



# Research on the relationship of work family conflict, work engagement and job crafting: A gender perspective

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## Abstract

With the development of social economy and the transformation of family structure, the conflict between work and family is becoming more and more obvious, especially for professional women. Dual role pressures from the work family domains may reduce individual's engagement in work settings, consequently, exploring the coping strategy becomes imperative. The current study investigated the role of job crafting and gender on the work-family conflict based on a field survey of employees from China. The results showed that there was no significant difference between men and women in work-family conflict (both work interfering with family and family interfering with work). Neither men nor women would lower their work engagement when work interfered with family issues. However, when families interfered with work, women were becoming less likely to engage in work than men. Furthermore, job crafting was verified as an antecedent which reduced the influence of work on family in the male group. For female employees, job crafting helped to reduce the influence of family on their work. The current study would help to understand the impact of gender on work-family interface, and provide valuable implications for the organizational strategies and social support systems to deal with work-family conflict.

**Keywords** Work-family conflict · Gender · Work engagement · Job crafting

It ought to be the ideal for all professionals to keep their job and family in balance. With the transformation and development of social and economic lifestyles, both for-profit organizations and the public sector have proposed diversified requirements for employees' work content. In China, the impact of changes in fertility policy on family structure and the role of family members should not be neglected. People born in the 1970s and 1980s from single-child family should take the whole duty to support their parents. Nowadays, the two-child policy that began in 2015 has increased the cost of raising children for some families. In this context, how to manage the relationship between work and family and alleviate work-family conflict is not only a focal topic for academia to study, but also an urgent need for workplace and family management practices.

Work-family conflict reflects the degree of incompatibility between roles and responsibilities in work and family domain (Netemeyer et al. 1996). It is possible that family matters exert a negative impact on work or work interferes with family activities. Longitudinal studies have confirmed that the conflicts and contradictions between the two affect the physical and mental health of employees, including feeling stressed (Brough et al. 2005), absences from work (Nilsen et al. 2017) and resigning from jobs (Jain and Nair 2013). Meanwhile, the main purpose of organizations is to create an energized, dedicated and engaged workforce. Several research has acknowledged the negative influence of work-family conflict on work engagement because conflict intrigued emotional exhaustion (Wayne et al. 2017) or made the boundary between two domains blurry (Conte et al. 2019), and thus led to lower work engagement. Previous study also has noted that faced with the negative impact brought by conflict, women feel more deeply impacted than men (Xu and Qi 2016). However, less attention has been paid to the difference between male and female groups about the impact of work-family conflict on work engagement.

As for the coping strategy of work-family conflict, most studies have focused on the positive effects of the supportive work environment on the conflict between work and family

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(Hao et al. 2016, Kailasapathy and Jayakody 2017). Compared with those external support, less research explored the internal resource one can depend on to deal with the conflict. Job crafting is a process of putting more emphasis on employees' initiatives and their internal needs (Wrzesniewski and Dutton 2001), which we think has positive implications for alleviating work-family conflict. Additionally, previous research acknowledged a more negative influence of work-family conflict in women group, while the gender difference in coping with pressure was less addressed. This study attempts to examine the impact of work-family conflict on work engagement and the effect of job crafting on alleviating conflicts from the perspective of gender.

Consequently, the current study has three purposes in its theoretical and practical contributions: (1) to verify the relationship between work-family conflict and work engagement; (2) to enrich our knowledge about the roles of job crafting and gender in dealing with work-family issues; (3) to provide guidance for organizations and governments to establish career assistance policy.

## Theoretical Background and Research Hypotheses

### Work-Family Conflict, Work Engagement and the Moderator Role of Gender

Work and family differ in terms of functions and goals, and the two belong to different categories with their own borders. According to the work-family border theory (Clark 2000), borders are expressed in three forms – physical, secular, and psychological – and are characterized by permeability, flexibility, blending, and strength (Zhang 2002). These characteristics of work-family borders mean that people may be disturbed by family affairs at work, or they may use family time for work or even take care of family affairs while working. Thus, people's roles in the respective domains of work and family are mutually impacted by the border characteristics. Roles refer to a series of behavioural patterns that people are expected to exhibit because of their status in social life (Reitzes and Mutran 1994). In meeting the requirements of roles in different domains, people will inevitably consume certain psychological and physiological resources. Border characteristics such as permeability and flexibility make roles realization complicated, giving rise to overloaded or conflicting roles and resulting in a scarcity of individual psychological resources (Wang et al. 2010). If employees are caught in a conflicting and unbalanced work-family relationship for a long time, they will feel physical and mental fatigue, namely, burnout (Robinson et al. 2016). Studies have also confirmed that role pressure (including role conflict, role overload, and role ambiguity) plays a mediating role in work-family conflict,

job satisfaction and turnover intentions, implying that work-family conflict will lead to negative perceptions of work and possible withdrawal behaviour (Gao and Zhao 2014).

