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How work-life conflict affects employee outcomes of Chinese only-children academics:

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Abstract

Purpose - China's controversial one-child policy has been blamed for creating an aging population, a generation of employees without siblings and a 4-2-1 family structure that places eldercare responsibility, primarily, on women. Current understanding of how this affects contemporary employees' work-life interface is lacking. This study examined the moderating roles of family structure and gender in the relationships between work-life conflict (WLC), job satisfaction and career aspiration for university academics.

Design/methodology/approach – Online and self-administered surveys were used to collect data, which involved 420 academic staff in three Chinese research universities.

Findings – Our results revealed that WLC is positively related to career aspiration, and this relationship is stronger for academics with siblings and, within the only-children group, significantly stronger for women than for men. WLC is also negatively related to job satisfaction and this relationship is stronger for only-children academics.

Research limitations/implications – Results were limited by a cross-sectional sample of modest size. Nevertheless, this study contributes to the understanding of gender roles and changing family structure in the work-life interface of Chinese academics.

Practical implications – Our findings have implications for both universities seeking to improve staff wellbeing and for wider society. A number of support mechanisms are proposed to enhance the ability of only children, especially women, to operate as effective members of the labour market.

Originality/value – Our results showed that only-children academics face a unique set of difficulties across career and family domains, which have been previously neglected in literature.

Key words: career aspiration, family structure, gender, job satisfaction, one-child policy,

work-life conflict

Introduction

Modern employees report facing multiple demands, most significantly from career and family. Theoretical development of work-life interface research recognises the 'cross-domain effects' in this relationship (Plaisier et al., 2015, Sturges and Guest, 2004). Ren and Caudle (2016) found that Chinese academics experiences a high level of work-life imbalance or conflict due to demands from both domains and a traditional Chinese work ethic that places work ahead of family and self-enjoyment. Hence, in this paper, we adopt a work-life conflict (WLC) perspective, which assumes that individuals have a fixed amount of time, resource and energy and that participation in multiple roles inevitably create conflicts and affect quality of life (Greenhaus and Beutell, 1985).

Western research suggests that WLC has been most acute with high-skilled employees who are torn between career ambition and family responsibilities (Beigi et al., 2017, Sturges, 2012). This group tends to work long hours in order to establish their careers and at the same time has a strong interest in keeping a balance between work and life (Sturges, 2012). However, the majority of existing research investigates the relationship between WLC and other employee outcomes from either psychological or organisational perspectives, using variables such as self-efficacy or perception of organisational demand/support (Cho and Ryu, 2016, McCarthy et al., 2013) and thus overlooks an important source of potential support – one's family. Moreover, current research rarely looks beyond dual-earner couples or nuclear family structures in the West (Ten Brummelhuis and Van Der Lippe, 2010). Similarly, little is known about the impact of gender beyond the Western context (Huang and Gamble, 2015). Here we investigate an under-researched group of high-skilled employees, university academics, in a non-Western context, China, to investigate WLC and the moderating roles of both family structure (which, in the Chinese context, includes grandparents, parents and

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children) and gender. Academics generally have more flexibility and control over their time to manage their professional and personal lives than many workers. Alongside this, they are also known for having constant work demands and working long hours, which may accentuate WLC (Ren and Caudle, 2016, Xia et al., 2019). Unlike other high-skilled worker groups (e.g. engineers or doctors), academics frequently experience long periods of insecure employment in early career before securing a permanent position. This often coincides with a life stage when individuals typically start families (Dorenkamp and Ruhle, 2019), resulting in substantial WLC.

The current Chinese workplace provides a unique research opportunity. In 1979, the Chinese Government introduced its controversial one-child policy (OCP), an extreme measure to control population expansion that limited each family to one child. By the 1990s, nearly 90% of children from urban areas and almost 60% of children from rural areas had no siblings (Chen, 1994). Four decades later, these children have grown up and form an important part of the Chinese workforce. Yet, there have been very few work and organisational studies that examine this distinctive cohort and its so-called '4-2-1' family structure. As China is now the second biggest economy and the consequences of the (now repealed) OCP will continue to dominate the Chinese workplace for many years, this remains a significant gap in HRM research. OCP may also have altered gender dynamics in Chinese families (Whyte and Parish, 1984), as it created a preference for male children (Hesketh et al., 2005) and ran alongside free market reform, which eroded communist principles of gender equality. China thus presents a fruitful environment for exploring how family structure and gender affect relationships between WLC and employee outcomes.

