



# Contextual resource or demand? The effects of organizational engagement climate on employees' work-to-family conflict

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## Abstract

Drawing from the work-home resources model and the social support literature, the present study investigated how organizational engagement climate influences employees' work-to-family conflict by examining resource generation and resource depletion mechanisms. Using a sample comprised of 2415 employees from 280 Chinese organizations, we found that organizational engagement climate was negatively related to employees' work-to-family conflict via work engagement, and simultaneously, positively related to employees' work-to-family conflict via work time. Additionally, our findings suggested that high level of supervisory support strengthened the organizational engagement climate-work engagement relationship. We discussed the theoretical and practical implications, as well as the limitations and suggestions for future research.

**Keywords** Organizational Engagement Climate · Work-to-Family Conflict · Work Engagement · Supervisory Support · the Work-Home Resources Model

## Introduction

In today's increasingly turbulent and competitive environment, employees' engagement management in contemporary organizations has attracted additional attention. Prior literature has shown that more highly engaged organizations are more effective and have better competitive advantages (Albrecht and Su 2012). For instance, Barrick et al. (2015) recognized that collective organizational engagement may serve as an important contextual resource to improve firm performance. Therefore, research on organizational factors recently strengthened the importance of creating an organizational climate that cultivates engagement among employees and has defined organizational engagement climate as “employees'

shared perceptions about the energy and involvement willingly focused by employees toward the achievement of organizational goals” (Albrecht 2014).

In accordance with this trend, research on organizational engagement climate has demonstrated its influence on many aspects of organizational life, including but not limited to, individual skill development (Albrecht 2014), individual in-role performance (Alfes et al. 2013), organizational adaptability (Harter et al. 2002), and organizational autonomy (Albrecht et al. 2018). Despite prevailing beliefs that organizational engagement climate enhances both individual and organizational outcomes (Rich et al. 2010), recent studies also pointed out its potentially negative consequences, such as higher workload and lower work progress (Crawford et al. 2010).

However, research on the consequences of organizational engagement climate has largely focused on work-related outcomes. The influence of organizational engagement climate on employees' family lives is still unclear. It is surprising because, for most adults, organizational life and family life are inextricably linked (Kossek and Lautsch 2012), and employees' work experience in organizations may influence their quality of home life (Greenhaus and Powell 2006). Given that work takes up increasingly more time in people's daily life, those specializing in work-family research have realized that organizational characteristics and activities may be major factors that are also relevant to employees' work-to-family-

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conflict (Zhang et al. 2012), and recently called for more empirical explanations of individuals' family lives through the lens of organization-level variables (Jiang and Shen 2018). In response, our first aim is to investigate the relationship between organizational engagement climate and employees' work-to-family conflict (WFC) using work-home resources (W-HR) model (Ten Brummelhuis and Bakker 2012). Specifically, this model offers a balanced framework to examine both positive and negative impacts of organizational engagement climate on employees' family lives. According to this model (Ten Brummelhuis and Bakker 2012), contextual demands in the workplace deplete personal resources (e.g., time, energy, and mood), leaving insufficient personal resources to function optimally in the home domain. In contrast, contextual resources in the workplace increase personal resources, which in turn, can be used to improve home outcomes. In relation to this argument and the inconsistencies about organizational engagement climate mentioned above, we argue that organizational engagement climate has both negative and positive impacts on employees' WFC. In doing so, this study goes beyond the previous focus on work-related outcomes of organizational engagement climate and responds to recent calls for more knowledge on how organizational characteristics influence employees' work-family balance (Michel et al. 2011).

Second, as highlighted in the W-HR model, personal resources play important roles in linking work-family interfaces. Prior literature suggested that time-based and strain-based are the two most prevalent bases of WFC (Rotondo et al. 2003). Judge and Colquitt (2004) further emphasized that time and psychological resources are primary personal resources that influence the quality of family domains when associated with contextual demands and resources. However, as general literature has examined the mediating effect of single personal resource (e.g., Karatepe and Karadas 2014), limited research has provided a systematic view of how different types of personal resources contribute to work-family interference (see Lin et al. 2017, for an exception). Therefore, we finally incorporate work time and work engagement as two mediation mechanisms that link organizational engagement climate to WFC. Specifically, we believe that during the resource generation process, work engagement mediates the negative relationship between organizational engagement climate and employees' WFC. This is because work engagement represents an affective-motivational state referred to as psychological personal resources (i.e. positive mood, high level of energy, and enthusiasm) that can directly transfer to the home domain and enhance the quality of employees' family lives (Ilies et al. 2017). In contrast, time as a finite personal resource can be an objective indicator in revealing the potential loss of personal resources during the resource depletion process. In other words, fulfilling the contextual demands of the organizational engagement climate may extend employees' working hours

and leave less time for them to spend at home (Adkins and Premeaux 2012). Research in this regard provides a more balanced and comprehensive explanation for how organizational engagement climate influences employees' family lives.

In addition, recognizing that organizational engagement climate may serve as both contextual resources and contextual demands leads to a more practical question of when organizational engagement climate has more resources for employees. According to the W-HR model (Ten Brummelhuis and Bakker 2012), besides organizational contextual resources, employees expand their resources from other external circumstances on which they are relying (e.g., social support). Individuals with additional resources tend to be more effective in utilizing contextual resources and coping with contextual demands (Li et al. 2018). Since supervisors capture key information about daily work and are closest to employees in workplaces (e.g., Edmondson and Boyer 2013; Kim et al. 2015), supervisory support should be the most useful and direct resource for employees to obtain. Prior literature also identified that support from supervisors reinforced employees' personal resources to regulate their emotions and deal with stress (Tsai and Chen 2017) and increase positive attitudes and behaviors (Van Daalen et al. 2006). Combined with the latest calls for advancing our understanding of mechanisms through which supervisory support can reduce WFC beyond the simple main-effect model (Pluut et al. 2018), the present study focuses on supervisory support and investigates its moderating effect during the processes of resource generation and resource depletion, respectively. In doing so, we contributed to prior literature by identifying the boundary conditions under which organizational engagement climate leads to positive outcomes (Albrecht et al. 2015).

