High performance work system (HPWS) and Clinician wellbeing: evidence from Chinese hospitals

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ABSTRACT The objective of this study was to address the recent call to restore employees’ wellbeing to the heart of the high performance work system (HPWS) research through investigating the effects of HPWS on the major dimensions of work-related wellbeing, i.e. emotional exhaustion, work engagement and job satisfaction. Based on a sample of 207 doctors and nurses in China, we introduced the perceived nature of the employee-employer relationship as a moderator to understand the complex mechanisms through which HPWS influence employee wellbeing. The findings demonstrated that it is not unconditional or inevitable that HPWS would lead to work engagement. HPWS may lead to work engagement or emotional exhaustion, depending on employees’ perceptions of the nature of the employee-employer relationship. The economic exchange perception may increase the possibility that HPWS leads to employees’ emotional exhaustion, while the social exchange perception may decrease the possibility that HPWS leads to employee work engagement.

Key words: Burnout, China, HPWS, Job satisfaction, work engagement

INTRODUCTION

High performance work systems (HPWS) refer to “an internally consistent set of policies and practices that ensure that a firm’s human capital (employees’ collective knowledge, skills, and abilities) contributes to the achievement of business objectives” (Huselid et al., 1997:171). In the past two decades, human resource innovation has been dominated by HPWS studies (Delbridge & Keenoy, 2010; Drummond & Stone, 2007; Sparham & Sung, 2007). Researchers (c.f., Appelbaum et al., 2000; Huselid, 1995; Huselid et al., 1997; Wright et al., 2003; Theriou & Chatzoglou, 2009) are eager to identify a set of universally applicable HR best practices, and demonstrate the positive influences of these HR practices on financial performance through eliciting desirable HR outcomes such as a higher level of organizational commitment and extra-role behaviors of employees.

Although there is an ever-increasing emphasis on examining the nature of high performance work practices and their effects on performance, many inconsistencies and deficiencies still remain in this field (Chaudhuri, 2009a; Guthrie, 2001; Tsai, 2006), and the HPWS research has received considerable criticism in recent years. The major criticisms include the lack of a critical attitude towards the effects of HPWS on stakeholders especially employees (Boselie, Brewster, & Paauwe, 2009), and ‘highly management-centric standpoint’ which privileges management goals over employee wellbeing (Boselie, Dietz, & Boon, 2005:73; Conway & Monks, 2009; Macky & Boxall,
2007). The ‘management-centric standpoint’ is evident in the narrow economic perspective of HPWS research, focusing on improving the efficiency and effectiveness of HR practices (Boxall & Macky, 2009; Delbridge & Keenoy, 2010; Godard, 2004), while “the effects of HPWPs on employees, instead of organizations, received less research attention” (Kroon, Voorde, & Veldhoven, 2009:510; Macky & Boxall, 2007; Kalmi & Kauhanen, 2008; Peccei, 2004; Sparham & Sung, 2007). Few studies on HPWS have focused on the effects of employees’ wellbeing (Kroon et al., 2009).

Panic about the scenario that most researchers take a shareholder perspective, rather than a stakeholder perspective to HPWS studies, some scholars (e.g. Boselie et al., 2005; Delbridge & Keenoy, 2010) call for more employee-centred research, aiming to restore the effects of HRM on employees to a more central position of the HPWS studies. Paauwe (2009:130) called for “a more balanced approach that pays equal attention both to the managerial, functionalist perspective and to the concerns, involvement, and wellbeing of employees” so as to avoid the marginalization of employee outcomes in HPWS research.