We consider this in relation to two important employee outcomes. First, job satisfaction (JS), as research has shown that WLC can lead to detrimental effects e.g. reduced JS (Buonocore

and Russo, 2013, Drummond et al., 2017). Second, career aspiration (CA), which is important to academics and where WLC can create barriers for individuals' career development (Beigi et al., 2017). Our first objective is to explore whether family structure moderates the relationships between WLC and JS and between WLC and CA. We recognise that family structure can take many forms and focus here on the impact of being an only-child versus having siblings. Our second objective is to develop an in-depth understanding of this cohort by examining whether gender may moderate relationships within the only-child group.

We make a number of contributions. First, we offer empirical evidence that family structures influence the work-life interface, enriching theoretical knowledge in work-life scholarship. Second, drawing on gender role theory (Eagly et al., 2000), we demonstrate the dilemmas and difficulties that female only-children face when managing both career and family roles. Third, no studies, to our knowledge, have examined OCP's impact in the workplace. Our study fills this void by providing understanding of only-children's experience in managing work-life issues. While the present study focuses on only-children academics in China, falling birth rates globally and aging populations in Western economies make our findings relevant to many other countries where proportions of only-children employees are growing.

As work-life interface is specific to societal contexts, where social, cultural, political, economic and organisational developments and concerns interact (Lewis et al., 2007), we will begin with an overview of OCP and its impacts on Chinese society, then briefly review the work-life literature and present hypotheses. Methodology and analysis will be outlined and then will be followed by findings and discussion.

China's one-child policy

Since its establishment in 1949, China's population has nearly doubled (Hesketh et al., 2005). Food shortages and the need for economic reform encouraged leaders to seek measures to control population expansion. Against this backdrop, the government introduced the controversial OCP (Cameron et al., 2013) in 1979 to limit the number of children born in each family. Nationally, OCP was promoted as a trade-off between quality and quantity (Falbo and Hooper, 2015), whereby married couples were advised to focus their energies on one child. The policy applied mainly to ethnic majority *han* people living in urban cities where social resources were scarce, and restricted each couple to one child, although some exceptions were allowed. In the mid-1980s, the policy was extended and applied to other ethnic minorities, mainly *Manchu* and *Zhuang* people. Compliance with OCP was underpinned by a series of reward and punishment schemes. Only-children were allowed priority to social welfare such as schooling, employment and housing, while violations could result in financial penalties, confiscation of properties or dismissal from work (Hesketh et al., 2005).

Prior studies have assessed the policy's economic outcome, and overall OCP has been credited for slowing down population growth and contributing to China's rapid economic development (Liu and Hu, 2013). Despite these benefits, OCP has been widely criticised for producing a rapidly aging population and a shrinking labour force (Cao et al., 2015). China's total fertility rate (the average number of births per woman) dropped from 2.75 in 1979 to 1.56 in 2014, while the proportion of population aged 65 and above increased dramatically from 4.39 percent to 9.18 percent during the same period (World Bank, 2016). Further, OCP has significantly changed the structure of many Chinese households, which display a 4-2-1 format that comprises of four grandparents, two parents and one child (Cao et al., 2015).

Within a Confucian tradition of filial piety or Xiao, children are expected to treat their parents/grandparents with loyalty, respect and physical care (Strom et al., 1996). In modern China, although the majority of urban retirees are entitled to a pension or similar, children are still considered the most reliable welfare source (Tsui and Rich, 2002). Thus one direct effect of OCP is that with an aging population, only-children are expected to primarily shoulder the burden of eldercare without sibling support. These developments have run alongside post-1978 economic reforms, namely the shift from a planned to market economy and associated increased globalisation (Warner, 2011). This has been particularly notable in Chinese universities, where the 'iron rice bowl', lifelong employment and organisational welfare/support mechanisms associated with the planned economy, has broken down (Xia et al., 2019). Chinese HE institutions have undergone radical reforms, including expansion of student numbers, structural reforms, transformation of curricula and internationalisation of research and teaching activities (Lai et al., 2016). Work intensification and long working hours are common place, under a new system of performance and contract-based employment directly related to student satisfaction, research output and funding (Lai et al., 2016, Xia et al., 2019). Some Chinese academics in Ren and Caudle's (2016) study reported that eldercare contributes to their work-life imbalance.