Lastly, China's intense global competition and rapid economic growth have resulted in long working hours and work-family interference for many employees (Wang et al. 2012), thus how to effectively manage Chinese employees and balance their work-family lives have attracted extensive attention in academic studies (e.g., Zhang et al. 2013). In this regard, we addressed our research questions by collecting data from Chinese employees, so that we not only tested the power of organizational engagement climate in the Chinese context but also provided potential implications for Chinese employers and managers.

## Theoretical Background and Hypothesis Development

Scholars have theorized that work and family are two important related life roles, and inter-role conflicts occur when work and family role demands are mutually incompatible so that meeting demands in one domain makes it difficult to fulfill demands in the other (Edwards and Rothbard 2000). In this

regard, work-to-family conflict (WFC) is defined as “a form of inter-role conflict in which the general demand of, time devoted to, and strain created by work responsibilities interferes with participating in family-related activities” (Netemeyer et al. 1996). Inherent in this perspective is the idea that successful functioning in both work and family roles depends on resource availability (Judge and Colquitt 2004). Building on this notion, we utilized the W-HR model (Ten Brummelhuis and Bakker 2012) as a theoretical framework to explore the effects of organizational engagement climate on WFC.

According to the W-HR model (Ten Brummelhuis and Bakker 2012), resources can be categorized into two types based on their origins: personal resources are proximate to the self, including personality traits and energy, whereas contextual resources are located outside the self and can be found in social contexts around individuals. Building upon this resource typology, the W-HR model (Ten Brummelhuis and Bakker 2012) expands general resource expansion and depletion processes to the work-family domain to understand the underlying mechanisms of work-family intersection. Specifically, during the resource expansion process, employees with more contextual resources are capable of conserving and developing more personal resources in the workplace, and these personal resources, in turn, facilitate employees' performance in the family domain and consequently diminish WFC. In contrast, the resource depletion process proposes that contextual demands in organizational settings impact individuals' role expectations and are perceived as resource losses. Consequently, employees tend to invest more personal resources to fulfill contextual demands. This investment, in turn, may negatively impact the non-work domain, as individuals have insufficient resources to engage in family domains.

As alluded earlier, previous studies have not concluded whether organizational engagement climate is a contextual demand or resource (Albrecht 2014). Through the W-HR model (Ten Brummelhuis and Bakker 2012), we examine both the demand and resource features of organizational engagement climate and provide the underlying mechanisms of these two processes.

### **Organizational engagement climate is a contextual work resource**

Organizational engagement climate has been described as the shared perceptions of the energy and involvement that employees willingly focus towards achieving organizational goals (Albrecht 2014). Previous literature showed that organizational engagement climate is an important contextual work resource that provides employees with a supportive work environment and inspired them to put forth their best performance (Barrick et al. 2015). Research also indicated that

organizational engagement climate can be considered as a unique organizational capability that is related to several organizational resources, including job autonomy (Alfes et al. 2013) and development opportunities (Bakker et al. 2011), which lead to personal resources accumulation in the workplace.

Work engagement refers to a positive, fulfilling, work-related state of well-being at work (Schaufeli et al. 2011). Empirical studies consistently suggested that contextual work resources are positively related to work engagement by affecting employees' energy, positive emotions, and enthusiasm at work (e.g., Bakker et al. 2007). Moreover, prior literature has identified a positive relationship between organizational engagement climate and employee engagement in Western countries (e.g., Albrecht 2014; Albrecht et al. 2018). Based on the evidence above, we expect that organizational engagement climate also stimulates work engagement in the Chinese context, and postulated that:

Hypothesis 1: Organizational engagement climate is positively related to work engagement.

As mentioned previously, work engagement is a positive affective state that captures vigor, dedication, and absorption (Schaufeli et al. 2002). Vigor refers to high levels of energy and mental resilience at work. Dedication indicates meaningful experiences with significance, enthusiasm and positive mood. Absorption is described as being fully concentrated on one's work (Schaufeli et al. 2011). Scholars suggested that resilience, enthusiasm, and positive mood associated with work engagement are all personal resources that can be developed in a state of high engagement (Demerouti et al. 2010). Moreover, according to Greenhaus and Powell (2006), employees' personal resources accumulated through work engagement may reduce WFC via two paths: instrumental path and affective path. Instrumental path suggested that skills, knowledge, and energy developed through work engagement can be directly used in the home domain to improve home outcomes (Siu et al. 2010). Similarly, affective path indicates that highly engaged employees are more likely to experience positive affect at work. This positive mood may spill over into the family domain and facilitates employees' family domain performance (Carvalho and Chambel 2014). This enrichment process is consistent with the W-HR model and supported by previous research through concluding that high work engagement improves employees' quality of family life (Ilies et al. 2017). Similarly, Siu et al. (2010) argued that when high work engagement transferred into family engagement, employees were highly engaged both at work and home. Therefore, we predict that personal resources accumulated in a state of high work engagement will transfer to employees' family domain and diminish their WFC.

