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<https://doi.org/10.1057/s41599-024-02752-9>

OPEN

Growth mindset and positive work reflection for affective well-being: a three-way interaction model

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The affective well-being of employees is significant in today's fast-paced lifestyle in the post-pandemic era, as it results in many benefits, including work-related and health-related benefits. It is known that the positive reflection of work predicts the affective well-being of employees. However, the optimal ways of strengthening the relationship between these variables in contemporary working conditions are yet to be explored. Drawing on border theory and implicit theories, this research analyzes the role of work contact and growth mindset in the relationship between positive work reflection and affective well-being. In addition, this study proposes a three-way interaction among positive work reflection, work contact, and growth mindset in predicting the affective well-being of employees. Responses were collected from employees working in IT firms. After screening, 309 valid samples were obtained. From the analysis, it was found that a higher level of work contact moderates the relationship between positive work reflection and the affective well-being of employees with a growth mindset. Alternatively, a medium level of work contact moderates the above relationship for both types of mindset (growth and fixed mindset) among employees.

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Introduction

The work-life of employees does not end after the official working hours. It continues since they think about their work and reflect on it, even during their leisure time after work. When such reflection of work during their leisure time is positive, it can be stated as Positive Work Reflection (Fritz and Sonnentag, 2005). Positive Work Reflection is related to positive affects, which is one of the indicators of the affective well-being of employees (Meier et al., 2016; Sonnentag and Grant, 2012).

Investigating the positive affects is important because it is related to the performance of individuals, helping others at the workplace, organizational citizenship behavior, proactive behavior, well-being, and satisfaction with life (Conway et al., 2009; Fay and Sonnentag, 2012; Holley et al., 2023; Jovanović and Joshanloo, 2022; Vasquez et al., 2020). Well-being in turn is positively related to mental health and a decrease in turnover intention (Weber and Avey, 2019; Nae and Choi, 2022). Furthermore, a high valence positive affect is enduring over time (Sandrin et al., 2020). Though the relationship between positive work reflection and positive affects is well-established, the role of relevant work-related and personal variables in this relationship is rather limited. In addition, information regarding the optimal ways of strengthening the relationship between these variables in contemporary working conditions is yet to be explored. This research gap has been addressed in the present study.

Work contact is a work-related variable, described as work-related communication in non-working time using the technology which is common among many employees (Olson-Buchanan and Boswell, 2006). It can also be explained as a work-related discussion during non-working time. Many employees find it inevitable in the post-pandemic era and it has been receiving notable attention recently (Choi et al., 2022). Initially work contact, a notable part of work-family (W-F) multitasking, was considered to be a stress-inducing factor for employees (Schieman and Glavin, 2008). However, some studies found that there are circumstances in which work contact can act as a beneficial factor to non-work domains. Specifically, employees in a supportive positive work environment consider work contact as a beneficial factor and less possibly consider it as a disruption to family and non-work domains. In contrast, employees in a conflictive context feel work contact, is a disruption to non-work domains (Glavin and Schieman, 2010).

This study recognizes the critical perspective on work contact and tries to examine the circumstances in which work contact is effective in stimulating positive affects. As positive work reflection will be high in the supportive work context (Fritz and Sonnentag, 2006), the present study argues that work contact can have a positive influence on the relationship between positive work reflection and positive affects. Precisely, this study proposes that work contact can moderate the relationship above. However, the question arises as, to what extent it can moderate. To address this question, drawing on implicit theories, this study proposes that the mindset of intelligence, a personal variable may influence the role of work contact in positive work reflection and positive affects relationship.

Though implicit theories of intelligence are applicable to all humans (Dweck, 2012), it has been investigated largely in the educational field (Costa and Faria, 2018; Li and Bates, 2019; Yeager and Dweck, 2012). However, the mindset of intelligence of the workforce has been analyzed by relatively few studies (e.g., Caniels et al., 2018; Frondoza et al., 2020). The mindset of intelligence in general is considered unidimensional i.e., one end of the continuum is the growth mindset while the other end is the fixed mindset (Burnette and Pollack, 2013; Dweck, 2012). People with a growth mindset believe intelligence is a nurturing factor that can be developed through learning and effort, whereas fixed

mindset people believe intelligence is a natural factor that cannot be developed (Dweck, 2012). Based on the background of the implicit theories, the current study proposes that the growth mindset employees are open to work contact, for their professional and personal growth. It is proposed that a growth mindset moderates the role of work contact in positive work reflection—positive affects relation. For individuals who believe in a growth mindset, work contact will strengthen the positive work reflection—positive affects relationship.

