

Research Article

# How Does High Performance Work System Increase Employees' Well-Being -The Sequential Mediating Roles of Job Characteristics and Work Meaning

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## Abstract

In the current era of competitive business environments, understanding the influence of high-performance work systems (HPWS) on employee well-being has become a critical research focus. This study, grounded in self-determination theory, aimed to investigate the link between HPWS and employee well-being within a Chinese context, with a particular emphasis on job characteristics. The research utilized a three-wave design, gathering 362 data sets from employees across five companies, to ensure a robust and varied sample. The methodology encompassed a comprehensive approach, including surveys and in-depth analysis, to explore the nuances of the relationship between HPWS and employee well-being. The study's findings underscored the positive impact of HPWS on employee well-being, revealing that job characteristics and the sense of meaningful work serve as pivotal mediators in this relationship. This research not only contributes to the academic discourse by providing empirical evidence of the mediating roles of job characteristics and meaningful work but also offers actionable insights for organizations seeking to enhance employee well-being through the strategic implementation of HPWS. The study's conclusions highlight the importance of aligning work systems with intrinsic motivational factors, as posited by self-determination theory, and set the stage for future research to further explore the complexities of employee well-being in diverse cultural and organizational settings.

## Keywords

HPWS, Employee Well-Being, Job Characteristics, Meaningful Work

## 1. Introduction

With the rapid development of technology, employees need to continuously improve themselves so that companies can develop sustainably, while companies have a responsibility to provide employees with a healthy and positive working environment. Happy employees are also high-performing employees [1, 2]: the level of performance of happier em-

ployees is 16% higher than that of unhappy employees [3]. Thus, having happy employees is one way that a company can sustain competitive advantage. But how can a company enhance employee well-being?

Human resources management (HRM) and employee well-being are closely related [4]. But the impact of high-

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performance work systems (HPWS) on employee well-being is inconclusive. Some researchers have shown that HPWS not only enhance a company's performance but the well-being of its employees [5]. Others have found that HPWS improved company performance at the expense of employee well-being [6, 7]. Therefore, the relationship between HPWS and employee well-being needs to be further clarified. Van De Voorde et al. demonstrated that investigating the relationship between HRM and different types of well-being is vital to both HRM and employee well-being [8].

Certain researchers have examined the potential impact of HPWS on employee well-being. Previous studies have also explored, at the organizational level [9, 10], the mediating role of organizational justice between HPWS and employee well-being [11], at the individual level, the mediation effect of self-efficacy between HPWS and employees' psychological well-being [5].

Some scholars have proposed that employee well-being is affected not only by organizational fairness and individual characteristics of employees but also by job characteristics [12]. Studies have confirmed that the characteristics of an organization are important to the well-being of its employees [13]. An early meta-analysis study showed that job characteristics have a positive effect on employee well-being, with more than 60% of changes in employee well-being being caused by job characteristics [14]. In addition, scholars have pointed out that HPWS is an important context variable that affects job characteristics [15]. Other studies have found that HPWS can improve employee autonomy, which in turn increases employee well-being [16]. We concluded from our literature review that job characteristics may also be an important mechanism by which HPWS affect employee well-being. However, few studies have explored the relationship between job characteristics in HPWS and employee well-being.

In an organizational context, a *high-performance work system* is a general management strategy implemented at the management level [9], and *job characteristics* are direct factors that specifically affect the actual experience of employees during their daily work [17]. It is possible that HPWS may affect employee well-being through job characteristics, which act as a mediating variable.

Work is no longer just a means for people to earn a living; rather, it is an important way to enhance personal development and heighten self-worth. *Self-determination theory* (SDT) is a motivational theory of individual development, personality, and well-being in a social context. The theory explains how external social context factors facilitate or impede positive behaviors and psychological health in individuals from the perspective of motivation. It also emphasizes the importance of interactions between individuals and social situations. SDT distinguishes between autonomous and controlled motivation. In conditions that meet the three basic psychological needs—autonomy [18, 19], competence and relatedness—motivation can be internalized and the individ-

ual can develop in a positive and healthy direction [20]. While SDT is widely used to explain the mechanism of individual well-being, it occurs rarely in the literature associated with HPWS, which has limited the investigation of the mechanism of employee well-being in HRM practices. This study, however, has used SDT to explore whether and how job characteristics and meaningful work affect the relationship between HPWS and employee well-being.

We discuss the proposed research model (see Figure 1) in detail in the following sections.

