skewness ( $\beta = 347.58$ ,  $p < 0.01$ ) and kurtosis ( $\beta = 62.718$ ,  $p < 0.01$ ) imply that data are not multivariate normal. Thereby, we applied the PLS-SEM technique instead of CB-SEM.

### 3.4 Analytical approach

We used SPSS software (SPSS 25.0) for calculating descriptive statistics and inter-construct correlation (see Table 4), and SmartPLS3 for PLS-SEM analysis. PLS-SEM, a highly reliable statistical technique, minimizes unexplained variance (Hair *et al.*, 2017b), analyzes and interprets the outputs of a research model in two steps, evaluation of the measurement model and the structural model (Ali *et al.*, 2018). Additionally, the robustness of the structural model was evaluated. Finally, we applied artificial neural networks (ANNs) to examine the relative impact of perceived hope, intrinsic spirituality and perceived supervisor support on job involvement.

## 4. Results

### 4.1 Evaluation of the measurement model

Multiple measures of reliability and validity were used to evaluate the measurement model. As shown in Table 3, Cronbach’s alpha and composite reliability scores of all variables range

between 0.713 to 0.901 and 0.811 to 0.923, respectively, demonstrating the reliability of measurement items. With few exceptions, all the outer loadings exceed the 0.700 thresholds suggested by Hair *et al.* (2021). It is suggested that outer loadings between 0.40 and 0.70 should be deleted if their elimination improves AVE values above the threshold of 0.5 (Hair *et al.*, 2019). As reported in Table 3, the AVE values of all constructs are above 0.5, indicating convergent validity (Hair *et al.*, 2019). Besides, HTMT values (see Table 4) are below 0.85, indicating the discriminant validity (Henseler *et al.*, 2015).

4.2 Evaluation of the structural model

We performed bootstrapping as the estimation method with a subsample of 5,000 to verify the hypothesized relationships. As exhibited in Table 5, results show significant positive relationships between PH and JI ( $\beta = 0.213, p < 0.05$ ), IS and JI ( $\beta = 0.163, p < 0.05$ ) and SS and JI ( $\beta = 0.163, p < 0.05$ ). Therefore, H1, H2 and H3 are supported. The scores of VIF,  $R^2$ ,  $Q^2$  and SRMR are used to assess the structural model. There is no evidence of multicollinearity in this study as the VIF scores range from 1.070 to 1.228 that are substantially smaller than the suggested cut-off value of 5 (Ali *et al.*, 2018). The model explains 14.9% ( $R^2 = 0.149$ ) variance that is sufficient (Falk and Miller, 1992). The SRMR value, an indicator of model predictive power, suggests the model predictive relevance as the SRMR value is below the limit, for example,  $< 0.08$  (Hair *et al.*, 2017a). Hair *et al.* (2019) recommend that the endogenous construct's  $Q^2$  should be

Constructs	Items	Loadings	Cronbach's alpha	CR	AVE
Perceived hope	PH1	0.80	0.713	0.811	0.52
	PH2	0.85			
	PH3	0.67			
	PH4	0.71			
Intrinsic spirituality	IS1	0.68	0.818	0.866	0.567
	IS2	0.79			
	IS3	0.86			
	IS4	0.91			
	IS5	0.89			
	IS6	0.76			
Supervisor support	SS1	0.66	0.901	0.923	0.668
	SS2	0.65			
	SS3	0.85			
	SS4	0.74			
	SS5	0.84			
Job involvement	J11	0.79	0.789	0.846	0.581
	J12	0.66			
	J13	0.78			
	J14	0.65			

**Table 3.** Factor loadings and reliability of the constructs

Constructs	Mean	SD	PH	IS	SS	JI
PH	5.44	0.81				
IS	5.03	1.02	0.255** HTMT = 0.387			
SS	5.49	1.02	0.384** HTMT = 0.467	0.113* HTMT = 0.167		
JI	5.20	0.95	0.316** HTMT = 0.282	0.232** HTMT = 0.256	0.257** HTMT = 0.269	