The increased pressure for eldercare also means that OCP has changed gender dynamics within Chinese families (Whyte and Parish, 1984). In the Communist years, women were encouraged to work full-time and contribute to social progress as much as men. Support, such as communal canteens, childcare and healthcare, were credited for reducing women's WLC (Cooke and Xiao, 2014). With free market economic reform, inflation and increased education, modern Chinese women continue to work and bring income to the family, but receive much less support from the state. Perhaps unsurprisingly then, existing research

reported that woman academics in China believe that they must work double time and their biggest stressor came from balancing demands from both work and family life (Rhoads and Gu, 2012, Zhang, 2010).

In summary, OCP has created a substantial burden of eldercare responsibility, particularly for only-children and particularly for women. WLC has thus become an important concern for both universities and academics.

Theory and hypotheses

Various terms have been used to capture work-life interface, such as work-life balance, work-life conflict, work to family strain, and positive/negative spill-over. These concepts are interchangeable in many ways as they are concerned with how individuals steer between work and life (Minnotte, 2012) and their impact on important employee outcomes e.g. JS (Powell and Greenhaus, 2010). Here, we use WLC and, given the Chinese context and its OCP, discuss the moderating effects of family structure and gender on relationships between WLC, JS and CA for a high-skilled group, Chinese academics. We take each in turn below.

Work-life conflict and job satisfaction

WLC describes a state of struggle to effectively reconcile work and family roles (Greenhaus and Allen, 2011) and is an important influence on JS, which describes an individual's state of positive effect in relation to their workplace experiences (Macdonald and MacIntyre, 1997). Research into JS in China has parallels with Western research in demonstrating that it is an important workplace construct (Authors). The negative relationship between WLC and JS has been well established by role conflict theory (Buonocore and Russo, 2013), which assumes an incompatibility between requirements from work and family within an individual's limited time and resources. Such incompatibility may create a sense of resentment and lead to negative organisational outcomes, when individuals see demands from work are responsible for their lack of time and energy for family life (Daniels and McCarraher, 2000). Existing international research has shown that academics who experience high level of WLC tend to be less satisfied with their job due to an incongruence between work and family roles (Dorenkamp and Ruhle, 2019), thus we might expect WLC to negatively impact JS for Chinese academics.

Research into how family structure affects WLC/JS relationship is rare. Studies so far tend to suggest that fewer adults within household structures intensify this negative relationship (Minnotte, 2012, Ten Brummelhuis and Van Der Lippe, 2010). For example, single-parent families in the US, particularly those led by women, are more likely to experience financial shortage and stress at work (Hernandez and Ziol-Guest, 2009). In China, the WLC/JS relationship is substantially influenced by its ageing population and the 4-2-1 family structure created by OCP. This structure places increased eldercare demands on, particularly, adult only-children and combining work and informal care is likely to intensify the negative relationship between WLC and JS (Plaisier et al., 2015), due to a lack of instrumental and emotional support. Lack of adult siblings creates fewer resources to manage care of both children and older dependents. A smaller extended family also reduces social capital, which is vital in a society emphasising *guanxi*, reciprocal social practices within a person's network of social/family connections (Hwang, 1987). Only-children academics are more likely to have low JS due to WLC given their lack of sibling support to ease work pressure from long hours, anxieties and conflicting demands faced by a post-reform HE system. We thus argue

that being an only-child could increase the negative relationship between WLC and JS and propose that:

H1: Family structure will moderate the negative relationship between WLC and JS, such that this relationship will be stronger for the only-children group than for the with-sibling group.