Hence, herein the role of work contact and growth mindset in the above relationship will be examined, by analyzing if the three-way interaction between positive work reflection \times work contact \times growth mindset, moderates the relation between positive work reflection and affective well-being. The present study has few notable contributions to the literature. It initially tries to extend the literature of positive work reflection—positive affects relation in the contemporary working condition. Then, it contributes to the extant literature on W-F multitasking by analyzing the positive aspects of work contact of employees. It also contributes to the literature on mindset by analyzing its role in the above-mentioned relationship. Further, the investigation of the moderated moderation relationship can deepen the knowledge of these variables, their interactions, and their contribution towards affective well-being.

Theoretical background and hypothesis development

Positive work reflection refers to the positive thoughts of the employees about their jobs during their leisure time as stated by Fritz and Sonnentag (2005). As per cognitive appraisal theory, people would evaluate their experiences as positive or negative which leads to specific reactions (Lazarus, 1991). This indicates that experiences are related to the reaction of the people. Hence, positive work reflection is one such process through which employees assess their work experiences positively (Sonnentag and Grant, 2012). Positive work reflection involves thinking about pleasant incidents like successful accomplishment of certain work-related tasks, supportive professional relationships, etc., (Fritz and Sonnentag, 2006). Thinking of positive incidents is beneficial to positive emotions (Morris, 1989) which in turn facilitates overcoming negative emotions (Fredrickson et al., 2000). Similarly, positive work reflection can facilitate the reduction of negative affect and can produce affective personal resources (Ten Brummelhuis and Bakker, 2012)).

The results of the studies that analyzed the positive work reflection and employee well-being relationship are quite interesting. The positive work reflection during the weekend is positively related to the reduction of exhaustion and disengagement among employees in the following week (Fritz and Sonnentag, 2005). Fritz and Sonnentag, (2006) found that positive work reflection during vacation helps the individual to get engaged in the job faster. It is also reported that positive work reflection is related to W-F enrichment (Daniel and Sonnentag, 2014) and positive affects (Sonnentag and Grant, 2012).

In addition, not only work reflection but also W-F multitasking is related to well-being (Kossek et al., 2012) and work contact is a significant part of such multitasking. Also, the use of technology in W-F multitasking can moderate the relationship between employee resources and well-being (Ten Brummelhuis and Bakker, 2012). Since positive work reflection is an aspect of reflecting positive experiences in the work environment and positive affects are one of the facets of employee well-being, one can expect that work contact, which is a significant part of W-F multitasking, can play a role in the relationship between positive work reflection and positive affects. Also, individuals may have

work contact either by leveraging the flexibility afforded by using information communication technology for doing the work in non-work time or because they are obligated to meet organizational expectations of being available to respond to work-related calls and messages beyond regular working hours (Piszczek, 2017).

Role of work contact. It is found from the literature review that the role of work contact in positive work reflection—positive affects relation has not been investigated much. Multitasking refers to performing two or more tasks simultaneously to complete several tasks over a limited period of time. When employees carry out official and family-related tasks simultaneously, it can be called W-F multitasking (Offer and Schneider, 2011). Several employees willingly carry out such W-F multitasking activities for their development. Border theory forms the background of W-F multitasking and explains the merging and splitting of work and family roles (Clark, 2000).

Work contact is a notable aspect of W-F multitasking. It is defined as the work-related communication of employees during non-work time using technology such as mobile phones and laptops (Schieman and Young, 2013). Voydanoff (2007) called the same as “boundary spanning demand”. The research on this common technological communication exhibited mixed results. Due to the flexibility associated with technological communications, it is positively associated with the W-F interface (Valcour and Hunter, 2004). A few studies have reported that the use of technological communications has a negative effect on individuals (Galinsky et al., 2001), as it increases work-related demands. Researchers also found a negative influence of work contact on both work and non-work domains and considered it as a potential stressor, as it is positively associated with ‘W-F conflict’ (Schieman and Young, 2013; Voydanoff, 2005). Additionally, Work intensity which includes multitasking, leads to poor health and poor sleep quality (Lyons et al., 2022).

Nevertheless, researchers have indicated that there are circumstances in which W-F multitasking can be advantageous for employees. For instance, the capacity to juggle between work and family responsibilities may afford individuals a sense of flexibility and autonomy. This flexibility can have a positive influence on well-being, particularly when it aligns with personal preferences and contributes to an improved work-life balance (Kossek et al., 2012). They found that multitasking can serve as a moderator between work and non-work domains. Similarly, work contact also has benefits and positive consequences for employees. When employees are in a positive supportive context, they perceive work contact as a beneficial factor rather than as a disruption in the non-work domain. Only employees in conflictive contexts perceive work contact as a disruption to family and non-work domains (Glavin and Schieman, 2010).