Work engagement refers to an active, full mental state at work, with three characteristics: vigour, dedication, and absorption (Schaufeli and Bakker 2004). As an active organizational behaviour, work engagement and burnout are at two ends of the same continuum. Dedicated employees maintain their physical and mental energy while performing their tasks, clearly understand their work mission and professional roles, keep their minds flexible, and actively engage in emotional exchanges with others. Conservation of resources (COR) theory notes that people always try to acquire, hold, and protect what they consider valuable, including physical, mental, social, and personal resources (Halbesleben et al. 2014). If people feel stressed, it is often because they have lost potential or realistic resources. According to this logic, individuals are not only responsible for resource investment from the dual roles of work and family, but also need to deal with the loss of resources caused by the contradictions and conflicts between the two. The psychological perception value of resource loss is quite significant. It makes individuals reduce investment to protect inner resource from the loss. While work engagement means involving into work whole-heartedly by proactively devoting time and energy to the job. Based on the above inference, this study suggests that work-family conflict will reduce work engagement.

The impact of gender on work-family conflict has always attracted attention. With the enhancement of social gender awareness, increasingly women have entered careers, assuming the same professional roles as men. However, traditional gender stereotypes have not changed along with this transition. The saying of “The man goes out to work while the woman looks after the house” is still the norm for evaluating whether people have fulfilled their obligations well. For men, it seems that priority is given to work instead of the family. If a male employee plunges into work by abandoning family responsibilities, the behaviour is even considered as an indicator of dedication to work. According to the results of the Third China Women's Social Status Survey jointly completed by the All-China Women's Federation and the National Bureau of Statistics in 2010, the proportion of women who “gave up career development for their families” is 36.20%, whereas that of men is only 13.37% (Yang et al. 2016). The former is greater than 2.7 times that of the latter. The difference is significant. This result implies that faced with work-family conflict, men tend to identify their working self-concept, whereas for women, family accounts for a more significant proportion of their self-concepts. Compared with men, women tend to be more strongly affected by family.

One of the important issues of work-family conflict is time conflict. Excessive time in one domain will inevitably affect the role completion in the other domain. According to a report

by the US Bureau of Labour Statistics (2014), women do housework for 2.3 h per day (1.4 h for men) and care for family members 0.6 h per day (0.3 h for men). If they do not withdraw from their careers, women need to invest more resources to meet the demands of the dual roles, such as cutting down their sleeping time (Maume et al. 2010). Women with overburdened schedules may not be able to maintain full energy at work. Based on the above inference, this study suggests the following:

Hypothesis 1: Work-family conflict and work engagement are significantly negatively correlated, and the relationship between them is regulated by gender.

### Impact of Job Crafting on Work-Family Conflict and the Moderator Role of Gender

Job crafting is considered as a certain of job design, which is unlike the traditional top-down approach. Job crafting focus on redefining the job content, boundaries, and roles by employees autonomously. Since Wrzesniewski and Dutton first proposed the concept of “job crafting” in 2001, there have emerged many definitions of the concept. However, they all agree that the core feature of job crafting is to emphasize employees’ initiative and enthusiasm during their participation in design, not passively accepting the adjustment of work content (Hu and Tian 2015). The purpose of job crafting is to enable employees to obtain recognition of work, to generate a sense of meaning in their work, and to engage in work happily (Zhao and Guo 2014). According to the Job Demands-Resource (JD-R) model, researchers argue that the process of job crafting is an adjustment made by employees based on their own abilities and needs, resulting in a balance between work demands and resources (Bakker and Demerouti 2007). Based on the content of job crafting, job crafting can be divided into task crafting, relationship crafting, and cognition crafting. To be specific, job crafting is to reconstruct the task quantity, category, and scope in addition to the quality of interpersonal relationships and to modify the perception of work to obtain the meaning of work (Berg et al. 2013).

This study believes that the impact of job crafting on work-family conflict is demonstrated by the following two ways: Firstly, job crafting promotes work-family relations to create a balance effect. Work-family conflict originates from the overlap and permeation of the two borders and the excessive depletion of resources resulting from the mutual interference of work-family dual roles. Job crafting enables employees to redesign their work borders and content based on their self-awareness, capabilities and basic needs to create a work environment that is more compatible with themselves (Bakker 2015). Namely, when people need to play both work and family roles simultaneously, they will, based on the time available and psychological resources, reconstruct the task quantity, scope, and category or seek new social relations and

support to prevent work involvement from taking away resources needed by family affairs and achieve a balance between work and family. Of course, the process of job cognitive crafting will also promote a full understanding of the relationship between work and family and confirm the meaning of each other. Secondly, job crafting reduces the conflict between work and family by promoting the enhancement effect of work on family. Previous studies have made it clear that during the job crafting process, people will have a calm feeling, which will in turn stimulate their positive emotions (Ghitulescu 2006). In coping with the potential stress from dual roles, job crafting as a positive response strategy helps people avoid burnout from work-family conflict and maintain individual well-being (Harju et al. 2016). Meanwhile, multi-stage sampling studies have confirmed that job crafting can promote person-job fit and recognition of job meaning (Tims and Bakker 2010) and in turn contribute significantly to job performance (Bakker 2015). People’s positive resources (such as positive emotional experiences, senses of meaning, and work achievements) acquired in the activities of a certain role can have a positive impact on other roles they undertake, thereby improving the overall effectiveness of other role activities (Bakker and Demerouti 2013). As a result, job crafting has stimulated high-quality resources in the work domain, spilled over into the family domain, and improved the efficiency of finishing family affairs.