**Note(s):** \*\*, \* indicate significant at the 0.01 and 0.05 level, respectively (one-tailed)

**Table 4.** Descriptive statistics, intercorrelation matrix and discriminant validity

**Table 5.**  
Structural model  
evaluation and  
hypothesis testing

Hypotheses	Paths	$\beta$	<i>p</i> -value	LLCI (5%)	ULCI (95%)	Fit indices	Decision
H1	PH → JI	0.213	0.001	0.112	0.333	$R^2 = 0.149$	Supported
H2	IS → JI	0.163	0.006	0.069	0.28	$Q^2 = 0.060$	Supported
H3	SS → JI	0.169	0.004	0.081	0.288	SRMR = 0.08	Supported
<i>Moderating effect</i>							
		<i>Age &lt; 30</i>		<i>Age ≥ 30</i>			
		$\beta$	<i>p</i> -value	$\beta$	<i>p</i> -value	<i>Diff in <math>\beta</math></i>	<i>p</i> -value
H4	PH → JI	0.292	0.000	0.324	0.000	-0.032	0.731
H5	IS → JI	0.409	0.000	0.144	0.341	0.265	0.023
H6	SS → JI	0.367	0.000	0.289	0.251	0.078	0.971

greater than 0 to validate the model's predictive accuracy. The  $Q^2$  value is 0.060, proving the predictive accuracy of the model.

To assess potential moderating effects of age, we performed the multigroup analysis (MGA) (Hair *et al.*, 2017a) where we categorized our respondents into two mutually exclusive groups: young adults (age < 30; 43.5%) and older adults (age ≥ 30; 56.5%) (Lowry and Gaskin, 2014). We considered the respondents aged under 30 as young adults, because educated individuals usually start their career at 25–30 years and this demographic group is considered as young professional in Bangladesh. The MGA works well when the two investigated groups are relatively proportionate. As can be seen in Table 5, the difference between the young and older adults is not significant with regard to the relationships between PH and JI ( $\beta = -0.032$ ;  $p = 0.731$ ), and between SS and JI ( $\beta = -0.078$ ;  $p = 0.971$ ), while a significant difference is evident in the relationship between IS and JI ( $\beta = 0.265$ ;  $p = 0.023$ ). Thus, H5 is supported, and H4 and H6 are rejected.

#### 4.3 Robustness check

To investigate endogeneity, the Kolmogorov–Smirnov test with Lilliefors correction (Sarstedt and Mooi, 2014) was initially applied on the scores of independent variables. The results allowed us to proceed with Park and Gupta's (2012) Gaussian copula approach as none of the constructs is normally distributed. All possible combinations of Gaussian copulas are included in the model, and none of them is found significant ( $p > 0.05$ ), supporting the robustness of the structural model (Hult *et al.*, 2018).

To analyze nonlinearity, Ramsey's (1969) RESET test was applied on the latent variables (Svensson *et al.*, 2018), showing that partial regression of JI on PH, IS and SS is nonlinear ( $F(6,253) = 0.923$ ,  $p = 0.472$ ). Besides, the 5,000-sample bootstrap with an interaction term to capture the quadratic effects of the independent variables on JI shows that all nonlinear effects are insignificant.

To examine unobserved heterogeneity, the FIMIX procedure was applied where six segments are extracted following prior recommendations (Sarstedt *et al.*, 2017). As suggested by Sarstedt *et al.* (2017), we checked AIC3 and CAIC followed by AIC4 and BIC to find out whether any pair suggests the same number of segments. We found that only the pair of AIC4 and BIC results in the same segment solution. Therefore, heterogeneity is not observed because the metrics indicate single segment solution (Sarstedt *et al.*, 2017).

#### 4.4 Artificial neural network (ANN) analysis

The ANN analysis was implemented using IBM's SPSS neural network module, where multilayer perceptions and sigmoid activation functions were applied for input and hidden

layers (Sharma and Sharma, 2019). In all, 90% respondents were allocated to training and 10% were allocated to testing procedures (Leong *et al.*, 2018). A tenfold cross-validation procedure obtained the root mean square error (RMSE) value (Ooi and Tan, 2016), shown in Table 6, suggesting a good model fit. In addition, sensitivity was analyzed to estimate each input neuron’s predictive power, standardize and report their relative importance in percentage (Karaca *et al.*, 2019). Table 7 demonstrates that PH is the most important predictor, followed by SS and IS that have normalized importance of 85% and 79%, respectively.

### 5. Discussion

Remote working such as WFH during COVID-19 pandemic is a new work method for many employees across the world. As a result, how employees’ job involvement can be ensured when they work from home has become a relevant research topic. Grounded on the extended JD-R model and the social support theory, this study investigated potential individual and organizational forces that may positively contribute to job involvement when individuals work from home. Our results suggest that perceived hope, intrinsic spirituality and perceived supervisor support positively influence job involvement when individuals work remotely.