As positive work reflection reflects the positive side of a job, it can provide a supportive factor to employees. Also, as already mentioned, according to Ten Brummelhuis and Bakker (2012) technology usage in W-F multitasking moderates between the resources of employees and their well-being. It is hence expected that work contacts will play a positive role in positive work reflection—positive affect relationships. As work contact is beneficial, it is expected to strengthen the positive relationship between positive work reflection—and positive affect relationship, and hence based on the above-mentioned premise, the following hypothesis H1 is formulated.

H1: *Work contact moderates the relationship between positive work reflection and positive affects.*

Role of mindset of intelligence. The origin of the mindset of intelligence is implicit theories (Dweck and Leggett, 1988). It

describes two different mindsets, namely fixed and growth mindsets. People with fixed mindsets would believe that their intelligence is not alterable (i.e., nature), whereas growth mindset people would believe their intelligence is a nurturing factor and can be improved as a result of their learning process and efforts (Yeager and Dweck, 2012). These mindsets are largely researched in the field of education (Costa and Faria, 2018; Goel and Schnusenberg, 2019; Li and Bates, 2019; Yeager and Dweck, 2012). Very few studies, like Caniels et al. (2018) and Burnette and Pollack (2013), have analyzed the same among adults, especially employees. In challenging circumstances, those with a growth mindset can respond in a better way than those with a fixed mindset, because people with a growth mindset recognize challenges as opportunities for their growth (Yeager and Dweck, 2012). Studies to date have analyzed mindset along with performance appraisal (Heslin and VandeWalle, 2011), work engagement (Caniels et al., 2018), and life satisfaction (Burnette and Pollack, 2013).

Therefore, the connection between mindset and various facets of well-being is established already and work contact is also expected to moderate the relationship between positive work reflection and affective well-being. The key question is to what extent the work contact will interact with this relationship. This study posits that the work contact and the degree to which employees embrace a growth mindset may be mutually reinforcing each other, as both can be beneficial for employee’s non-work domains. Building on implicit theories, the present study puts forth the following proposal. As people with a growth mindset value the process and people with a fixed mindset value the goal (Dweck, 2012), the employees with a growth mindset can perceive the work contact as an opportunity for their development. In recent times, studies have found that the mindset of intelligence can decide if transformational leadership can moderate the link between proactive personality and work engagement. It was reported that growth mindset and high transformational leadership can reinforce each other and strengthen the proactive personality and work engagement link (Caniels et al., 2018). Furthermore, it is also stated that for employees with fixed mindsets, low transformational leadership can strengthen the relationship between proactive personality and work engagement. Similarly, this study proposes that both the growth mindset and work contact can reinforce each other and in turn, can strengthen the positive work reflection—positive affects relationship.

Employees with fixed mindsets can also have work contact as per their work nature and organization. However, a fixed mindset and high work contact together will not strengthen positive work reflection—positively affect relationships. This is because work contact can be a disruptive factor in situations, that are not positive, and not supportive (Glavin and Schieman, 2010). As those with fixed mindsets believe their intelligence and capabilities are fixed irrespective of their efforts as stated by Dweck (2012), they may not perceive work contact as an opportunity to grow. For employees with a fixed mindset, low and medium work contact may strengthen the positive work reflection—positive affects relationship. Thus, it is proposed that a growth mindset can help ensure the affective well-being of individuals, while a fixed mindset may strengthen the positive work reflection—positive affects relationship when employees have low or medium work contact. Further growth mindset of employees can strengthen the above relationship even for higher work contact. Considering the above argumentation, hypothesis H2 is proposed.

H2: *The relationship between positive work reflection and positive affects is moderated by work contact and a mindset of intelligence. Specifically, when work contact is high, positive work*

reflection connects strongly with positive affects for employees with a growth mindset and not with a fixed mindset; when work contact is medium or low, positive work reflection connects strongly with positive affects for employees with both a growth mindset and a fixed mindset.

Methods

As the employees of IT firms often have work contacts, they are considered an appropriate sample to test this model and data is collected from personnel working in IT firms in India. This study adapted a non-probability convenient sampling method (Lu et al., 2023). The authors requested 25 IT companies, to take part in the survey. The organizations were identified through the professional and social networks of the authors. However, only 11 of them accepted the request and participated in the survey. With the help of the respective HR managers, the online link of the well-structured questionnaire was communicated to 500 individuals, accompanied by a comprehensive explanation of the study’s objectives. Received 362 responses with a 72.4% response rate, which is a good response rate.

The data has no extreme outliers. By excluding samples with missing values for any variables, like the approach taken by Voydanoff (2005), the resulting sample size considered for quantitative analysis is 309. Informed consent was obtained from the respondents and their participation was voluntary. To ensure anonymity, no personal details were collected from them. Respondents were 54% male and 46% female with ages ranging from 20 to 61 years. The mean and standard deviation of age were 24.5 and 4.5 respectively. A significant portion of the participants were unmarried, comprising nearly 59.2%, with the remaining individuals being married. Additionally, 51.8% of the respondents were undergraduates, and the rest were postgraduates.