Additionally, because gender is an inevitable issue in work and family interface research, this study is going to explore the moderator role of gender on the relationship between job crafting and work-family conflict. According to the gender stereotype research, women and men have their different way to interpret themselves and the surroundings. Meanwhile, gender stereotype also influences the expectations people have about the priorities of male and female. For example, men are anticipated to take their work as the first priority, while women are expected to take the family role in the first place (Naomi 2018). Social identity theory states that social roles are the basis of self-identification (Burke and Reitzes 1991). People assume different social roles, and the sense of identity they obtain from the roles constitutes the meaning of life. However, some of these social roles occupy a more central position than others, appear more important, and become an important component of people’s self-concept (Thoits 1991). As a result, people are more motivated to invest resources in more prominent roles to obtain a stronger sense of self-fulfilment. Correspondingly, the less-important roles receive relatively fewer resources.

In China, the participation rate of women in the labour force is quite high (China National Bureau of Statistics, 2018). On one side, women engage into the competitions with men in the workplace, one the other side, they are still expected to be super Mums in the families. For women, the pressure derived from time or role conflict between work and family is widespread. This study supposes that job crafting might be a

strategy to deal with work-family conflict and argues that gender will act as a moderator. Considering the different ways by male and female to define themselves and take actions, we will argue that the gender acts as a moderator between job crafting and work-family conflict.

Based on the above-mentioned role identity, the resources accumulated by women in job crafting are more likely to spill over into the family domain and help them become more competent to buffer the conflict between work and family. Grzywacz and Marks (2000), by examining a series of regulating variables that influenced the work-family enhancement effect, found that compared with men, women generally experience a greater enhancement effect on families from their work domain. In addition, in a study of employees in service industries from eight European countries, more women demonstrated their abilities to transfer resources gained from work to family roles. Their positive work-to-family spill-over effect exceeds that of men (Beham et al. 2017). In view of the above inferences, this study suggests the following:

Hypothesis 2: There is a significant negative correlation between job crafting and work-family conflict, and the gender moderates the relationship between job crafting and conflict. Figure 1

## Research Methods

### Sample Information

The study collected data from three public sectors located in Eastern China. As we know, with the implementation of China's reform and opening policy, the country has made great progress in social and economic development, especially for the Yangtze delta. All of our participants live and work in this area. Due to the economic prosperity, the talent agglomeration effect is enhanced, resulting in greater competitive pressure compared with other regions. Before 2016, China carried out a strict fertility policy, which advocated one child one family. While from 2016, two-child policy has been employed, which deeply influence people's lives. The issue of work-family balance is becoming more prominent because two-earner families have to take the

duty to bring up children, and to sustain the competitive capabilities in their work as well. Additionally, all of our participants work in the traditional public sectors characterized as high power-distance organizations. Consequently, supportive resource from organizations and leaders are not equilibrium among employees. Under such background, boasting one's initiative to promote job crafting might be an effective strategy to coping with the work-family conflict.

Questionnaires were distributed between March and June 2017. Based on the sampling framework of combining judgement and convenience sampling, questionnaires were distributed through the organization's human resources departments. The sampling within the organizations considered as much as possible the balance of demographic factors, such as gender and age. Prior to the distribution of the questionnaire, the contents of the questionnaire and how to answer the questions were explained, emphasizing anonymity and the purpose of the academic research and dispelling the concerns of respondents about filling out the questionnaire. A total of 400 questionnaires were distributed, and 391 were returned. After those with obviously missing answers or careless answers were removed, the total remaining questionnaires was reduced to 358, so the effective recovery rate was 89.5%. In terms of gender, men accounted for 42.2%, and women accounted for 57.2%. The proportions of people of different ages were as follows: 34.4% were 20–30 years old, 39.4% were 31–40 years old, 22.6% were 41–50 years old, and 3.6% were over 51 years old. The distribution of job tenure was as follows: 30.4% had tenure of 5 years or less, 35.8% had 6–10 years, 17.9% had 11–15 years, 8.7% had 16–20 years, and 15.1% had tenure of 21 years or longer. In addition, among the employees sampled, 66.8% were at the entry level, 28.5% were middle-level managers, and 4.7% were senior leaders. The distribution of the demographic characteristics of the sample population matches the overall characteristics of employees serving in these departments.

### Variables Measured

The items in the questionnaire used in the research were all 5-point Likert-type scales, ranging from 1 point for “significantly not meet” to 5 points for “significantly meet”. The questionnaire also included control variables such as age, gender, job tenure and position.

#### a. Work-family conflict

The variable was measured using a revised scale from Gao and Zhao (2014), including work interfering with family and vice versa. For the former, there are five items, such as “I often think about work at home”; the latter has four items, such as “My personal life has affected my work.” The calculated mean score was used to represent the degree that work interferes with family or vice versa.

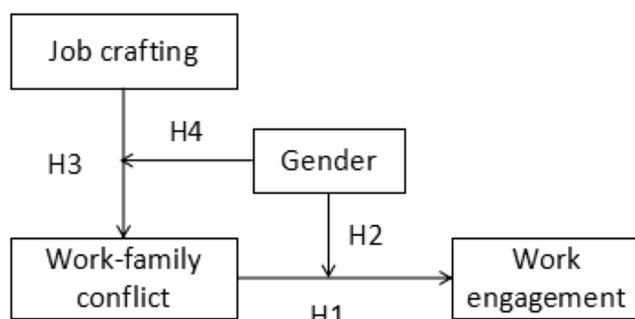


Fig. 1 The hypotheses model

## b. work engagement

This variable was measured with the tool designed by Schaufeli et al. (2002), which has three dimensions: vigor, dedication, and absorption. There were 17 items in the initial scale. In subsequent research, the short-version scale with 9 items was found to have the same validity. This study therefore adopted the short-version scale, with 3 items regarding vigor, such as “I feel full of energy at work”, 3 items regarding dedication, such as “I am full of passion about work”, and 3 items regarding concentration, such as “I am immersed in my own work.”