Gender has operated as a moderator in previous work-life research (Minnotte, 2012, Drummond et al., 2017). We anticipate the same moderating effect in the WLC/JS relationship within the only-children group, as pressures for eldercare are likely to be particularly acute for Chinese women thus increase the effect of WLC on JS. Prior studies both in the West (Zou, 2015) and in China (Huang and Gamble, 2015) have suggested that women's JS is more likely to result from intrinsic rewards, such as balancing work and family, than from extrinsic reward such as pay and promotion when compared to men (Zou, 2015). In China, traditional gender roles persist and requires compliance with cultural norms at home (Author A). Chinese women academics have reported prioritising 'family' over 'work', while their male counterparts expect to allow 'work first', given a conflict between work and life (Ren and Caudle, 2016). Accordingly, we argue that female only-children are expected to assume traditional gender roles as homemakers and take greater responsibility for eldercare than male only-children. Higher family commitments owing to OCP and persistent gender stereotypes in promotion in Chinese universities (Rhoads and Gu, 2012) means WLC may have a greater negative impact on JS within female only-children academics. We hypothesise that:

H2: Within the only-children group, gender will moderate the negative relationship between WLC and JS, such that this relationship will be stronger for women than for men.

Work-life conflict and career aspiration

CA is a self-concept of occupation for an individual shaped by personal beliefs and perceptions about one's capacity, individuals' career actions, performance and outcomes (Rosenberg, 1979). It captures one's career orientation and desire to reach a leadership position, and is of substantial relevance for academics (Bataille et al., 2017). Litzky and Greenhaus (2007) suggest that individuals seeking work-life balance are likely to have lower levels of CA, as they perceive high work demands as incompatible with family life. Cooke and Xiao (2014) argue that culture and context may lead to different perceptions of WLC between Western and Chinese employees. While WLC in the West may be perceived as a failure to care for an individual's significant others, within Chinese work ethics and recent competition in the labour market, Chinese employees tend to accept WLC as a fact of life and link it to their career expectations (Cooke and Xiao, 2014). The commitment-oriented HRM model adopted by Chinese universities and HE reform mean Chinese academics may see WLC as a prerequisite or 'investment in the profession' for achieving good performance and being positively related to career outcomes (Ren and Caudle, 2016, Xia et al., 2019). Moreover, Coso Strong and Sekayi (2018) found that doctoral students are typically trained to deal with conflicting demands and intense struggles throughout the course of their studies. WLC, as a result of intense engagement in academic activities (conducting research, applying for grants, teaching, and networking), can increase academics' perception of their capability and reinforces their career identity and confidence, which in turn lead to higher career expectations. Given pressures in the Chinese HE institutions, we follow Litzky and Greenhaus (2007) to postulate that WLC is positively associated with Chinese academics' CA.

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Changing family structure may moderate the relationship between WLC and CA. Within a Confucian tradition that stresses intergenerational support, most parents make substantial investment in emotional and financial support for their only child, who is expected to reciprocate in the form of eldercare (Tsui and Rich, 2002). The lack of siblings is likely to intensify the WLC/CA relationship, in which only-children may see WLC as a price they must pay in order to reach a higher position, so that they can provide better financial support for parents and grandparents (Wang and Fong, 2009). Conversely, those with siblings can share eldercare responsibilities and may not see WLC as part of achieving CA. Therefore, the ability to tolerate WLC becomes a more critical component of only-children's pathway toward career success. Accordingly, we hypothesise:

H3: Family structure will moderate the positive relationship between WLC and CA, such that this relationship will be stronger for the only-children group than the with-sibling group

We propose gender may again moderate between WLC and CA for only-children. It is widely reported in Western literature that women's career paths are different to those of men, in that women experience more interrupted and fragmented careers and face more barriers advancing to senior management (Powell and Butterfield, 2013). Women's ability to juggle work and life is inextricably associated with their academic career development (Rhoads and Gu, 2012). These factors are particularly relevant to China, where the increased caring responsibilities generated by OCP fall primarily on women according to current Chinese norms (Cooke and Xiao, 2014). Prior research shows that women in Chinese universities choose to abide by social gender norms and push themselves to 'do it all', rather than challenging gender role expectations, to avoid backlash (Ren and Caudle, 2016). Their 'conformist strategy', which is detrimental to their own wellbeing, means that female only-children's career development is more dependent on their ability to withstand WLC, than

male only-children. Thus, sacrificing one's self-enjoyment and family life for work can be viewed as self-sacrifice critical to women's career achievements, or short-term pain for long-term gain for Chinese female academics (Ren and Caudle, 2016). WLC functions as a more important 'filter' to female academics' CA: their ability to handle WLC without dropping out increases their career self-belief and ambition. The higher the WLC, the more capable they perceive themselves to be:

H4: Within the only-children group, gender will moderate the positive relationship between WLC and CA, such that this relationship will be stronger for women than for men.