Hypothesis 2: Work engagement is negatively related to WFC.

Integrating the arguments above, we delineate resource generation path from organizational engagement climate to diminish employees' WFC through work engagement. As discussed earlier, organizational engagement climate entails contextual resources through providing employees a supportive organizational environment (Barrick et al. 2015). Thus, these contextual resources may lead employees to experience a high level of work engagement and develop more personal resources, including energy, positive affect, and feelings of accomplishment (Albrecht et al. 2018). These personal resources, although generated and partially used in the work domain, can be transferred into the home domain for improving employees' home outcomes (Greenhaus and Powell 2006). Accordingly, we expect that there is a negative indirect effect from organizational engagement climate to WFC through work engagement.

Hypothesis 3: There is a negative indirect effect from organizational engagement climate to WFC through work engagement.

### Organizational engagement climate is a contextual work demand

According to the W-HR model (Ten Brummelhuis and Bakker 2012), contextual work demands are various physical, psychological, social, or organizational aspects of work environments that require employees to expend (physical or mental) effort and can lead to strain (Strauser et al. 2010). Kuenzi and Schminke (2009) posited that organizational climate captures most contextual work demand at the organizational level by shaping organizational members' collective evaluations of organizational context, responses to work environments, and workplace behaviors (e.g., Schneider et al. 2013; Xue et al. 2011; Peterson 2002). Following this proposition, organizational engagement climate reflects contextual work demands that require employees' efforts in achieving organizational goals, enhancing job performance, and improving working abilities (Sonnentag et al. 2008). In order to fulfill higher contextual work demands, employees have to spend more time on work-related activities. Moreover, organizational engagement climate denotes the norms and policies that the organization supports and rewards, which values the extra effort spent on the job (Albrecht 2014). Therefore, we argue that organizational engagement climate would exert a cross-level effect on employees' work time.

Hypothesis 4: Organizational engagement climate is positively related to work time.

In line with the W-HR model (Ten Brummelhuis and Bakker 2012), individuals may experience stress when perceiving that resources are threatened or lost. As time is limited, when employees spend more time at work, they have less time that can be used in the family domain. Time-based WFC occurs when employees have insufficient time to comply with expectations of the family domain (Major et al. 2002). Empirical studies also demonstrated the direct relationship between work time and WFC. For example, using a sample of full-time employees from the southern United States, Adkins and Premeaux (2012) suggested that employees' work hours are positively associated with WFC. Therefore, we expect that employees' work time also relates positively to WFC in the Chinese context.

Hypothesis 5: Work time is positively related to WFC.

Based on the W-HR model (Ten Brummelhuis and Bakker 2012), we expect that organizational engagement climate tends to result in WFC through cultivating a shared understanding of work demands that influence employees' spending time in the workplace. Consequently, work time increased through organizational engagement climate leaves less available time for employees to fulfill their family responsibilities. As noted previously, this resource loss in the family domain leads to WFC. In conclusion, when organizational engagement climate is high, employees are motivated to spend more time at work to fulfill work demands of organizational engagement climate. This time resource depletion triggers conflicts between work and family.

Hypothesis 6: There is a positive indirect effect from organizational engagement climate to WFC through work time.

### The moderating role of supervisory support

Supervisory support is an important type of social support and refers to employees' beliefs about the extent to which supervisors provide them with desirable resources as emotional support (e.g., showing concern) and instrumental assistance (e.g., helping with work tasks; Pluut et al. 2018). It is generally accepted that supervisory support is functional for employees in achieving work goals, fostering personal resource development, as well as reducing demands and associated costs (Bagger and Li 2014). In work engagement literature, various models of work engagement acknowledged that supervisory support could activate a motivational process that leads to work engagement (Vera et al. 2016). For instance, Vera et al. (2016) found that supervisory support strengthened the positive relationship between job autonomy and work engagement. Moreover, Watson (2000) found that

the interaction of supervisory support and contextual resources increased employees' positive affect at work. In accordance with these empirical findings and the assumption of the W-HR model that employees with more supervisory support are more likely to optimally utilize their contextual resources and benefit more from organizational engagement climate (Ten Brummelhuis and Bakker 2012), we propose that supervisory support strengthens the positive relationship between organizational engagement climate and work engagement.

In addition to the amplifying effect of supervisory support during the resource generation process, the W-HR model also proposed the potential buffering effects of supervisory support during the resource depletion process. According to the buffering process, supervisory support protects employees from harmful influences of work stressors and contextual demands by mitigating threatening experiences or providing valuable resources for coping with requirements elicited by these stressors and demands (Lapierre and McMullan 2016). For example, supervisory support undermines the negative effect of organizational workload demands on employees' emotional exhaustion (Goh et al. 2015). Similarly, Day et al. (2017) found that a high level of supervisory support weakened the relationship between organizational change and employee burnout. In the present study, we believe employees with more supervisory support, especially help with work tasks, could use less time to fulfill work demands of organizational engagement climate. Thus, the relationship between organizational engagement climate and work time is weakened by high supervisory support.

Hypothesis 7(a): Supervisory support enhances the positive relationship between organizational engagement climate and work engagement: so that the relationship is stronger for employees with higher supervisory support. Hypothesis 7(b): Supervisory support weakens the positive relationship between organizational engagement climate and work time: so that the relationship is weaker for employees with higher supervisory support.