## c. Job crafting

This variable was measured using the tool designed by Slemp and Vellabrodick (2013). Job crafting also included three dimensions: cognition crafting, relationship crafting, and task crafting. Cognition crafting refers to recognise one’s work and make it more personally meaningful. Relationship crafting means that one can actively change the quality/or amount of interaction with others in one’s job. And task crafting refers to create a task boundary which will suit one’s skill or motivation better. Among them, there were 4 items about cognition crafting, such as “I often think about the positive significance of my work for life”; 6 items regarding relationship crafting, such as “I often attend social activities to build more relationships”; and 7 items about task crafting, including “I often apply new methods at work.”

In the above measurement tools, the scale of work-family conflict was directly taken from the “Management Research Scale Manual” edited by Li et al. (2016), and the other two measurement tools underwent a translation and back-translation process to ensure the meaning of each entry was accurate.

## Data Analysis

This study used the SPSS and AMOS software packages for statistical analysis. First, confirmatory factor analysis (CFA) was performed to test the discriminant validity of each variable; then, correlation analysis was used to describe the correlations between sample characteristics and variables; finally, cross-group comparison analysis was conducted using grouping path analysis to test relevant research hypotheses.

## Data Analysis Results

### The Reliability and Validity of the Measurement Tools

This study used Cronbach’s  $\alpha$  coefficient to measure the reliability of the questionnaire. The results indicate that the reliability coefficients of work interfering with family and family interfering with work are 0.71 and 0.73, respectively; the

reliability coefficient of job crafting is 0.89, and the reliability coefficient of work engagement is 0.93. The data demonstrate that the job crafting and work engagement scales possess ideal measurement consistency and that the reliability coefficient of the work-family conflict scale is within a reliable range.

To examine the discriminant validity of the variables, by using AMOS 17.0 and through CFA, we tested the discriminant validity of latent variables, such as work interfering with family, family interfering with work, job crafting, and work engagement. The results indicate that the four-factor model (work interfering with family, family interfering with work, job crafting, work engagement) has a good fit ( $\chi^2 = 1113.69$ ,  $\chi^2/df = 2.06$ ,  $IFI = 0.91$ ,  $CFI = 0.90$ ,  $RMSEA = 0.05$ ) and is superior to the alternative models. Therefore, the four-factor model indicates the measured factor structure much better, and the discriminant validity of the variables in this study is good.

Because the multiple variables in this study were reported by the participants themselves and questionnaires were the main method, we made the following arrangements to control and test possible common method variance. First, in designing the questionnaire, we cross-ordered the items and set up reverse scoring items to avoid consistency variance caused by similar content. Second, during the questionnaire completion process, we clearly defined the content of the questionnaire and how to complete the questionnaire. Anonymity was adopted to minimize the social desirability tendency. Finally, Harman’s single-factor test method (Zhaou and Long 2004) was used to perform principal component analysis on all items in this survey, including all the variables. The firstly extracted factor explained 29.9% of the variation without any orthogonal rotation, which was below the threshold of 40%. This result shows that the common method variance in this model does not explain most of the variation between variables, so the common method variance in this study is acceptable.

## Descriptive Statistics, Variance Analysis and Correlation Analysis

Table 1 presents the mean, standard deviation in male and female group respectively, and Table 2, and 3 shows correlation coefficients between variables and variance analysis between samples. The data in the tables reveal the following. (1) There is no significant difference in the degree of work-family conflict between males and females. Whereas, the mean of job crafting for males is slightly greater than that for females. (2) In the analysis of work-family conflict and work engagement, the male and female samples share the same characteristics, namely, work interfering with family and work engagement are negatively but not significantly correlated. Family interfering with work and work engagement are significantly negatively correlated ( $r_{\text{female}} = -0.28$ ,  $r_{\text{male}} = -0.20$ ). Thus, Hypothesis 1 is partially verified. (3) In the correlation analysis of job crafting and work-family conflict, there is a