The research model that contains all the hypotheses is presented in Figure 1.

INSERT FIGURE 1 HERE

Method

Data collection

The study was conducted in three medium-size universities (two in the South-west and one in Eastern China), using a web-based survey. All three universities are ranked within the top 200 Chinese universities. We gained access through our contacts who referred us to three HR managers, who randomly selected and sent the survey link by email to 300 full-time academic staff in each university (from a total of 5,638). In our final sample, which consists of 420 employees, representing a 46.7% response rate, we found moderate-high levels of WLC (mean=3.66). 39.0% participants were only-children; 55.0% were men and 45.0% were women. 35.0% had medium-term tenure of 5-10 years, while 36.0% had tenure of more than 10 years, and 29% less than 5 years. 87.2% were aged between 26 and 50. 40.2% of participants held master degrees and 54.3% held a doctorate. Furthermore, 55.2% were

lecturers or senior lecturers, and 44.8% occupied associate professorship or professorship. All questions were translated independently and a consensus agreed by two Chinese researchers in the research team. This was then reviewed by two local participants, so that the measures were comprehensive and context-appropriate.

Measures

Independent and dependent variables. The independent variable WLC was measured by 10 items from The Industrial Society's Work–Life Checklist (Daniels and McCarraher (2000). A 10-item Generic Job Satisfaction Scale (Macdonald and MacIntyre (1997) was used to measure the first dependent variable JS. The 10-item Career Aspiration Scale (O'Brien (1996) was adopted to measure the second dependent variable. This scale has been used effectively in previous research in the Chinese context (Cheng and Yuen, 2012). To avoid the typical bias in Chinese samples towards the central point (Hui et al., 2004), all measures were assessed with a six-point Likert scale from (1) 'Strongly disagree' to (6) 'Strongly agree'.

Moderators. The main moderating variables of interest are gender (0 = man, and 1 = woman), and family structure (0 = only-child respondent, and 1 = with-sibling respondent).

Control variables. A number of controls at the individual level were included in the model, including age, marriage status, education background, the number of working years, and job position. Before testing the hypotheses, a number of t-tests were conducted to compare the similarity levels in terms of the demographic distributions between the only-children and with-sibling groups.

Analysis and results

We used two models to examine common method bias. Firstly, we followed Harman's single factor test using SPSS (Podsakoff and Organ, 1986). The largest factor explains 31.86% of the variance, indicating no substantial common method bias exists. Secondly, we tested a latent common method factor model in AMOS (Podsakoff et al., 2003). Comparison of the fit indices showed that the model with the latent common method factor had less goodness of fit with the data than the model without it. These analyses indicated that common method bias did not pose any risk or concerns for the results of this study.

Validation of measurement scales

It is good practice to validate scales developed in the West to improve measurements' crosslinguistic reliability and validity, using exploratory and confirmatory factor analysis (Zhou et al., 2012). To assess the factor structure of responses, scales were first subjected to Exploratory Factor Analysis with SPSS 25.0. The EFA results confirmed the factor structure in the proposed model. At this stage, poorly-performing items (i.e., low item-total correlations, high inter-item correlations or cross-loading items) were eliminated. During item removal tests, we considered "the trade-off between the number of scale items (for face validity or construct coverage) or measurement scales that perform well and discriminate" (Farrell, 2010: 326). 24 of the 30 items were retained, comprising 3 factors, which is consistent with the proposed measurement structure.

The psychometric properties of the constructs were then examined by Confirmatory Factor Analysis with AMOS 25.0. The CFA results for the 24-item model in the EFA solution did not demonstrate good model fit (χ^2 /d.f. = 4.34, IFI = .90, TLI = .87, CFI = .89, RMSEA = .09), and attempts were made to improve fit. Six items were removed either due to a low

loading on the intended factor or high cross-loadings on other factors. Their removal may relate to cultural and linguistic reasons. First, some statements (e.g. double negative) are not common in the Chinese language and thus create confusion. Second, item contents (e.g. focusing on individual leisure rather than family) may not be consistent with a collectivist culture and real-life experiences of Chinese participants. The CFA was repeated on the modified 18-item model. The resulting fit indices for this modified model showed improved fit and all indices are adequate ($\chi^2/d.f. = 3.68$, IFI = .94, TLI = .92, CFI = .94, RMSEA = .08).