Measures

Positive work reflection. The positive work reflection was measured using a three-item scale of Fritz and Sonnentag (2005, 2006). A sample item is “During leisure time, I realized what I like about my job”. The response ranges from completely disagree (1) to completely agree (5) (Cronbach alpha = 0.836).

Positive affects. A shortened form of positive affect with three items of the schedule-expanded form (Watson and Clark, 1994) like Meier et al. (2016) was used. The items are joyful, happy, and delighted. The response ranges from not at all (1) to very much (5). (Cronbach alpha = 0.861).

Work contact. A scale by Schieman and Young (2013) with three items was used for the work contact. A sample item is “How often were you called about work-related matters when you were not at work?” The response ranges from never (1) to very often (5) (Cronbach alpha = 0.691).

Growth mindset. A scale of implicit theory of intelligence by Dweck et al. (1995) with three items to measure fixed mindset was used. A sample item is “You can learn new things, but you

can’t really change your basic intelligence”. The response ranges from completely disagree (1) to completely agree (5). The responses are recorded so that the higher score denotes a growth mindset, whereas the lower score denotes a fixed mindset (see Caniels et al., 2018). (Cronbach alpha = 0.784).

Data analysis

To mitigate Common Method Bias, diverse Likert scales were employed to assess variables within the proposed model. For instance, a scale ranging from “completely disagree (1)” to “completely agree (5)” was used to measure the independent variable positive work reflection. The dependent variable positive affects was measured on a scale ranging from “not at all (1)” to “very much (5),” while work contact was gauged using a scale from “never (1)” to “very often (5).” Additionally, the growth mindset variable was assessed on a scale from “completely disagree (1)” to “completely agree (5).” The utilization of these varied scales serves to diminish Common Method Bias (CMB) during data collection. Anonymous responses were also implemented to further reduce response bias. Moreover, Harman’s single-factor test was conducted, revealing a variance of 25.47%. Since this value is below the established threshold of 50% (Podsakoff et al., 2003), it indicates the absence of common method bias in the present study.

Descriptive statistics, correlation analysis, and assessments of reliability and validity were executed through SPSS 25. The sample characteristics presented in the descriptive analysis were derived from the SPSS output. The descriptive statistics and correlation are displayed in Table 1. Confirmatory factor analysis carried out with AMOS 24, evaluated the adequacy of the measurement model. The measurement model fit was confirmed through assessments of convergent validity, discriminant validity, and composite reliability scores, following the criteria established by Fornell and Larcker (1981).

Measurement model fit. The internal consistency of items within all constructs was evaluated through Cronbach’s alpha (α), surpassing the threshold value of 0.6 (Shi et al., 2012). According to Fornell and Larcker (1981), if the AVE is below 0.5 and the Composite Reliability exceeds 0.6, the construct’s convergent validity is considered acceptable. So, the Composite Reliability (CR) and Average Variance Extracted (AVE) of all constructs (see Table 2), demonstrated an acceptable convergent validity and model fit. As the square root of AVE exceeds the value of Maximum Shared Variance (MSV), the discriminant validity is also ensured. Also, as per Hair et al. (2010), factor loading estimates exceed 0.5. The Factor loadings of all the items and the values of CR, AVE, and MSV for all constructs are shown in Table 2.

In accordance with the recommendations of Hair et al. (2010), the Chi-square/Degree of Freedom ($\chi^2/df = 1.141$) is below 3.0. Additionally, key fit indices, including Confirmatory Fit Index (CFI = 0.995), Goodness of Fit Index (GFI = 0.972), Adjusted Goodness of Fit (AGFI = 0.954), Tucker–Lewis Index (TLI = 0.993), and Incremental Fit Index (IFI = 0.995), all exceed the 0.9 threshold, Root Mean Square Error of Approximation

Table 1 Descriptive statistics, correlations, and reliability of all variables.

S.No	Variables	No of item	Mean	SD	1	2	3	4	Reliability
1	PWR	3	3.45	0.84	-				0.836
2	Positive affects	3	3.46	0.88	0.274**	-			0.861
3	WC	3	2.92	0.89	0.011	-0.074	-		0.691
4	GM	3	2.81	0.76	0.117*	0.039	0.233**	-	0.784

Note: **p < 0.01; *p < 0.05; PWR positive work reflection, WC work contact, GM growth mindset.

Table 2 Factor loadings and results of reliability and validity.