As hypothesized (H1), our empirical results confirm that perceived hope has a significant positive effect on job involvement. This finding implies that the higher the employees perceive hope, the higher the degree to which they psychologically identify themselves with their job and the lower their personal vulnerability that negatively affects work engagement (Schaufeli *et al.*, 2019). This result aligns with earlier evidence that hope positively impacts employees’ work behavior (Youssef and Luthans, 2007) and job performance (Peterson *et al.*, 2009). Our finding is also in line with Fredrickson (2013) and Pruyser (1986) who suggest that perceived hope matters when individuals are presented with difficult conditions and do not believe that they are capable of dealing with them. Since employees were moved from their office to home due to unwanted threat of COVID-19 pandemic, employees experienced not only a shortage in resources necessary to perform job but also psychosocial traumas. Our finding suggests that perceived hope can be an effective tool for enhancing employees’ job involvement during difficult times by reducing psychosocial problems.

N	Training		N	Testing		Total sample
	SSE	RMSE		SSE	RMSE	
236	99.907	0.651	27	10.213	0.615	263
239	102.307	0.654	24	8.147	0.583	263
238	103.686	0.660	25	16.290	0.807	263
232	98.601	0.652	31	14.982	0.695	263
230	101.32	0.664	33	10.344	0.560	263
236	102.276	0.658	27	13.785	0.715	263
234	104.931	0.670	29	9.689	0.578	263
238	104.759	0.663	25	4.169	0.408	263
235	101.752	0.658	28	8.221	0.542	263
236	103.605	0.663	27	8.390	0.557	263
	Mean	0.659		Mean	0.606	
	SD	0.005589		SD	0.104544	

**Note(s):** SSE = Sum square of errors, RMSE = root mean square of errors, N = sample size

**Table 6.**  
RMSE values

**Table 7.**  
Sensitivity analysis

Neural network (NN)	PH	SS	IS
NN (i)	89.75%	100.00%	78.94%
NN (ii)	100.00%	88.28%	86.61%
NN (iii)	100.00%	85.40%	46.59%
NN (iv)	78.26%	100.00%	91.76%
NN (v)	100.00%	48.80%	42.82%
NN (vi)	100.00%	88.34%	76.50%
NN (vii)	57.20%	74.54%	100.00%
NN (viii)	88.02%	100.00%	59.27%
NN (ix)	100.00%	40.25%	40.05%
NN (x)	100.00%	52.58%	92.93%
Average importance	0.91	0.78	0.72
Normalize importance	100%	85%	78%
Rank	1	2	3

The result that intrinsic spirituality is positively related to job involvement when individuals work from home (H2) provides new insights, supporting [Hong \*et al.\*'s \(2015\)](#) proposition that intrinsic spirituality functions as a personal resource and triggers job involvement. However, the result contradicts with [Kolodinsky \*et al.\* \(2008\)](#) who advocate that personal spirituality has no influence on job involvement. We argue that employees with high intrinsic spirituality tend to show a stronger attachment to their job even when they work remotely since their inherent spirituality influences them to work in a way they are likely to work and interact in their actual physical workplaces ([Word, 2012](#)).

The outcome also unveils a significant positive relationship between perceived supervisor support and job involvement when individuals work from home (H3). This result is somewhat consistent with prior studies which suggest that job resources make employees capable of investing their energies into and identifying with their work ([Gorgievski and Hobfoll, 2008](#); [Hobfoll, 1989](#)). Remote working during COVID-19 can be stressful for employees for several reasons: first, they work under serious health-related threat ([Godinic \*et al.\*, 2020](#)); second, they lack physical and intellectual resources to work effectively and efficiently. We advocate that job resources such as supervisor support can be particularly effective in increasing employees' morale at difficult times such as when they work from home, because supervisor support reduces employees' stress ([Steinhardt \*et al.\* \(2003\)](#) and improves job involvement ([Charoensukmongkol and Phungsoonthorn, 2021](#)).

The findings further suggest that age does not moderate the effects of perceived hope and perceived supervisor support on job involvement. One explanation may be that WFH during the COVID-19 pandemic is a forced choice for employees of all ages where they encounter similar work conditions such as uncertainty, social distancing and workplace isolation ([Kumar \*et al.\*, 2021](#); [Wang \*et al.\*, 2021](#)). Therefore, it is not surprising that employees of all age remain hopeful and expect support from their supervisor. Additionally, the moderating effect of age on the relationship between intrinsic spirituality and job involvement is found significant. The result underscores that younger employees demonstrate a higher degree of intrinsic spirituality compared to the older employee. An explanation may be because of the uncertainty caused by the COVID-19 pandemic and the adoption of new work practice such as WFH, younger employees tend to be more resilient and adaptive than older employees.