The validated measures showed good internal consistency and reliability via Cronbach Alphas (WLC Cronbach's $\alpha = 0.91$, JS Cronbach's $\alpha = .85$, and CA Cronbach's $\alpha = .91$). Composite reliability was calculated based on the standardised indicator loadings and measurement errors of each construct. All the constructs had composite reliability values greater than the recommended level of .75 (Table 1). Validity of the measures was assessed by the critical ratios (CRs) and the average variance extracted (Chan et al., 2016). All construct indicators met the recommended criteria, where the CRs were larger than 2.00, statistically significant at the .05 level (Bollen, 1989). Moreover, all constructs had AVE values higher than .50, demonstrating good convergent validity (Fornell and Larcker, 1981). Measurement scales also showed adequate discriminant validity, where all three AVE values were greater than the squared correlations (Fornell and Larcker, 1981).

INSERT TABLE 1 HERE

Hypothesis testing

We tested whether family structure and gender moderated relationships between WLC, JS and CA. To test the moderators, a multi-group approach was used. The objectives of multigroup simultaneous path analysis are to determine (1) whether the path coefficients for the relationships between WLC/ JS and WLC/ CA were equal across the with-sibling and only-children groups (2) within the only-children group, whether the path coefficients for the relationships between WLC/ JS and WLC/CA were equal across the male and female groups. Multiple-path comparisons using AMOS bootstrap function based on 2,000 bootstrap samples and 95% bias corrected confidence intervals were specified. We first constrained one path (i.e., from WLC to JS) to be invariant across both groups and then freely estimated this path. The χ^2 test was used to examine if the path from WLC to JS was different between the with-sibling (β with-sibling = -.03, ns.) and the only-children group (β only-children = -.26, p < .001). The result of χ^2 difference comparison provided evidence that there is a significant difference between these two groups in the relationship between WLC and JS ($\Delta \chi^2 / \Delta d.f. = 6.82$, p < .01), suggesting a significant moderating role from family structure. We also calculated Z scores for path differences between parameters and found that the difference between the two groups was also significant (Z = -264, p < .001). (See Table 2 and Figure 2a). In other words, WLC is stronger on JS in the only-children group. H1 was supported.

Within the only-children group, relationships between WLC and JS were statistically negative for both men and women (β men = -.15, ns; β women = -.32, p < .01). However, the moderation of gender on the WLC/JS relationship could not be supported with insignificant differences in χ^2 over the change of degree of freedom ($\Delta\chi^2 / \Delta d.f. = .12$, ns.). There was no significant difference between men and women (Z = 0.35, ns.) (see Table 2 and Figure 2b). H2 therefore was not supported.

INSERT TABLE 2 & FIGURES 2a AND 2b HERE

We then constrained the path from WLC to CA to be invariant across both with-sibling and only-children groups. WLC was found to be positive on CA for both groups ($\beta_{\text{with-sibling}} = .48$, p < .001; $\beta_{\text{only-children}} = .26$, p < .01). The result of χ^2 difference comparison showed that there is a significant difference between these two groups in the relationship between WLC and CA ($\Delta \chi^2 / \Delta d.f. = 7.07$, p <.01), suggesting a significant moderation by family structure. Such relationship was, however, significantly stronger for the with-sibling group (Z = -2.68, p <.001) (see Table 3 and Figure 3a). H3 was rejected.

We found that within the only-children group, the relationship between WLC and CA was not significant for men ($\beta_{men} = -.05$, ns.). However, there was a significant positive relationship between WLC and CA for women ($\beta_{women} = .48$, p < .001). The result of χ^2 difference comparison showed that there is a significant difference between men and women in this relationship ($\Delta \chi^2 / \Delta d.f. = 12.98$, p < .001), suggesting a significant moderating role by gender. The WLC/CA relationship was significantly stronger for women than for men (Z = -3.65, p < .001) (see Table 3 and Figure 3b). H4 was therefore supported.