Variables	Measurement scale	Standardized factor loadings	CR	AVE	MSV
PWR			0.844	0.647	0.081
PWR1	During leisure time, I realized what I like about my job.	0.66			
PWR2	During leisure time, I thought about the positive points of my job	0.89			
PWR3	During leisure time, I considered the positive aspects of my job	0.84			
PA			0.865	0.684	0.081
PA1	Joyful.	0.84			
PA2	Happy	0.92			
PA3	Delighted	0.71			
WC			0.697	0.438	0.005
WC1	How often were you called about work-related matters when you were not at work?	0.54			
WC2	How often did you read job-related emails or text messages when you were not at work?	0.70			
WC3	How often did you contact people about work-related matters when you were not at work?	0.73			
GM			0.788	0.555	0.022
GM1	You can learn new things, but you can't really change your basic intelligence.	0.67			
GM2	Your intelligence is something about you that you can't change very much.	0.83			
GM3	You have a certain amount of intelligence and you really can't do much to change it.	0.72			

PWR positive work reflection, PA positive affects, WC work contact, GM growth mindset, CR composite reliability, AVE average variance extracted, MSV maximum shared variance.

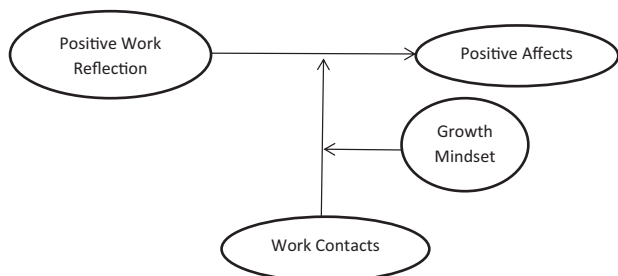


Fig. 1 The proposed three-way interaction model.

(RMSEA = 0.05) falls below 0.8, the Root Mean Square Residual (RMR = 0.021) is under 0.05, and both the Parsimony Comparative Fit Index (PCFI = 0.724) and the Parsimony Normed Fit Index (PNFI = 0.698) surpass the 0.5 threshold. Also, the p-value is 0.233, which is above 0.05. These results demonstrate an excellent fit of the measurement model in the current study.

Results of the hypotheses test

The hypotheses of the proposed research model were tested by utilizing the SPSS PROCESS macro, developed by Hayes (2018), which primarily uses ordinary least squares (OLS) regression analysis for parameter estimation. This study specifically employed model 1 and model 3, within the PROCESS macro (Like Blomberg and Rosander, 2020). To compute bias-corrected confidence intervals for all variables involved, bootstrapping with 5000 samples was applied. Prior to analysis, variables were mean-centered for the construction of products. The hypothesis testing of the present study supported both H1 and H2. When the moderator work contact was included, the positive work reflection—positive affects relationship was strengthened which was further strengthened by the mindset of intelligence that moderates the moderation of work contact (see Fig. 1). The descriptive statistics and correlation displayed in Table 1 show that work contact is associated with neither positive affects nor positive

work reflection and the growth mindset is not associated with positive affects, which is the dependent variable of this study. Further, these variables are included in regression analysis as moderators.

The results of the hypothesized moderated moderation are displayed in Table 3. In Table 3 Model 1, the coefficient shows the positive work reflection is positively related to positive affects ($\beta = 0.289, \rho < 0.001$), and the independent variable(IV) positive work reflection explains 7.5% of variance in the dependent variable (DV) positive affects.

Model 2 shows the moderating effect of work contact between the IV and positive affects (DV). The results of Model 2 in Table 3, indicate that moderators significantly and positively moderates between IV and DV ($\beta = 0.186, \rho < 0.01$). Besides, the inclusion of work contact in Model 2 significantly explains 10.78% of the variance in the DV. The Conditional effects of work contact on the relation between positive work reflection and positive affects are shown in Table 4. The moderation is seen to be strong when the work contact is high. Though the low work contact is not-moderate, the medium and high work contact significantly moderate the relation between positive work reflection and positive affects. Hence, the study reveals support for H1, which states the moderating effect of work contact. The hypothesis 2 proposed that the growth mindset strengthens the moderation of work contact on the link between positive work reflection and positive affect. The results of the three-way interaction between the variables are shown in Model 3 of Table 3 ($\beta = 0.385, \rho < 0.01$), which is significant. The inclusion of a growth mindset further explains 14.96% of the variance in the positive affects. Hence, there is a significant increase in the value of R^2 .

Three-way interaction. The results of the Conditional positive work reflection * work contact interaction at the value of fixed mindset and growth mindset are shown in Table 5. It explains that the growth mindset moderates the moderation of work contact on the link between positive work reflection and positive affects. Table 5 shows the conditional effects in three levels of work contact (low, medium, and high) and both fixed mindset

Table 3 Results of regression analysis on positive affects.