Finally, there is still an important question of whether supervisory support operates as a boundary condition that influences the indirect relationship between organizational engagement climate and WFC through two paths. According to the W-HR model (Ten Brummelhuis and Bakker 2012), WFC is less likely among those with more supervisory support because they are better at coping with contextual demands and utilizing contextual resources to conserve personal resources, which in turn can be used in the family domain. For instance, Goh et al. (2015) suggested that supervisory support provided employees with additional resources to deal with high workload demand, which led them to conserve psychological resources and subsequently reduce WFC.

Referring to earlier arguments (H2 and H5) that engagement and time represent important resources to reduce WFC, and the moderating effect of supervisory support in the relationship between organizational engagement climate and work engagement (H7.a) and that between organizational engagement climate and work time (H7.b), we propose that supervisory support is a conditional factor that strengthens the negative indirect effect from organizational engagement climate to WFC through work engagement while simultaneously attenuating the positive indirect effect from organizational engagement climate to WFC through work time.

Hypothesis 8(a): Supervisory support enhances the negative indirect effect from organizational engagement climate to WFC through work engagement so that the effect is stronger for employees with higher supervisory support.

Hypothesis 8(b): Supervisory support weakens the positive indirect effect from organizational engagement climate to WFC through work time so that the effect is weaker for employees with higher supervisory support.

## Method

### Samples and Procedure

The data used in this study was part of a wider survey on the status of the current flow of scientific and technological personnel of China under the support of the China Association of Science and Technology (CAST). Participants from 280 institutions located in different cities, were invited to finish an online survey. Of these 280 organizations, 29.6% are state-owned enterprises, 26.4% are universities, 19.3% are research institutes, 14.1% are hospitals, and 10.1% are private enterprises. Concerning the location of these organizations, 46.1% are located in Eastern China, 27.5% are located in Central China, 26.4% are located in Western China.

Before conducting the survey, with the assistance of CAST our research team got contacts with the human resource manager of each institution. With the help of these HR managers, we at first recruit voluntary applicants who meet the two criteria below: First, because we focused on employee's work behavior in organizations, respondents must be full-time employed in their primary job. Second, in order to get reliable data of the home domain variables, respondents should at least live with one family member. Then, using the random sampling method, we selected the final required qualified voluntary applicants (ranges from 5–20 across each institution). The amount of the participants of each organization should be in

accordance with the total amount of voluntary applicants of that organization. HR managers assist us to send the invitation letters enclosed with the introduction of the research, assurance of confidentiality, and a link of the online questionnaire to those participants. All the participants were assured of the anonymity of their responses and received 20 RMB as a reward after completing our survey. Of 3,000 distributed questionnaires, 2,653 were returned, with a response rate of 88.4%. After list-wise deletion because of a substantial amount of missing data, 2,415 valid questionnaires remained. We compared the participants and non-participants using t-tests for continuous variables and  $\chi^2$  tests for categorical variables. Results suggested that there were no significant differences for the characteristics of gender ( $\chi^2 = .30$ ,  $df=1$ ,  $p > .05$ ), educational level ( $\chi^2 = .08$ ,  $df=2$ ,  $p > .05$ ), age ( $\chi^2 = .19$ ,  $df=5$ ,  $p > .05$ ), position ( $\chi^2 = .55$ ,  $df=7$ ,  $p > .05$ ), or organizational tenure (mean difference = .03,  $t = .09$ ,  $p > .05$ ).

Of the final 2415 participants, 22.0% are 26 years old and below, 27.7% are 31–35 years old, 17.0% are 36–40 years old, 13.2% are 41–50 years old, 8.8% are 46–50 years old, and 11.3% are 50 years old and above. 57.1% of them were male. Regarding the educational background, 47.3% held an undergraduate university degree, 29.4% held a master's degree, and 23.3% held a doctor's degree. Regarding the position, 1.4% are frontline workers, 13.5% are junior technicians, 11.7% are junior managers, 31.5% are middle technicians, 9.5% are middle managers, 29.2% are senior technicians, 1.1% are senior managers, 2.0% are other staffs. Regarding the organizational tenure, the mean is 14.16, and the SD is 9.21.

## Measurement

The survey consisted of measures designed to capture the investigated variables in this research: organizational engagement climate, work engagement, work time, supervisory support, and WFC. In converting the measures of these variables into Chinese, we strictly followed the translation and back-translation methodology (Jones et al. 2001). 5-point Likert scales (1 = strongly disagree to 5 = strongly agree) are employed unless otherwise indicated.

**Organizational engagement climate** Organizational engagement climate was measured with a seven-item scale developed by Albrecht (2014), which described the level of the effort that employees are likely to put in achieving the organizational goals. Sample items were “people here always want to perform to the best of their ability” and “people here are willing to do their best to achieve the best outcomes for the organization”. These items were reliable to form a scale with an alpha coefficient of .82.

To obtain organizational engagement climate (organizational-level variable), we aggregated individuals' ratings on engagement climate to organizational level by

averaging their values for each organization. Within-group agreement ( $r_{wg}$ ; James et al. 1984), the intraclass correlations (ICC1), and the reliability of the means (ICC2; Bliese 2000) were calculated. The results showed that ICC1 and ICC2 were .28 and .67 respectively. The mean  $r_{wg}$  value was .89 (SD = .05) and the median value was .90. All these values provided empirical justification for the aggregation of engagement climate.

**Work-to-family conflict** Our measure of WFC was adapted from the scale developed by Netemeyer et al. (1996). The scale includes two subscales to measure bi-directional conflicts of work-family and family-work. We used the former 5-item subscale to measure WFC. Sample items include “the demands of my work interfere with my home and family life” and “the amount of time my job takes up makes it difficult to fulfill family responsibilities”. Internal consistency showed good reliability with an alpha coefficient of .93.