INSERT TABLE 3, FIGURES 3a, AND 3b HERE

Discussion and Conclusions

The effect of China's controversial OCP in contemporary workplaces provides a unique opportunity to explore novel aspects of work-life interface. More specifically, we tested the moderating role of family structure (Voydanoff, 2005) in the relationships between WLC/JS and between WLC/CA. We also examined whether gender moderated the above relationships particularly in the only-child group. This study was conducted in the context of Chinese HE, which has undergone radical reform (Lai et al., 2016), with academics frequently

experiencing work intensification and long working hours (Lai et al., 2016, Xia et al., 2019). Our results partially support the hypothesised model.

Our findings show that WLC reduces JS for only-children, though not those with siblings. This partially supports existing studies largely conducted in the West, which tend to suggest a negative relationship between WLC and JS (Buonocore and Russo, 2013). Importantly, it evidences significant differences between the only-children/with-sibling groups, supporting the view that OCP and its resultant family structure effect only-children's work and life. Within the only-children group, however, gender does not moderate between WLC and JS. There are two possible explanations. First, we tentatively propose that family structure and educational background of university academics have a stronger impact than gender difference on shaping only-children's work experiences. Second, reduced family resources in the 4-2-1 family structure may create an expectation that both men and women will have to engage in work and family roles, albeit impacting differently on their careers as noted in the WLC/CA relationship.

Second, our results confirm that family structure moderates the positive relationship between WLC and CA. Surprisingly, however, this relationship is stronger for the with-sibling group, despite our expectations that only-children would be more tolerant to WLC in order to achieve CA, due to the greater parental support and the higher expectations created by being the sole focus of parental attention (Strom et al., 1996), and experience greater WLC to fulfil these aspirations. One possible explanation is that OCP has increased family ties. Only-children have been found to be more reliant on parents (Cameron et al., 2013) and this reliance may extend into adulthood, meaning they reduce WLC despite their CA in order to fulfil caring responsibilities. Another explanation may be that our with-sibling sample tends to be more advanced in their career stage and thus face much higher levels of pressure to

produce research outputs and obtain research funding than earlier career researchers in the current Chinese HE system (Lai et al., 2016).

Another important issue identified here is the moderating role of gender between WLC and CA within the only-children group. While Western research evidences that women are more likely to suffer from WLC (Greenhaus and Beutell, 1985), our results further suggest that, for female only-children, higher levels of WLC lead to increased CA. Gender dynamics are changing in modern China. Women's identities include their work roles, care roles and reproductive roles (Leung, 2002). As modern educated women, female only-children academics are thus more likely to withstand WLC in achieving their CA due to the reemergence traditional gender roles (Cooke and Xiao, 2014). This is also reflected in our data that show male only-children occupy more senior positions than female only-children.

This study makes empirical contributions to the emerging understanding of WLC, JS and CA in a Chinese context, and particularly HE. It also makes a number of contributions both theoretically and empirically. First, within work-life literature, although there has been a recognition that family can be a source of both resource and demands (Powell and Greenhaus, 2010), little research has examined how family structures influence the work-life interface. By testing their moderating effects, we highlight that changing family structures raise concerns in the work domain. Being an only-child can be both beneficial and problematic within a 4-2-1 family structure. Compared with those who have siblings, only-children receive more parental career guidance and emotional support. Yet they also face greater pressure in eldercare and access less emotional and physical support from siblings. Consequently, WLC has a significant impact on their JS.

Second, this study contributes to the understanding of gender role dynamics in the context of changing family structure and work-life interface. Drawing on gender role theory (Eagly et al., 2000), we show that being a woman intensifies the relationship between WLC and CA due to the lack of sibling support. For many modern, educated female only-children, this career-family dilemma results in women 'doing it all', given the smaller family network and support available. While actively engaging in professional work reinforces women's career identity, evidence in the present study indicates that female only-children's career development may increasingly rely on their acceptance of WLC as a prerequisite. This is particularly so in a substantially reformed HE system that requires long working hours as a prerequisite to career success (Lai et al., 2016, Xia et al., 2019).

A third contribution is that our study provides sociological understanding of only-children's work experience. Despite OCP's profound impacts on many aspects of Chinese society, no studies, to our knowledge, have examined the impact of 4-2-1 family structure in the workplace. Our study fills this significant gap in international HRM research by offering empirical evidence on how only children experience work-life domains in the face of an ever aging population and changing family structures. We argue that OCP produced a generation of employees that experience 'sibling deprivation'. As the only-child, they are expected to provide eldercare to aging parents and grandparents like previous generations within a Confucian tradition of filial piety. These issues are likely to detract from employees' quality of life and their relationships both at work and at home (Powell and Greenhaus, 2006).