Echoing the concerns of Paauwe (2009) and others (Boselie et al., 2005; Delbridge & Keenoy, 2010), this paper set out to close the gap through examining the employee outcomes of HPWS. Given that few studies on HPWSs have focused on the effects of employees’ well-being (Guest; 2002; Kroon et al., 2009; Qiao, Khilji, & Wang, 2009; Peccei, 2004), especially on the negative wellbeing effects such as employee burnout (Kroon et al., 2009), this paper will specifically examine the effects of HPWS on the major components of employees’ work-related wellbeing - burnout and job satisfaction. The limited studies exploring the impact of HPWS on employee burnout report mixed findings (Kroon et al., 2009), suggesting that the relationship between HPWS and burnout is neither direct nor unconditional. Therefore, this study introduces two opposite mechanisms into the HPWS-wellbeing linkage, to examine whether economic and social exchange relationships between employee and management can provide a theoretical explanation for the mixed findings.

THEORETICAL THINKING AND HYPOTHESIS DEVELOPMENT

According to Sparham and Sung (2007:4), “the nature of the impact of HPWP on employees is not clear and remains highly contested”. Generally, there are two competing perspectives about the
impacts of HPWS on employee wellbeing: the unitarist perspective and the pluralist perspective (Boselie et al., 2009; Sparham & Sung, 2007). Unitarists tend to overlook or downplay the conflicting interests of employers and employees. They believe that organizational goals are aligned with employees’ interests. Therefore, management and employees will work collaboratively towards the shared common goals. HPWS, as the HR best practices which are universally applicable, are definitely in the interest of both management and employees, and thus good for both parties (Appelbaum et al., 2000; Bartel, A. 2004; Freeman & Kleiner, 2000). For unitarists, it is impossible that HPWS approaches have negative impacts on employee wellbeing (Osterman, 2000).

The pluralist perspective, by contrast, adopts a negative view about the influence of HPWS on employee wellbeing (e.g. Godard, 2001; 2004; Green, 2006; Legge, 1995; Ramsay et al., 2000). Pluralists recognize the fundamental division of interest between employers and employees. They do not take for granted that organizational goals are always aligned with employee wellbeing and emphasize the possible negative impact of HPWS on employees (Boxall and Purcell, 2008; Janssens and Steayert, 2009; Keenoy, 1997; Paauwe, 2004). Some pluralists, based on the ‘exploitation hypothesis’, argue that HPWS practices that pursue high organizational performance may intensify job demands, which will lead to job dissatisfaction, stress, emotional exhaustion, and work disengagement (Godard, 2001; Ramsay et al., 2000).

The limited empirical research about the impact of HPWS on employee wellbeing also report mixed or even contradictory findings (Kalmi & Kauhanen, 2008; Kroon et al., 2009; Peccei, 2004; Ramsay et al., 2000). For example, using data from 1998 Workplace Employee Relation Survey in Britain, Ramsay et al. (2000) find little support for either the unitarist or the pluralist perspective. Using the same data, Peccei (2004) finds that HPWS practices tend to have a positive impact on employee wellbeing. However, he also acknowledges that the HPWS practices that help to improve employee wellbeing are not the same as those commonly used in HPWS literature. Based on the data from Finland, Kalmi and Kauhanen (2008) argue that HRM innovations generally lead to beneficial outcomes for employees. Goddard (2001) finds that some HPWS practices such as job rotation or multiskilling have no significant relationship with job satisfaction; some practices such as team
autonomy have negative relationship with job satisfaction. Macky and Boxall (2007) demonstrate that HPWS practices are positively related to job satisfaction.

The opposing claims and the mixed findings regarding the relationship between HPWS and employee wellbeing suggest three possible explanations. First, the effects of HR practices on employee wellbeing is rather complex. The statistical models used to examine the relationship between HPWS and employee wellbeing are “too simplistic to capture the complex reality of implementation and operation of HPWS” (Ramsay et al., 2000:521).