**Table 1** Descriptive statistics per group

		Female group								Male group							
		Work interfering with family		Family interfering with work		Job crafting		Work engagement		Work interfering with family		Family interfering with work		Job crafting		Work engagement	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Age	20-30 years old	3.10	0.83	2.21	0.84	3.22	0.51	2.92	0.72	3.33	0.85	2.85	0.90	3.37	0.71	2.91	0.98
	31-40 years old	3.20	0.76	2.57	0.89	3.45	0.64	3.25	0.89	3.25	0.84	2.54	0.90	3.61	0.73	3.26	0.92
	41-50 years old	3.11	0.74	2.43	0.91	3.54	0.71	3.49	0.85	3.27	0.77	2.51	1.00	3.55	0.54	3.27	0.70
	Over 51 years old	2.90	0.58	2.25	0.85	3.62	0.55	3.81	0.75	2.60	0.86	2.30	0.92	3.72	0.80	3.71	0.86
Affiliation	Government agency	3.03	0.78	2.41	0.89	3.38	0.57	3.09	0.80	3.34	0.83	2.65	0.86	3.48	0.69	3.03	0.99
	Public institution	3.13	0.70	2.47	0.94	3.37	0.67	3.25	0.89	3.04	0.70	2.64	0.86	3.33	0.61	3.02	0.70
	State-owned enterprise	3.29	1.04	2.42	0.95	3.37	0.49	2.91	0.82	3.27	1.02	2.61	1.00	3.65	0.85	3.31	1.02
	Foreign company	3.08	0.83	2.05	0.81	3.39	0.69	3.37	1.00	3.60	0.72	2.00	1.00	4.06	0.61	4.07	0.42
	Others	3.27	0.76	2.39	0.80	3.47	0.64	3.34	0.79	3.41	0.83	2.70	1.17	3.80	0.54	3.57	0.75
Tenure	5 years or less	3.05	0.83	2.25	0.84	3.25	0.50	2.94	0.67	3.24	0.84	2.73	0.89	3.44	0.64	3.02	0.82
	6-10 years	3.27	0.78	2.51	0.93	3.32	0.67	3.14	0.90	3.44	0.84	2.83	0.99	3.48	0.80	3.02	0.82
	11-15 years	3.22	0.79	2.49	0.88	3.53	0.63	3.38	0.92	3.08	0.83	2.26	0.77	3.47	0.59	3.12	0.91
	16-20 years	3.33	0.69	3.00	0.82	3.42	0.56	3.21	0.91	3.41	0.64	2.75	0.91	3.79	0.65	3.58	0.95
	21 years or longer	2.91	0.59	2.18	0.86	3.61	0.72	3.63	0.80	2.95	0.84	2.25	0.79	3.59	0.60	3.45	0.74
Position	Entry level	3.03	0.76	2.39	0.89	3.38	0.62	3.15	0.84	3.32	0.89	2.74	0.92	3.42	0.74	3.02	0.91
	Middle-level managers	3.45	0.73	2.49	0.88	3.39	0.58	3.29	0.86	3.18	0.72	2.49	0.83	3.63	0.58	3.32	0.79
	Senior leaders	2.87	0.50	2.00	0.88	3.92	0.97	4.02	0.69	3.22	0.75	2.41	1.24	3.82	0.50	3.62	1.19

significant negative correlation between job crafting and family interfering with work in the female sample ( $r_{\text{female}} = -0.17$ ). The higher the level of job crafting is, the less the degree of family interfering with work. In the male sample, the job crafting and work interfering with family are significantly negatively correlated ( $r_{\text{male}} = -0.25$ ). The higher the level of job crafting is, the lower the degree of work interfering with family. Thus, Hypothesis 2 is partially verified.

### Multiple-Group Regression Analysis and Results Comparison

Using multiple-group regression analysis, the study examined the relationships between work-family conflict, job crafting, and work engagement in the male and female groups, with

$\beta_{\text{male}}$  as the male group regression coefficient and  $\beta_{\text{female}}$  as the female group regression coefficient. Using the t-test method from the studies by Chin (2000) and Jin et al. (2014), the study compared the difference in the regression coefficients of the two samples to see whether the distinct was significant. The results indicate the following: (1) The regression value of work interfering with family on work engagement does not reach a significant level, and there is no difference between the male and female groups. Namely, overall, work interfering with family cannot predict the result of work engagement. (2) In the female group, family interfering with work negatively predicts work engagement. The deeper the impact of family on work, the more likely it is to weaken dedication. However, in the male group, the negative effect of family interfering with work on work engagement does not reach a

**Table 2** Correlations among variables per group and variance analysis between groups

Variables	Female group					Male group					F		
	Mean	SD	1	2	3	4	Mean	SD	1	2		3	4
1. Work interfering family	3.14	0.79	1				3.28	0.83	1				2.31
2. Family interfering work	2.38	0.90	0.22**	1			2.55	0.89	0.26**	1			2.47
3. Job crafting	3.43	0.62	-0.05	-0.17*	1		3.60	0.64	-0.25**	-0.16	1		5.43*
4. Work engagement	3.25	0.86	-0.08	-0.28**	0.66**	1	3.24	0.88	-0.16	-0.20*	0.67**	1	0.02