## 6. Theoretical and practical contributions

The study advances theory and knowledge in multiple ways by offering new empirical insights. First, we offer fresh insights into the antecedents promoting job involvement at

times when employees work from home. Second, the study adds new dimensions to the JD-R model (Schaufeli and Bakker, 2004); it empirically establishes perceived hope and intrinsic spirituality as important personal resources and perceived supervisor support as an organizational resource to facilitate new role expectations resulting from remote working. We also find empirical evidence for the social support theory that perceived supervisor support has a positive influence on job involvement. Third, the extant literature lacks understanding of how intrinsic spirituality relates to job involvement at difficult times. In this study, we contribute to this gap by confirming that intrinsic spirituality contributes to developing work attitudes. Contrary to the extant literature (Kolodinsky *et al.*, 2008, Word, 2012), we find that intrinsic spirituality matters and contributes positively to job involvement when employees work remotely. We argue that changing working condition may reverse the previously reported relationship between individual spirituality and attachment with a job.

Since employees face higher perceived uncertainty during COVID-19 (Charoensukmongkol and Phungsoonthorn, 2021), we suggest organizations to take practical measures to increase employees' job involvement when they work from home. We advocate that organizations can devise immediate and long-term strategies to foster hope and spirituality, and provide supervisor support for enhancing job involvement. We suggest that planned hope interventions such as psychological training and development of positive events may be beneficial. Reducing the fear of losing job and uncertainty concerning financial rewards could be another way to boost employees' hope and optimism. In addition, physical and mental support from supervisors such as activating prosocial behaviors and providing sufficient technical support to efficiently work from home could be effective in increasing employees' job involvement. A shift in the supervisory style that emphasizes people and relationships over tasks and results (check on instead of check-in) may also be crucial in the new normal work context.

## 7. Limitations and scope of future research

Although we offer fresh perspectives to the theory, this study has several limitations and identifies scopes for further research. In this study, we investigated potential antecedents of job involvement when employees work from home. We advocate that there could be possible indirect interaction effects. For example, Hong *et al.* (2015) posited that spirituality fosters hope; we believe that this proposition may be appropriate to explore in the context of remote working during the current COVID-19 pandemic. Future research may also focus on longitudinal study capturing both employee and managerial perspectives; they may also look to explore other potential antecedents of job involvement when employees work from home.

## References

- Ahmed, I., Ismail, W.K.W. and Amin, S.M. (2014), "Employee's reciprocation of organizational support and leader-member exchange", *Management Research Review*, Vol. 37 No. 11, pp. 930-943.
- Ali, F., Rasoolimanesh, S.M., Sarstedt, M., Ringle, C.M. and Ryu, K. (2018), "An assessment of the use of partial least squares structural equation modeling (PLS-SEM) in hospitality research", *International Journal of Contemporary Hospitality Management*, Vol. 30 No. 1, pp. 514-538.
- Allen, T.D., Golden, T.D. and Shockley, K.M. (2015), "How effective is telecommuting? Assessing the status of our scientific findings", *Psychological Science in the Public Interest*, Vol. 16 No. 2, pp. 40-68.
- Bakker, A.B. (2011), "An evidence-based model of work engagement", *Current Directions in Psychological Science*, Vol. 20 No. 4, pp. 265-269.
- Balducci, C., Schaufeli, W.B. and Fraccaroli, F. (2011), "The job demands-resources model and counterproductive work behaviour: the role of job-related affect", *European Journal of Work and Organizational Psychology*, Vol. 20 No. 4, pp. 467-496.