Second, it is impossible that there is only one HPWS model in practice and in all major countries. There is no consensus, even among researchers, on what constitutes an HPWS, let alone HR practitioners and managers. In practice, since there are different understanding of HPWS, different aims to adopt HPWS, and various noises and deviations in implementing HPWS across firms, different HPWS models are introduced across firms with different aims and implemented in different ways. Theoretically, there are at least two types of HPWS in practice. One is the profit-oriented HPWS. Firms introduce HPWS as a tool to boost financial performance (Sparham & Sung, 2007). It is possible that such a profit-oriented HPWS is implemented through sacrificing the interests of employees. Such an HPWS is more likely to produce burnout and job dissatisfaction (Ramsay et al., 2000; Sparham & Sung, 2007). Another type of HPWS can be a win-win HPWS (Kalmi & Kauhanen, 2008; Sparham & Sung, 2007). Firms adopt such an HPWS aiming to enhance performance through eliciting positive employee outcomes such as high commitment, job satisfaction and extra-role behaviors. Such an HPWS could not be implemented at the cost of employees and is thus less likely to lead to burnout and job dissatisfaction. Therefore, it is untenable to generalize the unitarist or pluralist perspective to all firms without examining the nature of the HPWS in different firms.

Third, the relationships between HPWS and employee wellbeing are neither direct nor unconditional. In other words, the effects of HPWS on employee wellbeing may be mediated and moderated by other variables. Examining HPWS-wellbeing linkage without exploring underlying mediating and moderating variables could not capture the complex relationships.

Following these lines of thinking, we introduce economic exchange and social exchange as moderators between HPWS and employee wellbeing. The rationale for doing so is that exchange
plays a central role in employment relationships (Shore et al., 2006) such as organizational commitment, psychological contract and perceived organizational support. Economic exchange here refers to financially oriented, impersonal and short-term interactions, involving little social and emotional aspects of the employment relationships such as feelings of obligation and trust (Shore et al., 2006). Social exchange refers to the long-term oriented employment relationship with “open-ended and diffuse obligations”, involving mutual emotional investment and trust between employers and employees (Shore et al., 2006:839).

We hypothesize that HPWS variations could lead to different employer-employee exchange relationships. A profit-oriented HPWS, “as an alternative approach to maximizing the contribution of workers to production, [although] overcomes the limitation of Taylorist deskillling and direct control” (Ramsay et al., 2000:504), might make employees perceive that their employers are overemphasizing the economic exchange aspect of the employment relationships. This will make those employees who hope to develop a long-term and open-ended relationship with the employer feel frustrated. If employees perceive higher level of economic exchange in HPWS practices, they might interpret the HPWS as a new method of exploration and will instinctively turn against it. By contrast, a win-win HPWS could make employees perceive that their employer is emphasizing the social exchange through higher level of organizational investment in employees.

Based on equity theory (Adams, 1965), social exchange theory (Blau, 1964) and psychological contract theory (Rousseau, 1996), we hypothesize that the perceptions of employees about the nature of their exchange relationships with their employers will influence their emotions, attitudes, health and performance. Specifically, the perceived nature of the exchange relationships with employers will influence employees’ burnout and job satisfaction.

Burnout is defined as a psychological syndrome characterized by emotional exhaustion, disengagement and reduced personal accomplishment (Maslach, 1982:3). Empirical findings has revealed that high levels of exhaustion and low levels of work engagement constitute the core dimensions of burnout, while reduced personal accomplishment is not a separate burnout dimension (Demerouti, Bakker, Vardakou, & Kantas, 2003; Demerouti, Mostert, & Bakker, 2010). Therefore, the new instrument - the Oldenburg Burnout Inventory (OLBI), which is developed to overcome the
weaknesses of the Maslach Burnout Inventory (MBI) in measuring burnout, includes only two core dimensions: exhaustion and work engagement (Demerouti et al., 2003; Halbesleben & Buckley, 2004). Exhaustion refers to “a depletion of emotional resources” as “a consequence of intensive physical, affective and cognitive strain” (Demerouti et al., 2010:210; Halbesleben & Buckley, 2004:859). Work engagement refers to “a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption” (Demerouti et al., 2010:210). The reverse-coded work engagement represents the level of disengagement from work, which is defined as “distancing oneself from one’s work and experiencing negative attitudes toward the work object, work content, or one’s work in general” (Demerouti et al., 2003:14). According to Maslach and Leiter (1997), exhaustion and work engagement are assumed to constitute the opposite poles of a continuum of work related wellbeing. Although burnout has been a pervasive organizational problem and “has significant costs in terms of health and organizational consequences” (Halbesleben & Buckley, 2004: 874), there has been little research exploring how to reduce burnout through appropriate HRM strategies (Halbesleben & Buckley, 2004; Kroon et al., 2009).