Note: \*\*\* $p < 0.001$ , \*\* $p < 0.01$ , \* $p < 0.05$

**Table 3** Multiple-group regression results

	Female group								Male group							
	Work engagement		Work engagement		Work interfering with family		Family interfering with work		Work engagement		Work engagement		Work interfering with family		Family interfering with work	
	M <sub>11</sub>	M <sub>12</sub>	M <sub>21</sub>	M <sub>22</sub>	M <sub>31</sub>	M <sub>32</sub>	M <sub>41</sub>	M <sub>42</sub>	M <sub>11</sub>	M <sub>12</sub>	M <sub>21</sub>	M <sub>22</sub>	M <sub>31</sub>	M <sub>32</sub>	M <sub>41</sub>	M <sub>42</sub>
Controls																
Age	0.13	0.13	0.13	0.20	0.02	0.03	0.23	0.25	0.08	0.07	0.08	0.06	-0.08	-0.07	-0.14	-0.14
Affiliation	0.08	0.09	0.08	0.06	0.08	0.08	-0.08	-0.07	0.14	0.15	0.14	0.15	0.03	0.05	0.00	0.02
Tenure	0.15	0.14	0.15	0.10	-0.09	-0.09	0.17	-0.15	0.10	0.10	0.10	0.09	-0.04	-0.03	-0.05	-0.05
Position	0.08	0.09	0.08	0.08	0.19	0.19	0.02	0.03	0.11	0.10	0.11	0.09	-0.06	-0.02	-0.07	-0.06
Independent variables																
Work interfering with family		-0.10								-0.13						
Family interfering with work				-0.30***								-0.16				
Job crafting						-0.06		-0.18*						-0.24**		-0.13
R <sup>2</sup>	0.09	0.10	0.09	0.18	0.04	0.05	0.02	0.01	0.09	0.11	0.09	0.11	0.02	0.07	0.05	0.06
ΔR <sup>2</sup>	0.07	0.07	0.07	0.16	0.02	0.02	0.02	0.03	0.06	0.07	0.06	0.08	0.02	0.03	0.02	0.02
Changed F	4.60***	1.78	4.61***	19.63***	2.06	0.67	1.11	6.11*	2.94*	2.36	2.94*	3.06	0.53	7.21**	1.46	2.03

Note: \*\*\* $p < 0.001$ , \*\* $p < 0.01$ , \* $p < 0.05$ . M<sub>11</sub> and M<sub>12</sub> indicate the regression models testing the relationship between work interfering with family and work engagement. M<sub>21</sub> and M<sub>22</sub> indicate the regression models testing the relationship between family interfering with work and work engagement. M<sub>31</sub> and M<sub>32</sub> indicate the regression models testing the relationship between job crafting and work interfering with family. M<sub>41</sub> and M<sub>42</sub> indicate the regression models testing the relationship between job crafting and family interfering with work

significant level, thus partially supporting Hypothesis 1. According to the t-test results, the difference between the two sets of regression values reaches a significant level ( $\beta_{\text{female}} = -0.30$ ,  $\beta_{\text{male}} = -0.16$ ;  $t = -2.16$ ,  $p < 0.05$ ). (3) In testing the hypothesis about whether job crafting will reduce work-family conflict, in the female group, job crafting negatively predicts the extent of family interfering with work ( $\beta_{\text{female}} = -0.18$ ,  $p < 0.05$ ), whereas in the male group, job crafting negatively predicts the extent of work interfering with family ( $\beta_{\text{male}} = -0.24$ ,  $p < 0.05$ ). The results partially support Hypothesis 2. In order to illustrate the regulating effect of gender more vividly, the study presents three graphs in Fig. 2, 3, and 4.

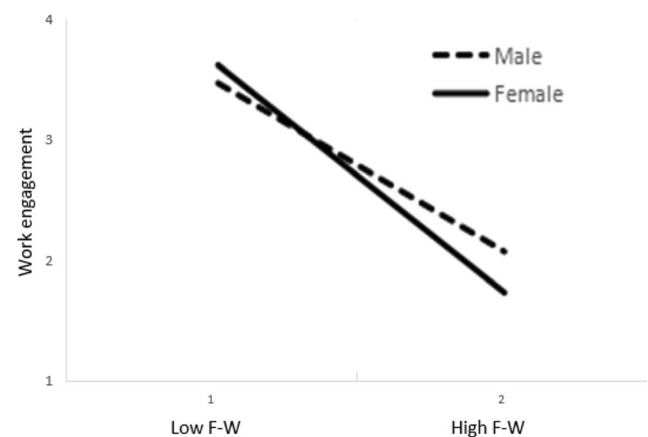
## Discussion

### Theoretical Implications

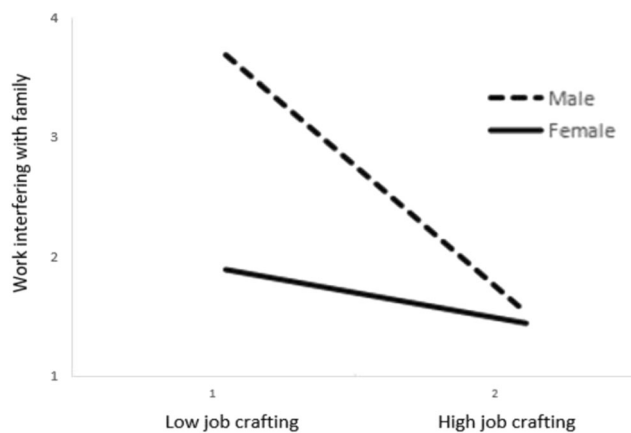
This study investigated three issues: the impact of work-family conflict on work engagement, whether job crafting alleviates work-family conflict, and the regulating role of gender in the above-mentioned relationships.