**Work time** Participants were asked to answer the following questions: “how many hours do you work on a workday”, “how many days do you work every week”, and “how many hours do you use to handle work-related matters on your days of rest”. An open-ended response was used for these items. We then calculated each participant's hours at work per day based on their answers.

**Work engagement** Participants' work engagement was measured by the Utrecht Work Engagement Scale (UWES) (Schaufeli et al. 2002). We adopted a Chinese version of the Utrecht Work Engagement Scale (Zhang and Gan, 2005). The scale comprises 17 items including “At my work, I feel that I am bursting with energy” and “I find the work that I do full of meaning and purpose”. Internal consistency reliability was .92.

**Supervisory support** A 4-item scale (Rhoades et al. 2001) was used to measure participants' perceptions of employees' perceptions of the support they can get from their supervisors. Example items include: “my supervisors are really good at understanding people's problems”. The alpha reliability is .93.

To obtain organizational-level supervisory support, we aggregated individuals' ratings on supervisory support to organizational level by averaging their values for each organization. Within-group agreement ( $r_{wg}$ ; James et al. 1984), the intraclass correlations (ICC1), and the reliability of the means (ICC2; Bliese 2000) were calculated. The results showed that ICC1 and ICC2 were .25 and .69 respectively. The mean  $r_{wg}$  value was .89 (SD = .07) and the median value was .91. All these values provided empirical justification for the aggregation of supervisory support.

**Control variables** Gender, age, educational level, position in organizations, and organizational tenure were treated as control variables based on the previous research. Gender and age are chosen because they were significantly related to WFC (Goh et al. 2015). We also controlled for employees' organizational tenure as it may influence employees' ability to obtain and use organizational resources such as organizational engagement climate (Karatepe 2009).

### Validity Issues

Before running the regression analysis, we used Harman's one-factor test to evaluate the extent to which common method variance is a problem (Schaller et al. 2015). An unrotated factor analysis of all the reflective constructs: organizational engagement climate, work engagement, supervisory support, and WFC, indicated the presence of four factors. Results showed that the first factor only accounted for 29.26% of the total explained variance, which suggests that common method bias did not influence our results. Moreover, tolerance and variance inflation factor (VIF) values were calculated for multicollinearity testing, the results of the diagnostics shown that multicollinearity was not an issue in either regression (tolerance: .568-.979; VIF: 1.021-1.762). lastly, we conducted confirmative factor analyses (CFA) to ensure the discriminate validity between organizational engagement climate and work engagement. Comparative fit index (CFI), Tucker-Lewis index (TLI), and root mean square error of approximation (RMSEA) were used to evaluate the model fit. The result showed that the two-factor model ( $\chi^2=2268.92$ ,  $df=197$ ,  $p < .01$ , CFI= .92, TLI= .90, RMESA= .07) fits the data better than the one-factor model ( $\chi^2=3740.89$ ,  $df=198$ ,  $p < .01$ , CFI= .86, TLI= .83, RMESA= .07), which supported that organizational engagement climate and work engagement as two distinct variables.

### Results

Means, standard deviations, and bivariate correlations among the variables are presented in Table 1, which provide a preliminary test for our hypotheses. Consistent with our hypotheses, engagement climate were positively correlated with work engagement ( $\gamma = .19$ ,  $p < .01$ ) and time at work ( $\gamma = .09$ ,  $p < .01$ ). the bivariate correlation between work engagement and WFC was negative ( $\gamma = -.06$ ,  $p < .01$ ), whereas the bivariate correlation between work time and WFC was positive ( $\gamma = .29$ ,  $p < .01$ ).

Following Wihler et al.'s (2017) approach, we used Mplus 7.0 to test the overall multilevel model while controlling for gender, age, educational level, position, and organizational tenure (Fig. 1). First, we estimated a cross-level model specifying the mediation paths from organizational engagement

climate to WFC via work engagement and work time. Using the model indirect command, the indirect effects were calculated (see in Table 3). Next, we created the cross-product term of organizational engagement climate  $\times$  supervisory support to test the moderation effects. Organizational engagement climate was group-mean centered, and supervisory support was grand-mean centered to create the interaction term. The results are shown in Table 2.

Results supported hypothesis 1 that posited a positive relationship between engagement climate and work engagement ( $\gamma = .33$ ,  $p < .01$ ). Hypothesis 2 proposed that employees with higher work engagement experience lower WFC, which was also supported ( $\gamma = -.18$ ,  $p < .01$ ). Additionally, to test the indirect effect of engagement climate on WFC via work engagement, we followed the distribution-by-product method to calculate the indirect effect and to generate the 95% confidence interval (CI) using Monte Carlo simulation (Selig and Preacher 2008). The results showed that the indirect effect was  $-.05$  with a 95% CI of  $[-.08, -.03]$ , which supported Hypothesis 3.

Hypotheses regarding the contextual demand feature of engagement climate were also supported. To be specific, engagement climate was positively related to time at work ( $\gamma = .64$ ,  $p < .01$ ), indicating that higher engagement climate leads employees to spend more time at work every day, supporting Hypothesis 4. In support of Hypothesis 5, employees' average work time every day was positively related to WFC ( $\gamma = .12$ ,  $p < .01$ ). Results indicated that the positive indirect effect of engagement climate on WFC via work time was  $.08$  with a 95% CI of  $[.01, .16]$ , supporting Hypothesis 6.