Since the early 1990s, Buunk and Schaufeli (1993) made an attempt to explain burnout with social exchange theory and assume that burnout is caused by lack of reciprocity in organizations where the psychological contracts are violated and the balance between investments and outcomes is disrupted. Based on social exchange theory and psychological contract theory, we assume that the perceived nature of the exchange relationship between employees and employers moderates the relationship between HPWS and burnout. If employees expect to build a relationship of social exchange with the employer, but they perceive that the relationship with the employer is de facto an economic exchange in nature, the employee will perceive that the gains from the employer are not proportional to their expectations and inputs. This might lead to emotional exhaustion, job dissatisfaction, and disengagement from work (Robinson & Rousseau, 1994; Schaufeli, 2006). By contrast, if employees expect to develop a relationship of economic exchange with the employer, but they perceive that the employer is pursuing to create a social exchange relationship, the employee might feel the need to reciprocate with positive behaviors toward the employer (Shore & Barksdale,
1998; Schaufeli, 2006). Following the above lines of reasoning, this research will test the following hypotheses:

**Hypothesis 1**: The perceived nature of the exchange relationship between employees and employers moderates the relationship between HPWS and employees’ emotional exhaustion. The perception of economic exchange may increase the possibility that HPWS leads to employees’ emotional exhaustion, while the perception of social exchange may reduce the possibility that HPWS leads to employees’ emotional exhaustion.

**Hypothesis 2**: The perceived nature of the exchange relationship between employees and employers moderates the relationship between HPWS and employees’ work engagement. The economic exchange perception may decrease the possibility that HPWS leads to employees’ work engagement, while the social exchange perception may increase the possibility that HPWS leads to work engagement.

**Hypothesis 3**: The perceived nature of the exchange relationship between employees and employers moderates the relationship between HPWS and employees’ job satisfaction. The economic exchange perception may decrease the possibility that HPWS leads to employees’ job satisfaction, while the social exchange perception may increase the possibility that HPWS leads to job satisfaction.

**Hypothesis 4**: Employees’ job satisfaction is negatively associated with their emotional exhaustion. Satisfied employees are less likely to be emotionally exhausted.

**Hypothesis 5**: The level of employees’ work engagement is positively associated with their job satisfaction.

The hypothesized model is presented in Figure 1.

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**METHOD**

**Sample and Procedure**

This research chose Chinese hospitals that have adopted HPWS practices as the empirical context to examine the HPWS-wellbeing linkage. The primary reason to select Chinese hospitals as our
empirical context is that China is a country where employees’ burnout has not received much research attention in the past. Another reason is that employee burnout, according to Maslach (1982:3), is more likely to “occur among individuals who do ‘people work’ of some kind”. Although empirical studies have found that Chinese hospitals are undergoing significant reforms in recent years through introducing new managerial practices such as HPWS (Yan & Liu, 2012). There is no evidence that most Chinese hospitals have adopted HPWS since HPWS practices have been regarded as “risky and costly, and sometimes unattainable” (Aghazadeh & Seyedian, 2004:60) even in Western industrialized countries. Therefore, a purposive sampling technique (Marshall & Rossman, 1999) was adopted to select sample hospitals with the help of local authority of public health. After a pilot study, we found six large hospitals are basically HPWS adopters in Nanjing, the capital city of Jiangsu province. They were the logical choice for this empirical study.