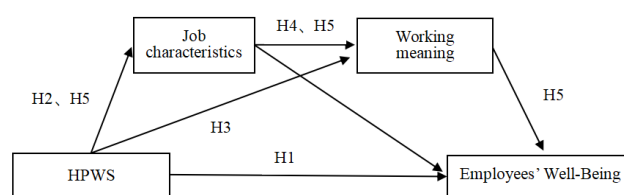


Figure 1. Theoretical model.

## 1.1. Theoretical Foundation and Hypotheses

### Linking HPWS and Employee Well-being

According to SDT, human beings have three innate psychological needs—the needs for competence, relatedness and autonomy [18, 19]. Individuals who have a high level of satisfaction with regard to these three needs have a more positive attitude towards their work, feel higher self-esteem, and are happier [20].

Although previous studies have produced inconsistent results about the relationship between HPWS and employee well-being, this study examines whether HPWS can increase employee well-being by increasing their level of satisfaction with regard to autonomy, competence and relatedness. The effectiveness of HPWS depends on employee perceptions of organizational climate at the individual level [21].

According to SDT, external environmental factors can be divided into informational factors, controlling factors and demotivating factors. *Informational* factors provide individuals with opportunities for independent choice and participation, which can satisfy autonomy and competence needs [22]. Essentially, HPWS are a group of separate but interconnected human resource (HR) practices designed to enhance employee capabilities, motivation, and opportunities [23], and are characterized by informational events. First, HPWS provide employees with opportunities to participate in work planning, work-method design, and rewards-for-performance through practices such as information sharing, participation in decision-making and grievance procedures, which help enhance employees' perceived autonomy [24]. Second, HPWS can enhance employees' sense of competence. Organizational commitment to training, decentralized decision-making, feedback on performance, and sharing key information provide employees with more opportunities to increase their

ability and resources to respond to work problems, thus allowing them to experience a higher level of competence and of satisfaction of that need [25]. In addition, HPWS also meet employee needs for relatedness by striving to find ways to motivate them using compensation, training, empowerment, and long-term psychological links and by communicating the organization's attention, respect, support, and care, so helping to meet their need to belong [26]. As well, HPWS can enhance the internal social network of an organization [27]; for example, through flexible work arrangements, self-management teams and so on to establish weak relationships between employees and through recruitment and selection, training and open communication to promote the formation of shared mental models. Accordingly, we propose the following hypothesis:

Hypothesis 1: HPWS are positively related to employee well-being.

## 1.2. Linking HPWS, Job Characteristics and Employee Well-Being

A large number of empirical studies have shown that HPWS can change job characteristics and directly affect the nature of work [28, 29]. For example, HPWS provide employees with more freedom of choice, diverse work content, and high levels of responsibility through job redesign [16], and directly promote job autonomy [30]. Specifically, HPWS provide more opportunities for employees to participate in decision-making [30, 31], which means that employees (a) have more chance to influence the planning, design and rewards of their work, which can not only promote employee autonomy but also provide more opportunities for employees to improve their knowledge and skills; (b) can increase their influence within the organization and (c) obtain more information and higher-quality feedback about their work. HPWS provide a large number of training opportunities that promote skills diversity; continuous training helps maintain skills diversity; teamwork increases opportunities for employees to influence others and helps improve their experience of the importance of work; management practices such as information sharing and performance assessment provide employees with feedback on job performance. HPWS give employees more roles and more opportunities to participate in decision-making [32], which directly increases the skills diversity, job autonomy, and the sense of meaning they find in their work.

According to SDT, individual well-being stems from the satisfaction of autonomy, competence and relatedness needs [18, 19]. When these three innate psychological needs are met, employees will show a more positive work attitude and a stronger sense of happiness [20]. HPWS provides employees with more opportunities to make decisions and to schedule work hours and arrange work methods by improving work autonomy and work integrity, which helps meet employee needs for autonomy. The need for competence is met

by increasing opportunities for employees to diversify their skills so that they have and use more knowledge and skills to deal with problems at work. When the meaningfulness of work is emphasized and the amount of feedback on work is increased, employees better understand the impact of their work on others in the work process, thereby helping to meet their relatedness needs. Therefore, job characteristics can improve employee well-being by satisfying their internal psychological needs. Results from some empirical studies have shown that management practices such as job enrichment, voice [16], and teamwork [33] can promote the transformation of internal motivation and then increase employee well-being. Accordingly, we propose the following hypothesis:

Hypothesis 2: Job characteristics plays a mediating role between HPWS and employee well-being.