Hypothesis 7 predicted the moderating role of supervisory support at work on the relationships of engagement climate with work engagement and work time. With regard to work engagement, the interaction of engagement climate and supervisory support is positively significant ( $\gamma = .18$ ,  $p < .01$ ). We plotted the interaction in Fig. 2a. Results from simple slope analyses showed that engagement climate was more strongly related to work engagement when employees had higher level of supervisory support (one SD above the mean, simple slope=  $.38$ ,  $p < .01$ ), as opposed to lower level of supervisory support (one SD below the mean, simple slope=  $.27$ ,  $p < .01$ ). We further computed the difference between two coefficients of the slopes using Mplus. The results showed significant different scores (difference=  $.11$ ,  $SE = .05$ ,  $p < .01$ ). Thus, Hypothesis 7(a) was supported.

With regard to work time, results showed that the interaction of supervisory support and engagement climate is not significant ( $\gamma = -.35$ ,  $p > .01$ ). Thus, Hypothesis 7(b) was not supported.

To further investigate the moderated-moderation model stated by Hypothesis 8, we estimated indirect effects from organizational engagement climate to work-family conflict via work engagement and via time at work at high (one SD

**Table 1** Means, standard deviations, and correlations among variables

	Mean	SD	1	2	3	4	5	6	7	8	9
Level 1											
1. Gender	1.43	.50									
2. Age	2.91	1.62	-.12**								
3. Educational level	1.76	.81	-.03	-.02							
4. Position	4.78	1.97	-.10**	.58**	.24**						
5. organizational tenure	14.16	9.21	-.07**	.80**	-.22**	.45**					
6. Work engagement	3.78	.60	-.07**	.08**	.10**	.15**	.03				
7. Work Time	6.63	1.85	-.14**	-.05*	.27**	.10**	-.11**	.20**			
8. WFC	2.64	.83	-.11**	-.08**	.13**	.03	-.10**	-.06**	.29**		
Level 2											
9. Supervisory Support	3.51	.31	.06**	-.09**	-.03	-.04	-.04*	.16**	.04	-.03	
10. Organizational Engagement Climate	3.26	.32	.04	-.07**	.07**	.03	-.08**	.19**	.09**	-.01	.38**

Note:  $n = 2,415$  at the individual level,  $n = 280$  at the organizational level. For gender, 1 = male, 2 = female. For age, 1=26 years old and below, 2= 31-35 years old, 3=36-40 years old, 4= 41-50 years old, 5= 46-50 years old. For Position, 1= frontline workers, 2= junior technician, 3= junior manager, 4= middle technician, 5= middle manager, 6= senior technician, 7= senior manager. 8= other staffs. For Educational level, 1= bachelor’s and below, 2 = master’s, 3 = doctorate.

\*  $p < 0.05$ , \*\*  $p < 0.01$

above the mean) and low (one SD below the mean) levels of supervisory support at work respectively (see in Table 3). Regarding work engagement, the indirect effect is  $-.06$  with a 95% CI of  $[-.10, -.03]$  under high level of supervisory support at work versus an indirect effect of  $-.05$  with a 95% CI of  $[-.07, -.02]$  under low level of supervisory support at work. The difference between the two conditional effects was  $-.02$  with a 95% CI of  $[-.04, -.01]$ . Thus, Hypothesis 8(a) was supported. Regarding work time, as Hypothesis 7(b) was not supported, Hypothesis 8(b) was also not supported.

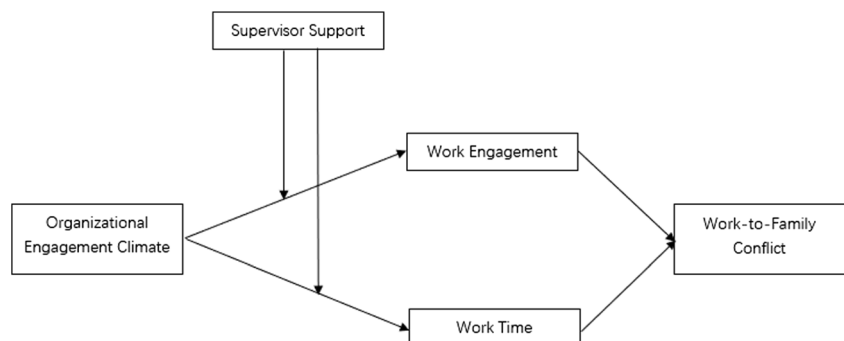
**Supplementary Analysis**

Although our study provides converging evidence regarding the resource generation and resource depletion paths from organizational engagement climate to WFC, there are potential alternative explanations for these effects. As shown in Table 1, work engagement is positively correlated with work time ( $\gamma = .20, p < .01$ ). To examine whether work engagement

may positively relate to WFC through work time, we conducted a supplementary analysis to provide further evidence for the validity of our findings following Rodríguez-Muñoz et al. (2014).

After adding the path from work engagement to work time in our overall model, there is a positive indirect effect from work engagement to WFC via work time ( $b = .06, p < .05$ ). However, we furtherly calculated the total effect of work engagement on WFC using the model constraint method via Mplus. The results showed that the total effect of work engagement on WFC (direct effect + indirect effect via work time) is still negative ( $b = -.10, p < .05$ ). Besides, the indirect effect from organizational engagement climate to WFC via work engagement is still negative ( $b = -.06, p < .05$ ), whereas the indirect effect from organizational engagement climate to WFC via work time is still positive ( $b = .08, p < .05$ ). That is, the work engagement-work time relationship didn’t influence the resource generation and resource depletion paths in our model.