The data was collected through a questionnaire survey. The questionnaire was designed in English and translated into Chinese and then back-translated into English by two bilingual researchers to ensure equivalency of meaning (Brislin, 1980). Of the 500 questionnaires distributed, 254 were completed and 207 usable surveys were obtained, constituting a 41 per cent response rate. Of the 207 respondents, 63.3% were female; 84% were in the 25-50 age group; 66.7% were married; 93.7% had at least some college education; And over 88.4 percent of them earned a monthly salary of more than RMB 2000 (around 313 US dollars). The respondents comprised a range of occupations: 14% were nurses, 18.4% were doctors, 19.8% were technical staff or service workers, 22.2 % were administrative staff, and 25.6% were supervisors, middle or senior managers. The respondents’ average length of service with the hospitals was 10.93 years (See Table 1).

Measures

Table 2 summarizes the means, standard deviations, correlations and scale reliabilities for the variables in the study. All variables were measured with prevalidated multi-item scales using a five-point Likert-type scale as a response format (e.g. 1= “strongly disagree” and 5= “strongly agree”).

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Insert Table 1 about here

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Confirmatory factor analysis revealed that all multiple item measures had good discriminant and convergent validity.

HPWS. Since there is no single agreed list of HPWS practices which constitute an HPWS, a 10-item HPWS practice measure was developed. It covers the major components of HRM functions such as recruitment, training, compensation, employee participation, and job security. The developed measure drew upon an extensive literature review, especially the work of Huselid (1995), Delery and Doty (1996); Wright et al. (2003) and Datta et al., (2005). Sample items included “My employer pays better than competitors”. The scale’s alpha reliability in this study is .92.

Emotional exhaustion. We used the OLdenburg Burnout Inventory (OLBI) developed by Demerouti and colleagues (2003) to measure emotional exhaustion. The four items of the exhaustion subscale are generic and refer to general feelings of overtaxing from work, a strong need for rest, and a state of physical exhaustion. Response options ranged from 1 (strongly disagree) to 5 (strongly agree). Sample items are “There are days when I feel tired before I arrive at work”. The scale’s alpha reliability is .85.

Work engagement. We used the OLdenburg Burnout Inventory (OLBI) developed by Demerouti and colleagues (2003) to measure work engagement. This subscale comprises four items, including “When I work, I usually feel energized”. The scale’s alpha reliability is .73.

Job satisfaction. A 3-item scale developed by Cammann, fichman, Jenkins and Klesh (1979) was used to measure job satisfaction. Response options ranged from 1 (strongly disagree) to 5 (strongly agree). Sample items are “All in all, I am satisfied with my job”. The scale’s alpha reliability is .69.

Economic exchange. We measured the perceived nature of economic exchange between employers and employees with a 9-item scale developed by Shore et al. (2006). Response options ranged from 1 (strongly disagree) to 5 (strongly agree). Sample items include “The most accurate way to describe my work situation is to say that I give a fair day’s work for a fair day’s pay”. The scale’s alpha reliability in this study is .91.
Social exchange. We measured the perceived nature of social exchange between employers and employees with an 8-item scale developed by Shore et al. (2006). Response options ranged from 1 (strongly disagree) to 5 (strongly agree). Sample items include “My relationship with my organization is based on mutual trust”. The scale’s alpha reliability in this study is .89.

Analytical Technique
we use SEM to examine the hypothesized model, including the moderating effects of the perceived economic and social exchange relationships between employees and employers. Following Anderson and Gerbing’s (1988) suggestion, a two-step analytical approach was adopted. The adequacy of our measurement model was first tested by conducting confirmatory factor analysis (CFA) using AMOS 18 (Arbuckle, 2009). SEM was then performed to estimate the fit of the hypothesized model to the data. We compared our hypothesized model to a series of nested models and chose the best-fitting model by comparing the goodness of the fit of the models.

To test the model fit, multiple model fit indices were reported as generally suggested by SEM scholars (Browne & Cudeck, 1993; Hu & Bentler, 1998) including the chi-square goodness-of-fit to degrees-of-freedom ratio ($\chi^2$/df), the root mean square error of approximation (RMSEA), the standardized root mean square residual (SRMR), the Normed Fit Index (NFI), the Tucker-Lewis coefficient (TLI), and the comparative fit index (CFI).