Fourth, our findings serve to develop understanding of key aspects of work-life interface of high-skilled employees in Chinese labour markets, beyond the HE context. Global competition and the transition from a manufacturing-based to a more knowledge-intensive economy (OECD, 2016) means this group will be key to economic developments in the

coming decades. Similar to studies conducted with professionals elsewhere (Powell and Greenhaus, 2006, Sturges, 2012), our study reveals that work-life conflict is dominant in university academics, especially women, seeking to realise their career ambitions. Academics work long hours and often experience difficulties of disengaging even at home (Ren and Caudle, 2016). Managing work-family interface is thus crucial to their physical and mental wellbeing.

Implications and limitations

Given that work and family domains are highly permeable (Voydanoff, 2005), we argue that consideration of OCP's implications for only-children academics is both important and neglected. Our results have significant implications for society, Chinese organisations (particularly universities) and employees. At the societal level, this research suggests that men and women of the only-children generation are facing substantial pressures in the work-family interface. Traditional Chinese gender roles dictate that women take responsibility for raising children and caring for the elderly and men for succeeding at work and providing for the family. Thus, female only-children employees are more likely to be affected by the relationship between WLC and CA. Policymakers should consider support mechanisms to enhance the ability of only children (especially women) to remain in and be effective members of the labour market, thus supporting the national economy. Western governments have adopted varied approaches here and careful attention to design will be required. One such avenue could be a continued reform of the Chinese pension system and medical insurance systems to ensure retirees are properly protected. Another potential avenue could be to increase the availability and services of care institutions particularly in rural areas.

For academics, we demonstrate important differences between those with siblings and those without. This poses challenges for both universities seeking to improve staff wellbeing and for wider society. Western universities have provided support to improve WLB and have seen a range of positive responses, including improved retention. Chinese universities can learn much from this and are advised to develop appropriate policies (e.g. part-time work, institutional support and eldercare counselling) to ensure that they are well-placed in competitive labour markets (Ren and Caudle, 2016; Xia et al. 2019). More widely, a review of workload model and career pathways is advised, following Western research (Atkinson, *et al.* 2018) to ensure that university working practices, that, for example, require long working hours, do not embed disadvantage to those with caring responsibilities and preclude female career success.

Although this study was conducted in China, its findings may have wider international relevance. Globally, falling birth rates and the increased prevalence of only-children in the workplace have posed considerable challenges. The general trend in many countries is towards an aging population, albeit the underlying reasons (e.g. change of lifestyle, women's increased participation at work, and lack of affordable housing) may be different (Nargund, 2009). While the long-term solution may be to support an increasing birth rate, short term, governments must develop policies to cope with this phenomenon and support a shrinking pool of young (often only-children) workers (Li et al., 2017). Organisations should equally implement creative practices to attract, motivate, develop and retain this cohort, given their pressure in eldercare and vulnerability in socialisation.

This study has limitations. First, it was constrained by a single-sector and cross-sectional sample of modest size. Second, age and tenure differences between with-sibling and onlychildren groups means we were unable to control for these life stage factors, which may influence respondents' perceptions of WLC, CA and JS. Third, existing scales measuring the work-life interface do not recognise the impacts of eldercare. Fourth, this study focuses on potential demands of eldercare from (grand)parents, who can also be potential sources of support in Chinese families. A number of potential directions for future research may be suggested. Theoretically, future research could develop work-life interface scales which capture the demands of eldercare. More research is needed to explore WLC and include other attitudinal parameters, such as trust, commitment, and perceptions of intrinsic/extrinsic motivations, to further understand only-children's work-family interface. Moreover, future research can also investigate potential support (e.g. childcare, cooking and chores) onlychildren receive from their (grand)parents in the work-life interface. Methodologically, our data were collected with educated urban individuals working in academia. Thus, future research can examine a larger sample, which includes workers at different industrial sectors and from rural areas to extend understanding of only-children workers. Alternatively, qualitative methods (e.g. in-depth interviews) may gather rich insights into the problems of combining eldercare, gaining JS and achieving CA for only-children.

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