- Cash, K.C. and Gray, G.R. (2000), "A framework for accommodating religion and spirituality in the workplace", *Academy of Management Perspectives*, Vol. 14 No. 3, pp. 124-133.
- Charoensukmongkol, P. and Phungsoonthorn, T. (2021), "The effectiveness of supervisor support in lessening perceived uncertainties and emotional exhaustion of university employees during the COVID-19 crisis: the constraining role of organizational intransigence", *The Journal of General Psychology*, Vol. 148 No. 4, pp. 431-450.
- Cole, M.S., Bruch, H. and Vogel, B. (2006), "Emotion as mediators of the relations between perceived supervisor support and psychological hardiness on employee cynicism", *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, Vol. 27 No. 4, pp. 463-484.
- Cyphert, S.T. (1990), "Employee absenteeism: an empirical test of a revision of the Brooke model", Doctoral Dissertation, University of Iowa, Iowa City.
- de Klerk, J.J. (2005), "Spirituality, meaning in life, and work wellness: a research agenda", *International Journal of Organizational Analysis*, Vol. 13 No. 1, pp. 64-88.
- Eisenberger, R., Stinglhamber, F., Vandenberghe, C., Sucharski, I.L. and Rhoades, L. (2002), "Perceived supervisor support: contributions to perceived organizational support and employee retention", *Journal of Applied Psychology*, Vol. 87 No. 3, pp. 565-573.
- Falk, R.F. and Miller, N.B. (1992), *A Primer for Soft Modeling*, University of Akron Press, Akron, OH.
- Feldman, D.B., Rand, K.L. and Kahle-Wroblewski, K. (2009), "Hope and goal attainment: testing a basic prediction of hope theory", *Journal of Social and Clinical Psychology*, Vol. 28 No. 4, pp. 479-497.
- Fredrickson, B.L. (2013), "Chapter one - positive emotions broaden and build", *Advances in Experimental Psychology*, Academic Press, Vol. 47, pp. 1-53.
- Genç, E. and Arslan, G. (2021), "Optimism and dispositional hope to promote college students' subjective well-being in the context of the COVID-19 pandemic", *Journal of Positive School Psychology*, Vol. 5 No. 2, pp. 87-96.
- Godinic, D., Obrenovic, B., Khudaykulov, A. and Others (2020), "Effects of economic uncertainty on mental health in the COVID-19 pandemic context: social identity disturbance, job uncertainty and psychological well-being model", *International Journal of Innovation and Economic Development*, Vol. 6 No. 1, pp. 61-74.
- Gorgievski, M.J. and Hobfoll, S.E. (2008), "Work can burn us out or fire us up: conservation of resources in burnout and engagement", in Halbesleben, J.R.B. (Ed.), *Handbook of Stress and Burnout in Health Care*, Nova Science Publishers, Hauppauge, NY.
- Hair, J., Hollingsworth, C.L., Randolph, A.B. and Chong, A.Y.L. (2017a), "An updated and expanded assessment of PLS-SEM in information systems research", *Industrial Management and Data Systems*, Vol. 117 No. 3, pp. 442-458.
- Hair, J. Jr, Hult, G.T., Ringle, C. and Sarstedt, M. (2017b), *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, Sage Publication.
- Hair, J.F., Risher, J.J., Sarstedt, M. and Ringle, C.M. (2019), "When to use and how to report the results of PLS-SEM", *European Business Review*, Vol. 31 No. 1, pp. 2-24.
- Hair, J.F., Jr., Hult, G.T.M., Ringle, C.M. and Sarstedt, M. (2021), *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, Sage Publications.
- Hakanen, J.J., Bakker, A.B. and Schaufeli, W.B. (2006), "Burnout and work engagement among teachers", *Journal of School Psychology*, Vol. 43 No. 6, pp. 495-513.
- Hasson-Ohayon, I., Braun, M., Galinsky, D. and Baider, L. (2009), "Religiosity and hope: a path for women coping with a diagnosis of breast cancer", *Psychosomatics*, Vol. 50, pp. 525-533.
- Henningsgaard, J.M. and Arnau, R.C. (2008), "Relationships between religiosity, spirituality, and personality: a multivariate analysis", *Personality and Individual Differences*, Vol. 45 No. 8, pp. 703-708.