RESULTS
The results of the CFA indicated that our hypothesized six-factor measurement model showed acceptable fit with the data, $\chi^2 (638) = 913.28, p < .05; \chi^2$/df = 1.43. RMSEA = .046, SRMR = .073, TLI = .92, and CFI = .93. Standardized coefficients from items to factors ranged from .46 to .87. All the regression weights were significant ($p<.001$), indicating the posited relationships among indicators and constructs and thus the convergent validity (Hair, Anderson, Tatham, & Black, 1998).

Table 3 presents the results of the test of our structural model. We used a series of nested models to examine the fit of our structural model. Our hypothesized model (Model 1), in which economic and social exchange perceptions moderated the relationship between HPWS and employees’ emotional
exhaustion, work engagement and job satisfaction, fit the data well, \( \chi^2 (1) = .949, p > .05 \); RMSEA = .000, SRMR = .0049, TLI = 1.002, and CFI = 1.000. However, the estimates of Model 1 showed that although employees’ economic and social exchange perceptions moderated the relationship between HPWS and work engagement, as well as the relationship between HPWS and job satisfaction, the effects were insignificant. Model 1 also demonstrated that employees’ economic exchange perception was negatively related to job satisfaction, and work engagement was negatively associated with emotional exhaustion, but the paths were all insignificant. Therefore, based on the parsimony principle that a model should be as simple as possible, we followed Kelloway (1998) to improve the initial hypothesis model through removing some insignificant paths one by one and compared the model fit statistics of the models to find the alternative best-fitting model (Model 2). The insignificant paths from HPWS to emotional exhaustion and from work engagement were not removed because of the technical requirements to test moderating effects. The model fit statistics can be seen in Table 5 and the test results for the final model are shown in Figure 2. Table 5 showed that the removal of the insignificant paths improved the model without hurting the model fit statistics, \( \chi^2 (9) = 13.45, p > .05 \); \( \chi^2/df = 1.49 \), RMSEA = .049, SRMR = .047, NFI = .98, TLI = .98, and CFI = .99. Therefore, model 2 is preferred as it explains the data with fewer parameters (Burnham & Anderson 1998).

The results of Model 2 showed that the perceived nature of the relationship between employees and employers was a very important factor influencing employee wellbeing. Employees’ emotional exhaustion would increase if the relationship between employees and employers was perceived by employees as an economic exchange. Such a perception went up by 1, the level of emotional exhaustion would increase by 0.39 \((p < .001)\), while the level of work engagement would decrease by 0.40 \((p < .001)\). By contrast, if the relationship was perceived by employees as a social exchange, the
level of work engagement would increase ($\beta = .19, p < .01$), the level of emotional exhaustion would decrease, although the effect was not significant ($\beta = -.02, ns$).

The results of Model 2 demonstrated that HPWS positively associated with employees’ work engagement ($\beta = .58, p < .001$) and job satisfaction ($\beta = .48, p < .001$). This finding supported the mainstream unitarist view, suggesting that HPWS, as an innovation in human resource management, could foster employees’ work-related wellbeing. However, our data revealed that it is not unconditional and inevitable that HPWS will lead to work engagement. Even though not significant, HPWS positively associated with emotional exhaustion as well, suggesting that the pluralist perspective were not entirely groundless and impossible. HPWS had the potential to increase employees’ emotional exhaustion. Moreover, our data showed that the relationship between HPWS and employees’ emotional exhaustion was moderated by the perceived nature of the exchange relationship between employees and employers. If the relationship between employees and employers was perceived by employees as an economic exchange, the possibility that HPWS led to emotional exhaustion would increase. Our data showed that the perception of economic exchange went up by 1, the possibility that HPWS led to emotional exhaustion would increase by 0.15 ($p < .05$). By contrast, if the relationship was perceived as a social exchange, the possibility that HPWS led to emotional exhaustion would decrease. When the social exchange perception went up by 1, the possibility that HPWS led to emotional exhaustion would decrease by 0.12 ($p < .05$). These findings support our hypothesis 1, suggesting the effects of HPWS on employees’ wellbeing was not direct and complex.