## 1.3. Linking HPWS, Meaningful Work and Employee Well-Being

Pursuing sense of meaning is an important goal in one's life, and experiencing a sense of meaning promotes well-being [34]. Numerous studies have confirmed that sense of meaning is the most important variable for predicting individual well-being [35]. Work plays a vital role in determining employee well-being [36]. Today, for most people, work is not only a means of earning a living but also a manifestation of their self-worth. The *meaning of work* is the employee's perception and evaluation of the value of their work, and it is a subjective judgment [37]; it is a positive psychological state that people consider their work to be valuable and important in the work process [17, 38]. When employees experience a sense of meaning at work, they are more positive, vigorous and passionate about their work [39, 40]. The sense of value and meaning gained at work will promote employee well-being [16].

Initially, HPWS focused on organizational performance, which was achieved by triggering positive work attitudes and efforts among employees [9]. Jiang et al (2013) summarized the mediating variables of HPWS at the individual, group, and organizational levels based on ability, motivation, and opportunity (AMO). The motivational variables had different names but very similar meanings [41]: they all underlined care, respect and attention with regard to employees. Self-esteem is an important source of employees' sense of meaningful work [40]. Practices such as participation in decision-making and teamwork in HPWS provide them with opportunities to demonstrate their competence, thereby gaining a sense that their work is meaningful. In addition, some empirical studies have confirmed that teamwork and voice can promote well-being by enhancing employees' sense of value and meaning [16].

Accordingly, we propose the following hypothesis:

Hypothesis 3: Meaningful work plays a mediating role between HPWS and employee well-being.

## 1.4. Linking HPWS, Job Characteristics, Meaningful Work and Employee Well-Being

Job characteristics determine employees' behaviors and experience of daily work and have a profound impact on their psychological state [17]. According to the job characteristics model proposed by Hackman and Oldham (1976), three psychological states (i.e. experienced meaningfulness, experienced responsibility and knowledge of results) play a mediating role between job characteristics and work-related outcomes. However, subsequent studies have proven that all three psychological states are not predictive [42, 43]: the experience of meaningful work appears to be the most critical mediation variable [14, 44].

Other studies have shown that job characteristics can have a significant impact on employees' sense of the meaningfulness of their work [45, 46]. Accordingly, we propose the following hypothesis:

Hypothesis 4: Job characteristics are positively related to meaningful work.

According to SDT, in the work process, as long as social events or work contexts meet psychological needs related to autonomy, ability and relationship, the individual's intrinsic motivation can be triggered [47, 48].

HPWS are management policies and practices adopted by the organization [9], whereas job characteristics directly affect employees' actual experience of daily work [17]. In other words, job characteristics are proximal factors that are more influential for employees than HPWS. Moreover, job characteristics as contextual factors affect employees' mental state [17]. With regard to autonomy needs, job autonomy and task integrity create more autonomous working conditions because employees can work independently, which can inspire the intrinsic motivation associated with meaningful work [30, 49]. Doing work that the employee considers important increases the amount of influence they have on others and their awareness of social influence and social value, thereby meeting relatedness needs [46, 50]. The best way to develop the sense of meaning in one's work is to positively influence the lives of others [17, 39]. Therefore, doing work they consider important is a prerequisite for employees believing that their work is meaningful.

The job characteristic model proposed five core characteristics of any job: skill variety, task identity, task significance, autonomy and feedback [17]. Previous studies have shown that the five dimensions play a stronger role as a complex whole than any one dimension by itself [51, 52]. Therefore, this study considers the five core dimensions as a whole variable. In addition, studies of job design have demonstrated that meaningful work is the most effective mediation variable between job characteristics and individual attitudes and behavioral variables [53]. Researchers have also found that the sense of value and meaning gained at work promotes employee well-being [16]. Therefore, we propose the follow-

ing hypothesis:

Hypothesis 5: HPWS affect employee well-being sequentially through job characteristics and meaningful work.

## 2. Methods

### 2.1. Sample and Data Collection

We recruited participants from five firms in the power and garment industries. In order to minimize the impact of common-method bias, we collected data at three different points in time. First, we issued 500 questionnaires that requested information about demographic characteristics and HPWS. Six weeks later, we invited the same group of employees to participate in a survey of job characteristics, and 407 employees completed it. Six weeks later the third questionnaire, which investigated meaningful work and employee well-being, was sent to the 407 employees who had responded to both of the first two questionnaires. After the exclusion of questionnaires that could not be matched correctly or had too many missing answers, 362 sets of valid data remained. The mean age of participants was 31.32 years ( $SD = 6.89$ ), of which 49.7 % were male and 50.3% were female. Their educational backgrounds arranged from high-school diploma and below (7.5%), junior college (28.8%), bachelor's degree (46.6%) to master's degree and above (17.1%). Of the sample, 49.4% were unmarried and 50.6% were married.