- Henseler, J., Ringle, C.M. and Sarstedt, M. (2015), "A new criterion for assessing discriminant validity in variance-based structural equation modeling", *Journal of the Academy of Marketing Science*, Vol. 43 No. 1, pp. 115-135.
- Hobfoll, S.E. (1989), "Conservation of resources: a new attempt at conceptualizing stress", *American Psychologist*, Vol. 44 No. 3, pp. 513-524.
- Hodge, D.R., Zidan, T. and Husain, A. (2015), "Validation of the Intrinsic Spirituality Scale (ISS) with Muslims", *Psychological Assessment*, Vol. 27 No. 4, pp. 1264-1272.
- Hong, P.Y.P., Hodge, D.R. and Choi, S. (2015), "Spirituality, hope, and self-sufficiency among low-income job seekers", *Social Work*, Vol. 60 No. 2, pp. 155-164.
- Horan, K.A., Moeller, M.T., Singh, R.S., Wasson, R., O'Brien, W.H., Matthews, R.A., Jex, S.M. and Barratt, C.L. (2018), "Supervisor support for stress management and intervention process", *International Journal of Workplace Health Management*, Vol. 11 No. 4, pp. 260-272.
- Hu, Q., Schaufeli, W.B. and Taris, T.W. (2016), "Extending the job demands-resources model with guanxi exchange", *Journal of Managerial Psychology*, Vol. 31 No. 1, pp. 127-140.
- Hult, G.T.M., Hair, J.F. Jr, Proksch, D., Sarstedt, M., Pinkwart, A. and Ringle, C.M. (2018), "Addressing endogeneity in international marketing applications of partial least squares structural equation modeling", *Journal of International Marketing*, Vol. 26 No. 3, pp. 1-21.
- Kanungo, R.N. (1981), "Work alienation and involvement: problems and prospects", *International Review of Applied Psychology*, Vol. 30, pp. 1-15.
- Karaca, Y., Moonis, M., Zhang, Y.-D. and Gezgez, C. (2019), "Mobile cloud computing based stroke healthcare system", *International Journal of Information Management*, Vol. 45, April, pp. 250-261.
- Kim, Y. and Seidlitz, L. (2002), "Spirituality moderates the effect of stress on emotional and physical adjustment", *Personality and Individual Differences*, Vol. 32 No. 8, pp. 1377-1390.
- Kniffin, K.M., Narayanan, J., Anseel, F., Antonakis, J., Ashford, S.P., Bakker, A.B., Bamberger, P., Bapuji, H., Bhawe, D.P. and Choi, V.K. (2021), "COVID-19 and the workplace: implications, issues, and insights for future research and action", *American Psychologist*, Vol. 76 No. 1, pp. 63-77.
- Kolodinsky, R.W., Giacalone, R.A. and Jurkiewicz, C.L. (2008), "Workplace values and outcomes: exploring personal, organizational, and interactive workplace spirituality", *Journal of Business Ethics*, Vol. 81 No. 2, pp. 465-480.
- Krafft, A.M., Guse, T. and Maree, D. (2020), "Distinguishing perceived hope and dispositional optimism: theoretical foundations and empirical findings beyond future expectancies and cognition", *Journal of Well-Being Assessment*, Vol. 4, pp. 217-243.
- Krafft, A.M., Martin-Krumm, C. and Fenouillet, F. (2019), "Adaptation, further elaboration, and validation of a scale to measure hope as perceived by people: discriminant value and predictive utility vis-à-vis dispositional hope", *Assessment*, Vol. 26 No. 8, pp. 1594-1609.
- Kumar, R. and Mokashi, U.M. (2020), "COVID-19 and work-life balance: what about supervisor support and employee proactiveness?", *Annals of Contemporary Developments in Management and HR*, Vol. 2 No. 4, pp. 1-9.
- Kumar, P., Kumar, N., Aggarwal, P. and Yeap, J.A. (2021), "Working in lockdown: the relationship between COVID-19 induced work stressors, job performance, distress, and life satisfaction", *Current Psychology*, Vol. 40, pp. 6308-6323.
- Kurtessis, J.N., Eisenberger, R., Ford, M.T., Buffardi, L.C., Stewart, K.A. and Adis, C.S. (2017), "Perceived organizational support: a meta-analytic evaluation of organizational support theory", *Journal of Management*, Vol. 43 No. 6, pp. 1854-1884.
- Lawler, E.E. and Hall, D.T. (1970), "Relationship of job characteristics to job involvement, satisfaction, and intrinsic motivation", *Journal of Applied Psychology*, Vol. 54 No. 4, pp. 305-312.
- Leong, L.-Y., Jaafar, N.I. and Ainin, S. (2018), "Understanding Facebook commerce (f-commerce) actual purchase from an artificial neural network perspective", *Journal of Electronic Commerce Research*, Vol. 19 No. 1, pp. 75-103.