**Fig. 1.** Model Design





**Table 2.** Unstandardized coefficients of the multilevel model testing mediation effects and moderation effects

Predictor	Work to family Conflict			Work engagement			Work time		
	Estimate	SE	t	Estimate	SE	t	Estimate	SE	t
Level 1									
Gender	-.14**	.04	-3.68						
Age	-.04*	.02	-2.36						
Educational level	.03	.03	1.03						
Position	.03**	.01	2.56						
Tenure	-.01	.01	-.70						
Work engagement	-.18**	.03	-4.94						
Work time	.12**	.03	4.45						
Level 2									
Organizational engagement climate	-.06	.07	-.83	.33**	.06	5.62	.64**	.30	2.18
Supervisory support at work				.10**	.07	1.57	-.21	.42	-.150
Supervisory support at workxOrganizational engagement climate				.18**	.08	2.22	-.35	.51	1.25

Note:  $n = 2,415$  at the individual level,  $n = 280$  at the organizational level.

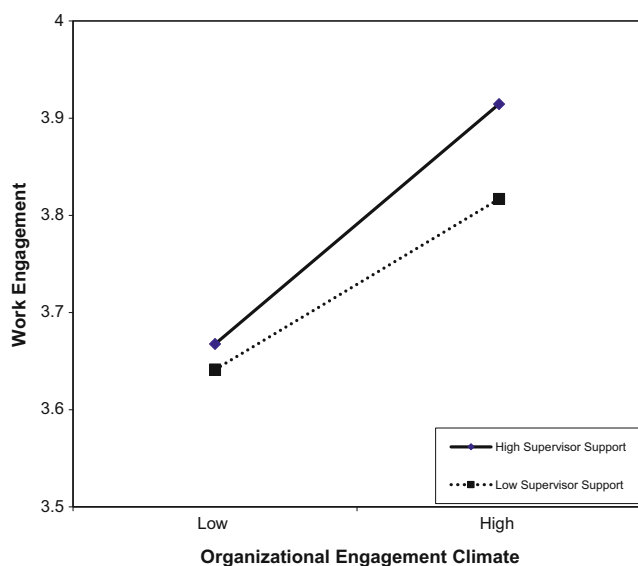
\* $p < 0.05$ , \*\* $p < 0.01$  (two-tailed).

## Discussion

There has been widespread interest among scholars and practitioners in understanding the newly emerged characteristic of organizational engagement climate (Albrecht 2014). While a line of research has identified organizational engagement climate as being associated with several work-related outcomes, the potential negative effects of engagement climate require further discussion (Albrecht et al. 2018). Driven by a resource-based perspective derived from the W-HR model, we examined both the demand and resource features of engagement climate by relating it to two personal resources,

namely work engagement and work time. Consistent with our predictions, we found that engagement climate is positively related to work engagement (resource expansion) and work time (resource depletion) at the same time. Furthermore, in line with the proposition of the W-HR model (Ten Brummelhuis and Bakker 2012), we tested the resource-expansion and resource-depletion mechanisms simultaneously to explain how organizational engagement climate influences employees' WFC. Results showed that organizational engagement climate is a double-edged sword. On one hand, a high level of organizational engagement climate is related to higher work engagement, which helps generate additional personal resources to be employed in the family domain. On the other hand, employees under high level of organizational engagement climate tend to spend more time at work, which left less time for them to perform in their family lives.

Finally, we empirically examined whether supervisory support is a conditional factor that helps prevent WFC. The results showed that while high level of supervisory support strengthened the resource expansion mechanism, it didn't attenuate the resource depletion mechanism. This may due to that organizational-level supervisory support is mainly general and aim to provide affective and psychological resources for employees. In this respect, such support may not be conducive for employees in fulfilling specific work demands and reducing work time. Thus, it failed to attenuate the relationship between organizational engagement climate and work time. Nevertheless, our findings suggested that employees with higher supervisory support are better shielded against resource depletion as they gain more resources from organizational engagement climate. In contrast, employees with



**Fig. 2.** The moderating effects of supervisory support

**Table 3.** Results of the moderated path analysis

	Simple Slope Test			Indirect Effect Test		
	First P <sub>MX</sub>	S.E.	t	Indirect P <sub>MX</sub> ×P <sub>YM</sub>	S.E.	t
For Work Engagement						
Mean				-.05**	.01	-4.03
Low Supervisor Support (-1 s.d.)	.27**	.06	4.79	-.05**	.01	-3.63
High Supervisor Support (+1 s.d.)	.38**	.07	5.50	-.06**	.02	-4.04
Difference	.11**	.05	2.22	-.02*	.01	-2.12
For Work Time						
Mean				-.08**	.03	-2.58

Notes: For work engagement, P<sub>MX</sub>: path from organizational engagement climate to work engagement; For work time, P<sub>MX</sub>: path from organizational engagement climate to work time.

For work engagement, P<sub>YM</sub>: path from work engagement to WFC; For work time, P<sub>YM</sub>: path from work time to WFC.

\*  $p < .05$ ; \*\*  $p < .01$  (two-tailed).

lower supervisory support are more likely to compromise in their family lives because resource depletion exceeds resource expansion.

### Theoretical contributions

We believe that this paper makes several contributions to organizational climate literature and work-family literature. First, with growing research interest in organizational engagement climate, prior literature mostly focused on how organizational engagement climate influences employees' work-related outcomes in Western samples (Albrecht 2014). By investigating the influence of organizational engagement climate on employees' WFC, the present study broadened literature on the consequences of organizational engagement climate. Specifically, this study extends existing knowledge on how organizational engagement climate influences family domains and also responds to the recent need to fully address roles of the organizational context played in work-family fields (Jiang and Shen 2018). Additionally, based on our best knowledge, this is the first study to investigate the relationship between organizational engagement climate and work engagement in the Chinese context. The positive findings here supported the generalizability of organizational engagement climate in non-Western countries to some extent.