Independent variables	Model 1		Model 2 Moderator: WC		Model 3 Full model	
	B	SE	B	SE	B	SE
PWR	0.289***	0.058	0.257***	0.058	0.233***	0.059
WC			-0.099(ns)	0.057	-0.145 ⁺	0.0039(ns)
GM						0.10
<i>Interactions</i>						
PWR*WC			0.186**	0.061	0.235***	0.064
PWR*GM					0.1023(ns)	0.118
WC*GM					-0.223(ns)	0.118
PWR*WC*GM					0.386**	0.125
R ²	0.075***		0.1078***		0.1496***	
R ² change			0.0269**		0.0267**	

Note: ****p* < 0.001; ***p* < 0.01; **p* < 0.05; ns not significant, SE standard error, PWR positive work reflection, WC work contact, GM growth mindset.

Table 4 Conditional effects of the focal predictor at values of the moderator (WC).

WC	B	SE	p-value	LL 95% CI	UL 95% CI
Low	0.0994	0.0846	0.2412	-0.0672	0.2660
Medium	0.2567	0.0580	0.0000	0.1425	0.3709
High	0.4140	0.0704	0.0000	0.2754	0.5526

LL lower limit, CI confidence interval, UL upper limit, SD standard deviation, SE standard error, WC work contact.

Table 5 Test of conditional PWR*WC interaction at the value of mindset of intelligence.

Mindset	B	F	p-value
FM	0.0074	0.0075	0.9311
GM	0.3930	18.3137	0.0000

PWR positive work reflection, WC work contact, GM growth mindset, FM fixed mindset.

and growth mindset. The values of the six combinations showed that a growth mindset significantly moderates the moderation of both high and medium work contact in the IV-DV relationship, whereas, a fixed mindset moderates the moderation of medium work contact alone. Thus, the study found support for H2, which states that there is a three-way interaction between positive work reflection and positive affects. The moderated moderating effects between IV and DV are displayed in the plot in Fig. 2. Comprehensively, consistent with the hypothesis of the present study, the relation between positive work reflection and positive affect is moderated by work contact. Interestingly, only by high and medium work contact because the moderation by low work contact is insignificant (Table 3). One possible explanation for this is low work contact is not possible for most of the employees. This moderation effect is further moderated by a growth mindset (Tables 3 and 5). Thus, the results support the proposed moderated moderation model.

Discussion

In this research, the role of positive work reflection, work contact, and mindset of intelligence of employees is analyzed for their relationship to positive affects. It is found to have a significant relationship between positive work reflection and positive affects,

which is in line with the previous findings (Meier et al., 2016; Sonnentag and Fritz, 2015). So, when the working environment for employees is positive enough to generate positive work reflection, it contributes to their better affective well-being. The optimal methods for enhancing the connection between these variables in modern working conditions are limited so far. Therefore, this study examined the role of work contact, a work-related construct, between the above-mentioned variables. Work contact is a part of daily life for most employees, which in turn plays a positive role in positive circumstances (Glavin and Schieman, 2010). Building on the concepts proposed by Ten Brummelhuis and Bakker (2012), Glavin and Schieman (2010), and border theory, this study revealed evidence supporting the moderating role of work contact in the relationship between positive work reflection and positive affects. Specifically, it revealed that medium and high work contact strengthens the positive relation between positive work reflection and positive affect.

The present results indicate that low work contact does not significantly moderate the above relationship, which may be because low work contact is not practically possible for most of the employees in the present day. This is due to the fact that the digital era increases the flexibility of employees along with an expectation to remain connected at all times (Ninaus et al., 2021). There has been a noticeable increase in work-related communication during employees' leisure time, largely due to the widespread use of digital communication tools and remote work practices. The shift towards remote and flexible work arrangements, accelerated by the pandemic, has blurred the boundaries between work and personal life for many individuals in the contemporary world. This is also confirmed by the recent work (Siegl, 2023). In addition, these flexible work arrangement is linked with better affective well-being (Karpagavalli and Suganthi, 2024)

Further, the growth mindset strengthens the moderating effect of work contact (see Table 5). This three-way interaction strengthens the main relationship. In conditions of high work contact, positive work reflection is positively related to positive affect for employees with a growth mindset (but not with a fixed mindset). In conditions of Medium work contact, the relation between positive work reflection and positive affects is strengthened for employees with both fixed mindset and growth mindset (Table 6). The data of the present study indicated two groups of work contact (medium and high but not low) and two groups of Mindset (fixed mindset and growth mindset) that have moderated moderation effects on the positive work reflection—positive affect relationship (Table 7). The results in this table show specifically the groups in which the employees believe about their