First, regarding the relationship between work-family conflict and work engagement, this study posited the hypothesis that work-family conflict negatively impacts the level of work

engagement. The results only support the decline in work engagement caused by the family interfering with work in the female group. This result can be understood in two manners. First, the traditional Chinese social morality and norms hold that “sacrificing the small family for the big one” is a good virtue. When the interests of the collective (work) conflict with those of an individual (family), the choice to engage in the collective activities is more socially desirable. Second, as a male, even in fulfilling family roles, it is very likely that he is still attached to work. For example, a male seems to have



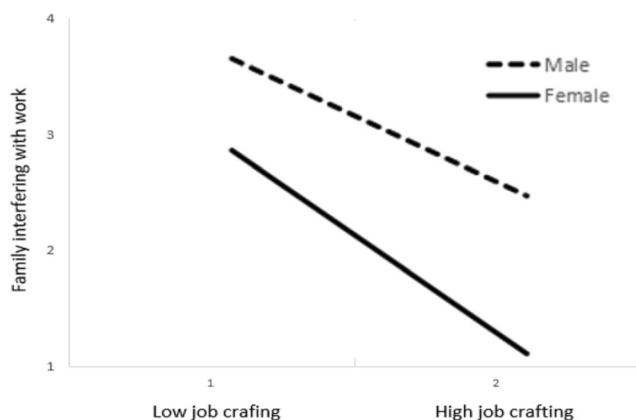
**Fig. 2** Gender moderates the relationship between family interfering with work and work engagement



**Fig. 3** Gender moderates the relationship between job crafting and work interfering with family

fulfilled his family role if he has a successful career and high income. In other words, a male may be inclined to fulfil his family obligations through work. Therefore, it does not matter to what extent work impacts the family or vice versa; regardless, he will not be hindered from engaging in work. Relatively speaking, a female's work and family roles are completely separated; therefore, when her family role is highlighted (family interfering with work), her time and resources allocated to work drop accordingly, just as previous studies have found that pressure from family interfering with work has significantly predicted women's intention to quit (Huang and Cheng 2012).

Second, regarding the relationship between job crafting and work-family conflict, this study posited the hypothesis that job crafting can alleviate the degree of conflict between work and family, and the results partially validated the hypothesis. Work-family conflict includes work interfering with family and family interfering with work. In the female group, job crafting significantly negatively predicts the degree of family interfering with work. Namely, job crafting significantly reduces the impact of family on work. In contrast, in the male group, job crafting significantly



**Fig. 4** Gender moderates the relationship between job crafting and family interfering with work

negatively predicts the degree of work interfering with family. Namely, implementing job crafting significantly reduces the impact of work on family. The conflict between work and family is mainly manifested in the contradiction of time, stress and scarcity of behaviour resources. Job crafting includes recognition of the meaning of work, changing the focus of work and the quality of work relationships. Through job crafting, women may be able to refocus on their work tasks according to the needs of their own role, putting emphasis on those work forms or work tasks that cause less conflict with family affairs. A study by Kim and Gong (2016) confirmed that female executives demand significantly more flexible work arrangements (working at home, part-time jobs, and flexible work hours) significantly more than their male counterparts. This may have eased conflict arising from resource constraints. For men, job crafting has alleviated the work interfering family. From the perspective of gender role theory, work is the core domain for men to establish their self-concepts. Male group takes advantage of job crafting to develop jobs at which they are more competent. Through relationship crafting, they strive to acquire more social resources to make themselves more effective at work and experience more work meaning, which is also the foundation for achieving family significance (Tims and Bakker 2010), thus promoting the positive spill-over of the work domain into the family domain and reducing the negative impact of work on family.

Third, regarding the impact of gender on work-family conflict and job crafting, based on a meta-analysis of 350 independent samples, Shockley et al. (2017) noted that overall, there is no significant difference in work-family conflict between men and women, but there may be differences in the types of conflict due to family characteristics. For example, mothers feel more affected by family interfering with work than fathers do, and women in families with two professionals feel more affected by family interfering with work. Men in families with two professionals feel more affected by work interfering with family. The results of this study to some extent correspond to that results. No matter to what extent work impacts family or family impacts work, this study did not find significant differences between male and female groups. However, what is more crucial is that when people are exposed to work-family conflict, will their enthusiasm for work be impacted? The current study has confirmed that women, like men, will not reduce their engagement in work even feeling the work interfering with family, but they will reduce their work involvement if their families impact their work. However, the process of job crafting can significantly help female groups ease the negative impact of family on work. Put simply, even if women's work may be impacted by their highlighted family role, the conflict between the two roles can also be alleviated by job crafting to reduce the negative impact.



From the above, the current study has its theoretical contribution as followed: First, the study extends our knowledge on the relationship between work-family conflict and work engagement based on a sample from public sectors in China and found only family interfering with work reduced the engagement in women group. Secondly, the present research contributes to the literature by verifying the role of job crafting in alleviating the conflict derived from work-family matter. Furthermore, the study confirmed the gender difference on work-family issues. For men, job crafting reduced work interfering with family, while for women, job crafting diminished the negative effect of family interfering with work.

### Practical Implications

Gender has always been an important perspective in research about work-family conflict. The traditional gender role theory often argues that women are more likely to fall into conflict, thus impacting their job performance in the workplace. However, the conclusions of this study do not fully support this argument. Faced with the dual role of work-family, both men and women feel the similar conflict from the roles strain. Although women's level of engagement in work may be impacted by family affairs, with the help of the job crafting process, the pressure from the dual role can be alleviated. Therefore, the corresponding cultural value orientation, organization management system and human resources policy adjustment can help improve employees' performance in the workplace.