Our finding showed that the economic exchange perception and the social exchange perception also influenced the possibility that HPWS led to work engagement or job satisfaction. However, the effects were not significant. Therefore, the hypotheses 2 and 3 were not supported statistically.

The results of Model 2 showed that employees’ job satisfaction is negatively associated with emotional exhaustion ($\beta = -.38, p < .001$), indicating that satisfied employees were less likely to be the victims of emotional exhaustion. The level of employees’ work engagement was positively associated with their job satisfaction ($\beta = .45, p < .001$), demonstrating that work engagement, as “an individual’s [continuous and positive] experiences resulting from the work” (Christian, Garza, & Slaughter, 2011:97), would lead to the positive evaluation about and attitude toward their jobs.
Therefore, our hypotheses 4 and 5 were supported, indicating that the relationship between work engagement and employees’ emotional exhaustion was fully mediated by job satisfaction.

**DISCUSSION AND CONCLUSION**

This study sought to address the recent call to restore employees’ wellbeing to the heart of HPWS research (Boselie et al., 2005; Delbridge & Keenoy, 2010; Paauwe, 2009). It investigated the effects of HPWS on the major dimensions of work-related wellbeing, i.e. emotional exhaustion, work engagement and job satisfaction. Through exploring the moderating effects of the perceived nature of the employee-employer relationship on the employee outcomes of HPWS, this research aimed to understand the complex mechanisms through which HPWS influences employees’ wellbeing. The findings demonstrated that it is not unconditional and inevitable that HPWS will lead to work engagement. In other words, HPWS had the potential to lead to work engagement or emotional exhaustion, depending on employees’ perception of the nature of the employee-employer relationship. The economic exchange perception could increase the possibility that HPWS led to employees’ emotional exhaustion, while the social exchange perception could decrease the possibility that HPWS led to employees’ work engagement. Given that HPWS could not be implemented in a vacuum and influenced by many factors, the variations of HPWS in terms of motives, understanding, designs and implementations could lead to different perceptions and responses among employees. Therefore, HPWS, as an innovation in HRM, needs to be carefully managed and continuously improved. It is arbitrary to conclude that HPWS would inevitably foster the wellbeing of all employees and that it is a one-time event to introduce HPWS into HR management.

This research has significant theoretical implications. It contributes to the growing HPWS literature in several ways. First, it is an effort to bring back employees’ wellbeing in HPWS research. Second, it emphasizes that there are different types of HPWS in practices due to the variations in the motives, understanding, designs and implementations of HPWS. Different HPWS could have different effects on employees’ wellbeing. Therefore, cautions are required when generalizing either the unitarist or the pluralist statement before examining the HPWS variations. Third, it reveals that the effects of HPWS on employees’ wellbeing are neither direct nor unconditional.
Some practical implications for HRM practitioners can be drawn. The analysis revealed that HPWS can lead to both work engagement and emotional exhaustion, suggesting that different types of HPWS exist, which could lead to different employee outcomes. It also suggests that it is dangerous for employers simply to adopt new HR practices without understanding the impact on employees.

Given that the implementations of HPWS can be influenced by many factors such as government policies, variations in HPWS across organizations cannot be avoided and will lead to different results. Therefore, organizations should carefully scrutinize and manage their HPWS practices, and avoid take it for granted that HPWS will inevitably lead to desired employee outcomes. The analysis also revealed that the perceived nature of the employee-employer relationship influences HPWS effects and employees’ work engagement, emotional exhaustion and job satisfaction. Therefore, organizations should carefully manage the relationship with their employees and make an effort to create a social exchange perception among employees.