### 2.2. Measures

We tried to use scales that had been validated in the Chinese context. For scales published in English journals, we carried out bidirectional translation.

#### *High-performance work systems (HPWS)*

To measure this variable, we used a version of the scale developed based on the seven best practices proposed by Delery et al. [32], which has 19 items. Respondents rated the items on a 5-point Likert scale ranging from 1 (completely disagree) to 5 (completely agree). Two sample items follow: "Employee representatives can participate in major decisions involving the personal interests of employees" and. "Employees have the opportunity to participate in training every year." Among the items, "The salary of employees is mainly determined by their qualifications" is reverse scoring. The Cronbach's alpha coefficient for this scale was 0.95.

#### *Job characteristics*

The job-characteristics scale was developed by Hackman and Oldham [17], and included the five dimensions of job autonomy, task variety, task significance, task identity, and feedback from job. We used a version revised by Zhang et al. [57] to reflect the Chinese organizational context. Respondent rated the items on a 5-point Likert scale ranging from 1 (completely disagree) to 5 (completely agree). Two sample items follow: "The job allows me to make my own decisions about how to schedule my work" and "The job itself provides

me with information about my performance." The Cronbach's alpha coefficient for this scale was 0.84.

#### *Meaningful work*

This variable was measured by a 10-item scale from Steger et al. [37]. Respondents rated the items on a 6-point Likert-type scale ranging from 1 (strongly disagree) to 6 (strongly agree). Two sample items follow: "I understand how my work contributes to my life's meaning" and "I view my work as contributing to my personal growth." The Cronbach's alpha coefficient for this scale was 0.90.

#### *Employee well-being*

We began with the 8-item Personal Wellbeing Index created by Cummins et al. [58] to measure employee well-being. The index measures eight aspects of well-being: standard of living, health, achieving in life, relationships, safety, community connectedness, future security and religion/spirituality. The index has been shown to have good reliability and validity among Chinese respondents. The items on religion were deleted to better fit the Chinese context, and, using the expert method, questions about work experience, educational background, family relations, and social status were added to produce a 10-item personal well-being scale. The Cronbach's alpha coefficient for this scale was 0.94.

### 3. Results

#### 3.1. Testing Discriminant Validity

As all the data in this study were collected using a self-report questionnaire, we tested the discriminant validity of variables using confirmatory factor analysis. Table 1 shows that the four-factor structure including HPWS, employee well-being, job characteristics, and meaningful work has good fit ( $\chi^2/df = 2.283$ , CFI = 0.937, TLI = 0.931, RMSEA = 0.060, SRMR = 0.082). The three-factor, two-factor, and single-factor structures, after reducing the number of indicators, have poor goodness-of-fit. These data demonstrate that the discriminant validity of the four variables measured is superior.

#### 3.2. Correlation

As shown in Table 2, correlation coefficients of the four variables were between 0.34 and 0.63, and all reached significant levels ( $p < 0.01$ ), indicating that the variables were significantly positively correlated in pairs. This result is consistent with the hypothetical direction, and provides a basis for further research on the relationship between HPWS, job characteristics, meaningful work and employee well-being.

#### 3.3. Hypothesis Testing

First, we performed a mediation analysis (see Table 3). After controlling the variables—gender, education, age, job

tenure and marital status—we performed a regression analysis using HPWS alone as the independent variable and employee well-being as the dependent variable, finding that HPWS positively predicted employee well-being ( $\beta = 0.34$ ,  $p < 0.01$ ). Thus, Hypothesis 1 was supported.

In order to verify the subsequent hypotheses, we performed an overall model test. For Model1, we began with controlled variables (gender, education, age, job tenure, and marital status) and performed regression analysis on job characteristics, meaningful work, and employee well-being. It can be seen from the data (R<sup>2</sup>) that the influence of these controlled variables on the dependent variables is very low.