- Lowry, P.B. and Gaskin, J. (2014), "Partial least squares (PLS) structural equation modeling (SEM) for building and testing behavioral causal theory: when to choose it and how to use it", *IEEE Transactions on Professional Communication*, Vol. 57 No. 2, pp. 123-146.
- Luthans, F., Avolio, B.J., Walumbwa, F.O. and Li, W. (2005), "The psychological capital of Chinese workers: exploring the relationship with performance", *Management and Organization Review*, Vol. 1 No. 2, pp. 249-271.
- Milliman, J., Czaplewski, A.J. and Ferguson, J. (2003), "Workplace spirituality and employee work attitudes: an exploratory empirical assessment", *Journal of Organizational Change Management*, Vol. 16 No. 4, pp. 424-447.
- Moon, T.-W., Youn, N., Hur, W.-M. and Kim, K.-M. (2020), "Does employees' spirituality enhance job performance? The mediating roles of intrinsic motivation and job crafting", *Current Psychology*, Vol. 39 No. 5, pp. 1618-1634.
- Ng, E.C.W., Chan, C.C. and Lai, M.K. (2014), "Hope and life satisfaction among underprivileged children in Hong Kong: the mediating role of perceived community support", *Journal of Community Psychology*, Vol. 42 No. 3, pp. 352-364.
- Nitzl, C. (2018), "Management accounting and partial least squares-structural equation modelling (PLS-SEM): some illustrative examples", in Avkiran, N.K. and Ringle, C.M. (Eds), *Partial Least Squares Structural Equation Modeling*, Springer.
- Ooi, K.-B. and Tan, G.W.-H. (2016), "Mobile technology acceptance model: an investigation using mobile users to explore smartphone credit card", *Expert Systems with Applications*, Vol. 59, October, pp. 33-46.
- Palumbo, R. (2020), "Let me go to the office! an investigation into the side effects of working from home on work-life balance", *International Journal of Public Sector Management*, Vol. 33 Nos 6/7, pp. 771-790.
- Park, S. and Gupta, S. (2012), "Handling endogenous regressors by joint estimation using copulas", *Marketing Science*, Vol. 31 No. 4, pp. 567-586.
- Pattnaik, L. and Jena, L.K. (2021), "Mindfulness, remote engagement and employee morale: conceptual analysis to address the 'new normal'", *International Journal of Organizational Analysis*, Vol. 29 No. 4, pp. 873-890.
- Pawar, B.S. (2009), "Individual spirituality, workplace spirituality and work attitudes: an empirical test of direct and interaction effects", *Leadership and Organization Development Journal*, Vol. 30 No. 8, pp. 759-777.
- Peterson, C. and Seligman, M.E. (2004), *Character Strengths and Virtues: A Handbook and Classification*, Oxford University Press, New York, NY.
- Peterson, B.S., Warner, V., Bansal, R., Zhu, H., Hao, X., Liu, J., Durkin, K., Adams, P.B., Wickramaratne, P. and Weissman, M.M. (2009), "Cortical thinning in persons at increased familial risk for major depression", *Proceedings of the National Academy of Sciences*, Vol. 106 No. 15, pp. 6273-6278.
- Phungsoonthorn, T. and Charoensukmongkol, P. (2019), "Antecedents and outcomes associated with a sense of place toward the organization of Myanmar migrant workers in Thailand", *Equality, Diversity and Inclusion: An International Journal*, Vol. 39 No. 2, pp. 195-218.
- Pruyer, P.W. (1986), "Maintaining hope in adversity", *Pastoral Psychology*, Vol. 35 No. 2, pp. 120-131.
- Qureshi, H., Lambert, E.G. and Frank, J. (2019), "The relationship between stressors and police job involvement", *International Journal of Police Science and Management*, Vol. 21 No. 1, pp. 48-61.
- Rabinowitz, S. and Hall, D.T. (1977), "Organizational research on job involvement", *Psychological Bulletin*, Vol. 84 No. 2, pp. 265-288.
- Ramsey, J.B. (1969), "Tests for specification errors in classical linear least-squares regression analysis", *Journal of the Royal Statistical Society: Series B (Methodological)*, Vol. 31 No. 2, pp. 350-371.