First, the values of gender equality should be strengthened in policy development and implementation. In countries with low gender equality, women spend significantly more time than men caring for children (Kossek et al. 2014). The time conflict may explain why household task reduces women's engagement in work. The Framework Agreement on Parental Leave (2012), as amended by the European Commission, stipulates that parental leave can be up to 15 months for both parents and encourages both parents to share parental responsibilities equally (Yue and Yan 2013). This will reduce women's withdrawing from work (reduction of engagement or quit) due to the consumption of resources by family roles. In China, the "Population and Family Planning Law" stipulates that female employees have maternity leave (a maximum of 178 days) and spouses have paternity leave (a maximum of 30 days). However, in practice, spousal paternity leave is often much less than 30 days. In addition, China does not have parental leave-related legislation. Regardless of male or female employees, a proper and comprehensive maternity leave/parental leave is, without a doubt, a guarantee for them to strike a better balance between work and raising children.

Second, organizations provide aid programmes for job crafting development. Considering the positive impact of job crafting on work-family conflict, as validated by this study,

organizations can promote job crafting behaviour in the following areas. (1) Strengthen the sense of mission. Compared with those whose value of life is to work for a living, people who are called to work from the heart and have a mission tend to dig deep into their work and tap its meaning in response to their self-realization needs. As the employee groups studied by this paper work for government departments and institutions, their work characteristics and achievements have significant social values. Units or departments can strengthen employees' sense of mission in various manners, such as grassroots efforts to care about peoples' livelihood, strengthening contact with the masses, and promoting their focus on or development of work content. (2) Establish a job crafting training programme and incorporate it into the organization's training system. Developing or focusing on the work content/work relationship entails certain skills. An organization's original human resource training function should build a design programme based on differentiating job crafting requirements, implement corresponding training courses, provide timely feedback, evaluate training performance, and improve employees' job crafting awareness and ability. (3) Create an atmosphere of trust and tolerance, and empower employees to a certain degree. Employees' autonomy in an organization is a factor that impacts job crafting (Tims and Bakker 2010). The degree of freedom at work allows employees to adjust their work according to their abilities or experience. However, judged in terms of the characteristics of work autonomy, autonomy in most of the work in the public sector is relatively weak. Thus, senior leaders need to empower employees to decide on work methods and processes within the possible boundaries such that employees can feel a sense of support from the organization and leaders. An organization with a climate of tolerance and trust is more likely to incubate the behaviour of job crafting.

Additionally, it is necessary to build a balanced work-family social support system. Raising offspring and supporting elderly people may be the responsibilities that will take the most family resources. From the public services perspective, providing high-quality child care and retirement services is the most powerful external support for people to balance family and work effectively. The one-child policy has, for quite a long time, created a family structure with a ratio of 4:2:1. Both spouses, having to support four elderly people, have too many difficulties in terms of allocation of time and physical and mental resources. If there is a guaranteed and trustworthy care system that the elderly can rely on, it will effectively reduce distraction from work. Furthermore, with the implementation of the two-child policy, families are faced with a significant increase in the cost of raising families. Strong backing for young parents to work without worry will be to strengthen the policy support and supervision of the child care industry and establish a comprehensive child care service system.

## Research Limitations and Future Direction

The limitations of this study are as follows. First, the study examined the impact of gender on work-family relationships. The measurement only used the biological attributes of gender as input into the analysis model, thus limiting the analysis of gender roles to the traditional consistency model (the model treats male and female traits as two extreme manifestations of the same trait). However, the types of gender roles in groups can be generally divided into masculine, feminine, androgynous and undifferentiated. Among them, the groups that conform to the androgynous model (that is, with both masculine and feminine traits) usually have better social adaptation and psychological health (Cai et al. 2008). If the gender role type can be used instead of biological sex in future studies, the results will be closer to reality. Second, people's allocation of resources to work and family roles is also greatly impacted by the future work self, which is a representation of the individual's future image of work expectations and ambitions. A clear and detailed work self contributes to proactive professional behaviour (Zhang et al. 2016). If this variable is considered in future studies, it will provide a new perspective on understanding how people balance the relationship between work and family. In addition, this study has not considered information about family structure, including nuclear family or extended family, family size, and member interaction styles, but all this information represents important background variables that impact the work-family relationship. If we can further examine and analyse the gender awareness behind policy-making in social, political, and economic life, it will provide a better perspective on understanding the behaviour choices by current groups in the work and family domains, in addition to their future development. It will also respond better to academia's appeal for incorporating gender theory into public management research and practice (Bao 2006).

## Conclusion

The current study explored the relationship between job crafting, work-family conflict and work engagement from the perspective of gender. The results showed that in both groups work interfering with family would not reduce work engagement. However, in women group, family interfering with work had a negative influence on work engagement. Job crafting alleviated the impact of family on work in women' group, meanwhile, it mitigated the impact of work on family in men' group. The study shed light on the roles of job crafting and gender in the domain of work-family interface, and made its contribution to the practice of public human resource policies.

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## Compliance with Ethical Standards

**Conflict of Interest** The author declares that she has no financial and personal relationships with other people or organizations that can inappropriately influence this work.

**Ethical Approval (Including the Name of the Approval Board)** This study is supported by Chinese National Social Science Fund (Grant No.15BGL097). The way of data collection has been approved by National Office for Philosophy and Social Science of China and Shanghai Jiao Tong University.

**Informed Consent** In the first part of the questionnaires, the subjects were informed of the content of the survey and signed their consent before answering the questions.

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