The study has several limitations. The first concern is the threat of common method bias (Podsakoff et al., 2003) as discussed in the Method section. Even if some scholars (c.f., Malhotra, Kim & Patil, 2006; Spector, 2006;) believe that the issue of CMB might have been exaggerated since it does not change the relational patterns among variables, CMB cannot be ruled out completely given that self-report measures were one of our methods to collect data in the same measurement context (Podsakoff et al., 2003). This means that awareness of the CMB issue remains necessary in interpreting the findings. Since employees are the best judges of their own wellbeing, it is difficult not to use self-report measures when studying wellbeing. Future studies could reduce CMB concern through introducing a time lag between the measurement of the predictor and criterion variables, and utilizing different response formats (Podsakoff et al., 2003).

The second limitation is the narrow data source: all data were collected from hospitals in one city of China, which might have reduced variation among responses, suggesting the need for caution with generalizations. With more Chinese firms adopting HPWS, future studies will overcome this limitation through extending the research scope to other industries and regions.
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Table 1 Profile of Respondents

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</tr>
<tr>
<td>Position</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurse</td>
<td>29</td>
<td>14.0</td>
</tr>
<tr>
<td>Doctor</td>
<td>38</td>
<td>15.8</td>
</tr>
<tr>
<td>Technical/service worker</td>
<td>41</td>
<td>19.8</td>
</tr>
<tr>
<td>Administrative staff</td>
<td>46</td>
<td>22.2</td>
</tr>
<tr>
<td>Supervisor/middle &amp; senior manager</td>
<td>53</td>
<td>28.2</td>
</tr>
<tr>
<td>Total</td>
<td>207</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 2 Correlations and Cronbach’s Alpha Coefficients

<table>
<thead>
<tr>
<th>Variables</th>
<th>Means</th>
<th>S.D.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. HPWS</td>
<td>3.54</td>
<td>.99</td>
<td>(.92)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Job satisfaction</td>
<td>3.62</td>
<td>.84</td>
<td>.50**</td>
<td>(.83)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Economic exchange</td>
<td>2.89</td>
<td>1.01</td>
<td>-.20**</td>
<td>(.90)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Social exchange</td>
<td>3.33</td>
<td>.94</td>
<td>.61**</td>
<td>.32**</td>
<td>.27**</td>
<td>(.83)</td>
<td></td>
</tr>
<tr>
<td>5. Emotional exhaustion</td>
<td>2.97</td>
<td>1.12</td>
<td>-.17*</td>
<td>.20**</td>
<td>.27**</td>
<td>(.85)</td>
<td></td>
</tr>
<tr>
<td>6. Work engagement</td>
<td>3.63</td>
<td>.82</td>
<td>.52**</td>
<td>.43**</td>
<td>-.20**</td>
<td>.38**</td>
<td>-.05 (.75)</td>
</tr>
</tbody>
</table>

Note: N= 207. * p < .05, ** p < .01. Cronbach’s α is in parentheses.

Table 3 Model fit statistics for the hypothesis and the alternative best-fitting models

<table>
<thead>
<tr>
<th>Model Fit Statistics</th>
<th>The hypothesis Model (Model 1)</th>
<th>The final best-fitting Model (Model 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>χ²</td>
<td>.949</td>
<td>13.445</td>
</tr>
<tr>
<td>χ²/df</td>
<td>.949</td>
<td>1.494</td>
</tr>
<tr>
<td>SRMR</td>
<td>.0049</td>
<td>.0473</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>.000</td>
<td>.049</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>.999</td>
<td>.984</td>
</tr>
<tr>
<td>Tucker-Lewis coefficient (TLI)</td>
<td>1.002</td>
<td>.982</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>1.000</td>
<td>.994</td>
</tr>
<tr>
<td>Akaike’s Information Criterion (AIC)</td>
<td>72.0</td>
<td>67.445</td>
</tr>
</tbody>
</table>
Figure 1 The hypothesized model (Model 1)

Figure 2 The test results for the final model (Model 2)