- Rhoades, L. and Eisenberger, R. (2002), "Perceived organizational support: a review of the literature", *Journal of Applied Psychology*, Vol. 87 No. 4, pp. 698-714.
- Ribeiro, N., Gupta, M., Gomes, D. and Alexandre, N. (2021), "Impact of psychological capital (PsyCap) on affective commitment: mediating role of affective well-being", *International Journal of Organizational Analysis*, Vol. 29 No. 4, pp. 1015-1029.
- Sarstedt, M. and Mooi, E. (2014), *A Concise Guide to Market Research: The Process, Data, and Methods Using IBM SPSS Statistics*, Springer, Berlin.
- Sarstedt, M., Ringle, C.M. and Hair, J.F. (2017), "Treating unobserved heterogeneity in PLS-SEM: a multi-method approach", in Latan, H. and Noonan, R. (Eds), *Partial Least Squares Path Modeling*, Springer.
- Schaufeli, W.B. and Bakker, A.B. (2004), "Job demands, job resources, and their relationship with burnout and engagement: a multi-sample study", *Journal of Organizational Behavior*, Vol. 25 No. 3, pp. 293-315.
- Schaufeli, W.B. and Taris, T.W. (2014), "A critical review of the job demands-resources model: implications for improving work and health", *Bridging Occupational, Organizational and Public Health*, pp. 43-68.
- Schaufeli, W.B., Bakker, A.B. and Van Rhenen, W. (2009), "How changes in job demands and resources predict burnout, work engagement, and sickness absenteeism", *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, Vol. 30 No. 7, pp. 893-917.
- Schaufeli, W.B., Shimazu, A., Hakanen, J., Salanova, M. and De Witte, H. (2019), "An ultra-short measure for work engagement", *European Journal of Psychological Assessment*, Vol. 35 No. 4, pp. 1-41.
- Scrima, F., Lorito, L., Parry, E. and Falgares, G. (2014), "The mediating role of work engagement on the relationship between job involvement and affective commitment", *The International Journal of Human Resource Management*, Vol. 25 No. 15, pp. 2159-2173.
- Sekaran, U. and Mowday, R.T. (1981), "A cross-cultural analysis of the influence of individual and job characteristics on job involvement", *International Review of Applied Psychology*, Vol. 30 No. 1, pp. 51-64.
- Sharma, S.K. and Sharma, M. (2019), "Examining the role of trust and quality dimensions in the actual usage of mobile banking services: an empirical investigation", *International Journal of Information Management*, Vol. 44, February, pp. 65-75.
- Shih, K.-H., Hsieh, Y.-R. and Lin, B. (2009), "Moderator effects to internal audits' self-efficacy and job involvement", *International Journal of Accounting and Information Management*, Vol. 17 No. 2, pp. 151-165.
- Shumaker, S.A. and Brownell, A. (1984), "Toward a theory of social support: closing conceptual gaps", *Journal of Social Issues*, Vol. 40 No. 4, pp. 11-36.
- Spector, P.E. and Brannick, M.T. (2010), "Common method issues: an introduction to the feature topic in organizational research methods", *Organizational Research Methods*, Vol. 13 No. 3, pp. 403-406.
- Steinhardt, M.A., Dolbier, C.L., Gottlieb, N.H. and McCalister, K.T. (2003), "The relationship between hardiness, supervisor support, group cohesion, and job stress as predictors of job satisfaction", *American Journal of Health Promotion*, Vol. 17 No. 6, pp. 382-389.
- Sunardi, I. and Putri, V.W. (2020), "Career satisfaction based on trust and proactive personality", *Management Analysis Journal*, Vol. 9 No. 1, pp. 35-45.
- Supervía, P.U., Bordás, C.S. and Lorente, V.M. (2020), "Exploring the psychological effects of optimism on life satisfaction in students: the mediating role of goal orientations", *International Journal of Environmental Research and Public Health*, Vol. 17 No. 21, pp. 78-87.
- Svensson, G., Ferro, C., Høgevold, N., Padin, C., Varela, J.C.S. and Sarstedt, M. (2018), "Framing the triple bottom line approach: direct and mediation effects between economic, social and environmental elements", *Journal of Cleaner Production*, Vol. 197 No. Part 1, pp. 972-991.

- Toscano, F. and Zappalà, S. (2020), "Social isolation and stress as predictors of productivity perception and remote work satisfaction during the COVID-19 pandemic: the role of concern about the virus in a moderated double mediation", *Sustainability*, Vol. 12 No. 23, p. 9804.
- Turliuc, M.N. and Candel, O.S. (2021), "The relationship between psychological capital and mental health during the Covid-19 pandemic: a longitudinal mediation model", *Journal of Health Psychology*. doi: [10.1177/13591053211012771](https://doi.org/10.1177/13591053211012771).
- Uddin, M.A., Mahmood, M. and Fan, L. (2019), "Why individual employee engagement matters for team performance? Mediating effects of employee commitment and organizational citizenship behaviour", *Team Performance Management: An International Journal*, Vol. 25 Nos 1/2, pp. 47-68.
- Wan, Y.K.P. and Chan, S.H.J. (2013), "Casino employees' perceptions of their quality of work life", *International Journal of Hospitality Management*, Vol. 34, September, pp. 348-358.
- Wang, B., Liu, Y., Qian, J. and Parker, S.K. (2021), "Achieving effective remote working during the COVID-19 pandemic: a work design perspective", *Applied Psychology*, Vol. 70 No. 1, pp. 16-59.
- Word, J. (2012), "Engaging work as a calling: examining the link between spirituality and job involvement", *Journal of Management, Spirituality and Religion*, Vol. 9 No. 2, pp. 147-166.
- Youssef, C.M. and Luthans, F. (2007), "Positive organizational behavior in the workplace: the impact of hope, optimism, and resilience", *Journal of Management*, Vol. 33 No. 5, pp. 774-800.
- Zhang, T. and Li, B. (2020), "Job crafting and turnover intention: the mediating role of work engagement and job satisfaction", *Social Behavior and Personality: An International Journal*, Vol. 48 No. 2, pp. 1-9.

**Corresponding author**

Muhammad Shariat Ullah can be contacted at: [shariat@du.ac.bd](mailto:shariat@du.ac.bd)

---

For instructions on how to order reprints of this article, please visit our website:

[www.emeraldgroupublishing.com/licensing/reprints.htm](http://www.emeraldgroupublishing.com/licensing/reprints.htm)

Or contact us for further details: [permissions@emeraldinsight.com](mailto:permissions@emeraldinsight.com)