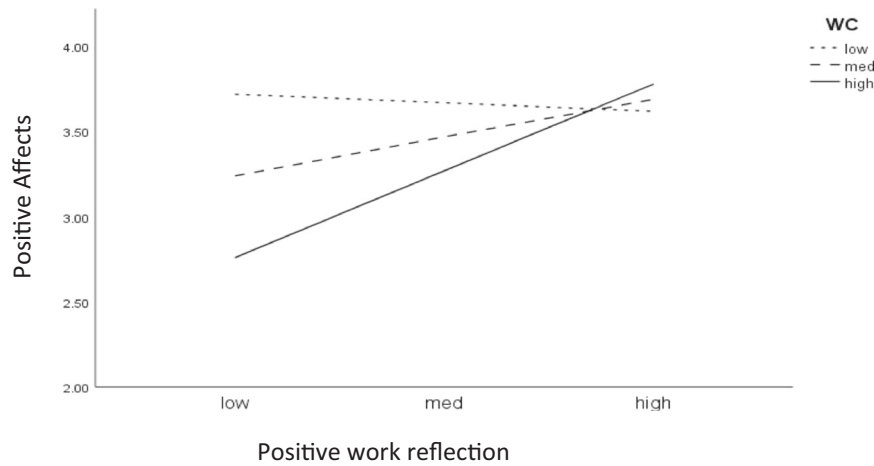


Fig. 2 The moderating effects of work contact (WC) at different levels (low, med (medium), high) and growth mindset between IV and DV.

Table 6 Conditional effects of the focal predictor at values of the moderators.

WC	Mindset	B	SE
Low	FM	0.1664(ns)	0.1080
Low	GM	-0.0578(ns)	0.1317
Med	FM	0.1726*	0.0858
Med	GM	0.2749***	0.0820
High	FM	0.1789(ns)	0.1163
High	GM	0.6077***	0.0904

****p* < 0.001; **p* < 0.05; ns not significant, SE standard error, WC work contact, GM growth mindset, FM fixed mindset.

mindset of intelligence along with the amount of work contact they have. So, the highly preferred arrangement for a growth mindset people is to have a higher level of work contact with higher positive work reflection, for the experience of very high positive affect. In contrast, with respect to positive affect, the arrangement of high work contact with low positive work reflection is the least preferred combination.

In summary, individuals with a growth mindset exhibit two combinations that correlate with relatively better mental health outcomes. The first involves high work contact coupled with high positive work reflection, while the second entails medium work contact paired with high positive work reflection. Individuals in these two scenarios tend to experience higher positive affect compared to those in other combinations. Additionally, individuals with medium work contact and low positive work reflection tend to have relatively better affective states than those with low positive work reflection and high work contact (refer to Fig. 2).

This indicates that the balance between these variables is crucial for the benefit of employees and organizations. Employees with fixed mindsets who believe they are unable to develop their intelligence through learning or effort may feel better when their work contact is medium and not high (i.e., strengthens the positive work reflection—positive affect relationship). On the other hand, employees with a growth mindset, who believe they can always develop their intelligence through their effort feel best at both the levels of work contact (medium and high), i.e., significantly strengthen the positive work reflection—positive affect relationship. These findings are in line with the implicit theories of Dweck, (2012).

Based on the results of this study, it is found that a higher level of work-related communication in leisure time is inappropriate for employees with fixed mindsets. However, the positive work

reflection—positive affect relationship is strengthened for employees with fixed mindsets when they have a medium amount of work contact. In contrast, for employees with a growth mindset, the positive work reflection—positive affect relationship is strengthened at both medium and high work contact (Tables 6 and 7). These results indicate that the mindset of intelligence of the employees needs to match the amount of their work contact for their affective well-being. Hence, different levels of work contact are suitable for employees with different mindsets of intelligence. Therefore, individuals with a growth mindset tend to favor a higher level of work-related communication, especially in a work environment positive enough to elicit elevated levels of positive work reflections. These findings align with the conclusions drawn by Glavin and Schieman (2010) and are consistent with implicit theories.

The findings of this study have some notable theoretical contributions, which are as follows. It confirms the positive relationship between positive work reflection and positive affects. The result of this study reinforces and builds upon the findings of Meier et al. (2016), which is highly essential. This is because affective well-being has numerous beneficial effects, such as influencing health, overall well-being, quality of life, and boosting productivity. Further, it provides a new understanding of the role of the mindset of intelligence of employees. It also explains the moderation between work-related variables (work contact) and personal characteristics of employees (positive work reflection and mindset of intelligence).

Precisely, it extends the existing literature on affective well-being by providing a new insight into the interplay between the above-mentioned variables by developing a moderated moderation model. By combining implicit theories and findings of Glavin and Schieman (2010), it is proposed and found the support to the moderated moderation of mindset with work contact on positive work reflection—positive affects relationship. Specifically, It is found that employees with a growth mindset can handle medium and high levels of work-related communications in leisure time in a more effective way by reinforcing affective well-being, whereas fixed mindset employees can experience the same amount of affective well-being only at the medium level of similar communication. Thus, the present study also contributes to the existing body of literature on W-F multitasking.