Moreover, recent literature has seen an increasing volume of the renewed consideration that contextual work attributes may potentially generate resources (Li et al. 2018). For example, Bhave and Lefter (2018) found that occupational interactional requirements may serve as a contextual social resource and contribute to employees' work-family enrichment. Our study goes beyond this argument by simultaneously investigating the resource generation and resource depletion mechanisms. The results suggested that organizational engagement climate has both demand and resource features, which may

interfere with family life but can also enrich it. Therefore, this study advances work-family research by providing a more balanced view on how organizational engagement climate affects employees' family lives.

Third, by demonstrating the moderating effects of supervisory support, the findings synthesized and offered boundary conditions of when or for whom organizational engagement climate is more resourceful or demanding. In addition, the moderating effect of supervisory support on the relationship between organizational engagement climate and employees' WFC help understand the fluctuating effects of other organizational contextual characteristics on employees' family lives. For instance, when a supportive supervisor demonstrates understanding and empathy towards employees' family-related obligations, it boosts an employee's psychological resources to deal with related contextual demands, thus reducing WFC (Goh et al. 2015).

Lastly, the core tenets of the W-HR model contend that contextual work demands and resources are the causes of conflict and enrichment respectively (Ten Brummelhuis and Bakker 2012). By theorizing the double-edged effects of organizational engagement climate, and showing that it can simultaneously serve as contextual resources and contextual demands, our study added knowledge to the W-HR model.

### Practical implications

Responding to the increasing focus on the value of organizational engagement climate among modern organizations (Albrecht et al. 2015), the present study provides several practical implications for managers and practitioners. First, despite the well-acknowledged fact that organizational engagement climate facilitates organization performance (Albrecht and Su 2012), our study demonstrated its roles in boosting employees' work engagement and reducing their WFC in the

Chinese context. Considering the close linkage between work and family for each employee, our findings offer new insights for Chinese practitioners to manage employees through more comprehensive ways. Specifically, it is very important to devise ways (i.e. cultivating organizational engagement climate) that benefit employees at both their workplace and home.

Moreover, the findings suggested that organizational engagement climate may lead employees to experience higher WFC through prolonging work time. Therefore, while cultivating an engagement climate in organizations, employers and managers should acknowledge the resource-depleting effects of organizational engagement climate. This is especially important for employees with lower supervisory support, as their family lives seem negatively impacted by organizational engagement climate. In other words, the prerequisite of cultivating an organizational engagement climate is to provide sufficient resources for employees to shield against resource depletion.

In conclusion, our results indicated that organizational engagement climate can be a contextual work resource and a contextual work demand that both enriches and interferes with employees' family lives. As WFC is an important indicator of employees' subjective well-being that will be reflected in employees' subsequent organizational behavior (e.g., higher turnover intention, less organizational citizenship behavior; Anderson et al. 2002), organizations should design practices that enable employees to derive value from organizational engagement climate. One way that has been demonstrated in the present study is providing sufficient supervisory support. Our results suggested that employees with high supervisory support are better at coping with contextual demands and utilizing contextual resources. Therefore, organizations should incorporate supervisors' willingness to help and supportive behaviors into their diversity training programs in order to efficiently manage employees' WFC and engagement states. For instance, providing supervisors with training to more effectively identify the most desired resources (e.g. instrumental resource or affective resource) of employees and the appropriate time to provide assistance are especially important (McCarthy et al. 2013).

### Limitations and future directions

Despite the contributions of this study, some limitations need to be acknowledged. First and foremost, although our hypotheses strictly depend on theory, our data were collected through self-report and cross-sectional design, which may result in common method bias. However, since work engagement, supervisory support, and WFC encompass individual differences and psychological perceptions, they are more accurate when participants report these themselves. Moreover, we did emphasize that the survey is confidential and only available for academic research. We also conducted Harman's one-factor test to evaluate the extent of the common method

problem (Schaller et al. 2015). In addition, Schriesheim and DeNisi (1981) have suggested that the testing of moderators is, in itself, a partial control for this bias. Nevertheless, future studies may consider longitudinal data from different sources to strengthen cause-and-effect relationships and minimize common source bias in our model.

Additionally, to address the potential confounding effect that work time is positively related to work engagement, we added the path from work engagement to work time in our model. The results of the supplementary analysis showed that adding this path did not change the hypothesized relations in any substantial way, which to some extent alleviated the concern of alternative explanations. The findings here reinforced the conclusions of extant literature regarding work engagement as psychological resources that contributes to employees' work-family enrichment (e.g., Siu et al. 2010). However, different findings for the relationship between direct work engagement and WFC and for that between indirect work engagement and WFC through work time provide clues for future studies to compete for these two effects and discover potential boundary conditions. For instance, Ilies et al. (2017) investigated how and when employees' daily work engagement increases their daily work-family balance at the within-individual level.

Finally, the present study considered only general supervisory support. We encourage follow-up studies to go further and investigate buffering effects of different specific supervisor behaviors (e.g., supervisor work-family support; Russo and Waters 2006) in order to more effectively manage employees' work engagement and balance their work-family lives while also offering more targeted implications for practitioners.

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### Compliance with ethical standards

**Conflict of Interest** The authors, Yifan Jiang, Qiong Wang, and Qingxiong Weng declare that there is no conflict of interest to disclose.

**Ethical Approval** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

**Informed Consent** Informed consent was obtained from all individual participants included in the study.

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