Conclusions and practical contribution

This study examines the unexplored and crucial interaction among positive work reflection, work contact, and growth

Table 7 Spots of the role of FM and GM at different levels of WC.

	Medium WC	High WC
FM	PWR—positive affect relationship is significantly strengthened	No significant effect on the PWR—positive affect relationship
GM	PWR—positive affect relationship is significantly strengthened	PWR—positive affect relationship is significantly strengthened

WC work contact, GM growth mindset, FM fixed mindset, PWR positive work reflection.

mindset in the context of contemporary working conditions. Results of this study have clearly shown that the same level of work-related communication in non-working time is not suitable for all employees. Additionally, it provided a focus on a growth mindset to manage the different levels of work-related communications and to enhance affective well-being. This is important because affective well-being is a significant part of the overall well-being of the employees. This study revealed that employees with a growth mindset perceive an increased level of work-related communication as a positive aspect of their work. This perception may contribute to a sense of fulfillment, engagement, and continuous learning. The opportunity to connect with others, share ideas, and collaborate aligns with the philosophy of a growth mindset, fostering a positive work environment. Furthermore, the belief in one's capacity for growth may help mitigate stress and anxiety associated with challenges, positively impacting overall well-being. This, in turn, is very much related to productivity (Sears et al., 2013; Gratton, 2021) and contributes even to career development (Strauser et al., 2008).

The outcomes of this study offer advantages for both individuals in the workforce and organizations, as enhancing positive affect can result in various positive outcomes, including improved efficiency and effectiveness at work. Moreover, the study suggests that, before determining the level of work-related communication during non-work hours, it is advisable to consider employees' mindset (whether it is growth or fixed) as it can significantly contribute to the enhancement of their well-being. Considering these aspects, the study recommends that both employees and organizations strive to achieve a balance between employees' mindset and their work-related communications during non-working hours.

Additionally, It is recommended that when organizations or managers aim to acknowledge and appreciate employees without unintentionally reinforcing a belief that skills are fixed, they may choose to emphasize the specific steps and efforts undertaken by employees that contributed to their success such as the successful accomplishment of a project. This approach avoids suggesting that inherent talents alone were responsible for the accomplishments and reinforces the value of effort and continuous improvement. Also, organizations can plan and offer interventions to develop the mindset of employees in the direction of growth mindset as suggested by Keating and Heslin (2015), because interventions can benefit the mental health of employees (Uglanova and Dettmers, 2023). Further, including practices like helping employees to learn new skills, providing leave for their study, motivating them to learn from their failures, job rotation, education programs, motivating participation, and encouraging creativity may help in developing a growth mindset among the employees.

Limitations

This study has certain limitations. The results and discussion mentioned above are based on cross-sectional data. In the future, the same relationship can be analyzed in a longitudinal study. This may provide a better understanding of the role of moderating variables in the relationship between positive work reflection and affective well-being. Some other factors (e.g., motivation) may have a role in the above-mentioned relationships, which can be considered in future

research. Additionally, in the present study, employees from IT firms alone are considered as a sample, so to get generalized results, future analysis can include a sample of individuals from various sectors. Despite these limitations, the results of this study showed a notable contribution to the literature on W-F multitasking. Also, it revealed the significance of the mindset of intelligence of employees in the background of the digital era. Additionally, it explained the benefit of work contact and the growth mindset of employees together. Most importantly this study highlighted the contribution of positive work reflection, work contact, and growth mindset and the interplay between them towards the affective well-being of employees in the post-pandemic era.

Data availability

Data used in this study is part of the first author's thesis work. It can be made available by the authors upon reasonable request.

Received: 14 September 2023; Accepted: 25 January 2024;

Published online: 08 February 2024

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Acknowledgements

The first author would like to acknowledge and thank the Center for Research, Anna University, for granting the ACRF fellowship.

Author contributions

R Karpagavalli—conceptualization, data collection, formal analysis, investigation, methodology development, validation, visualization, writing the original draft, review, and editing; L Suganthi—conceptualization, data collection, funding acquisition, supervision, validation, visualization, review & editing.

Competing interests

The authors declare no competing interests.

Ethical approval

Ethical approval was granted for this study by the Doctoral Committee, formed by the Center of Research, Anna University, Chennai.

Informed consent

The survey questionnaire specified the purpose of the study and it also assured anonymity. Respondents were also informed that the data collected would be used for research purposes only. Responses were collected based on the interest of the respondents and oral informed consent was obtained from them.

Additional information

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