Model 2 is a test of the mediation effect. The results (see Table 3) indicate that HPWS significantly predicted job characteristics ( $\beta = 0.56$ ,  $p < 0.01$ ), while job characteristics had no significant effect on employee well-being ( $\beta = 0.03$ , n.s.). Thus, Hypothesis 2 was not supported. HPWS was found to significantly predict meaningful work ( $\beta = 0.46$ ,  $p < 0.01$ ), and meaningful work also significantly predicted employee well-being ( $\beta = 0.24$ ,  $p < 0.01$ ). Thus, Hypotheses 3 was supported. At the same time, job characteristics were found to significantly predict meaningful work ( $\beta = 0.27$ ,  $p < 0.01$ ). Thus, Hypotheses 4 was supported. These data also provide preliminary evidence that HPWS may affect employee well-being through job characteristics and meaningful work. Comparing the two models, Model 2's R<sup>2</sup> effect size with regard to job characteristics, meaningful work, and employee well-being was higher by 0.31 ( $p < 0.01$ ), 0.48 ( $p < 0.01$ ), and 0.31 ( $p < 0.01$ ) respectively.

In order to further prove the existence of a sequential mediation effect, we constructed a parallel-mediation-effect model and compared it with the sequential-mediation-effect model. The goodness of fit indexes of the two models are shown in Table 4. The values of  $\chi^2/df$ , RMSEA, SRMR and AIC in the sequential-mediation-effect model are all low when compared to the parallel-mediation model; therefore, the sequential-mediation-effect model is superior.

Further, we used a bootstrap bias-correction procedure to test the mediation effect, setting the sampling number at 5000. Table 5 shows the results of this test of the mediation effect. It can be seen that the path for HPWS to affect employee well-being through job characteristics was not significant, further confirming that Hypothesis 2 was not supported. The path coefficient for HPWS that affected employee well-being through meaningful work was 0.21, with bootstrap confidence intervals (95%) and no zero between their lower and upper limits. Thus, Hypotheses 3 was supported. The path coefficient for HPWS affecting employee well-being through job characteristics and meaningful work reached 0.06, and the bootstrap confidence interval (95%) did not include zero. Thus, Hypotheses 5 was supported.

The results of this study show that meaningful work is the only effective mediating variable between HPWS and employee well-being, with an effect size of 24.32%, because the mediation effect of job characteristics between HPWS and employee well-being is not significant. Overall, the four-

factor model has a significant mediating effect, and its effect size is 7.22%. In addition, the path coefficient from HPWS to meaningful work is significant, while the path coefficient from job characteristics to employee well-being is not significant. This indicates that the impact of HPWS on employee well-being is partly achieved through job characteristics and then through meaningful work. At the same time, the path

coefficient from HPWS to meaningful work is significant, indicating that more than just job characteristics affect meaningful work. Conversely, the path coefficient between job characteristics and employee well-being is not significant, indicating that meaningful work fully mediates the relationship between job characteristics and employee well-being.

**Table 1.** Discriminant validity of variables: HPWS, WB, JC, and MW.

Model	$\chi^2/df$	RMSEA	CFI	TLI	SRMR
Four-factor: HPWS, WB, JC, MW	2.283	0.060	0.937	0.931	0.082
Three-factor: HPWS, WB, JC+MW	2.939	0.073	0.902	0.895	0.107
Two-factor: HPWS+WB, JC+MW	5.542	0.112	0.769	0.754	0.138
One-factor: HPWS+WB+JC+MW	8.426	0.143	0.622	0.599	0.147

HPWS = high-performance work systems; WB = employee well-being; JC = job characteristics; MW = meaningful work.

**Table 2.** Descriptive statistics and bivariate correlations.

M	SD	1	2	3
1. HPWS	3.58	0.48		
2. JC	3.69	0.46		
3. MW	4.71	0.75	0.63**	0.55**
4. WB5.13	1.01	0.52**	0.34**	0.48**

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

HPWS = high-performance work systems; WB = employee well-being; JC = job characteristics; MW = meaningful work

**Table 3.** Results of regression analyses.

	JC		WM		EH	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Gender	0.03	0.08	-0.13*	-0.07	-0.06	0.01
Education	-0.07	-0.03	-0.03	0.04	-0.07	-0.03
Age	-0.14*	-0.10	-0.07	0.03	-0.06	-0.01
Tenure	0.08	0.07	0.05	0.01	0.08	0.06
Marital Status	0.05	0.03	0.13*	0.08	0.04	-0.01
Independent Variable						
HPWS		0.36**		0.46**		0.30**
Mediation Variable						
JC				0.28**		0.02

	JC		WM		EH	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
WM						0.22**
$R^2$	0.03	0.15	0.03	0.40	0.02	0.23
$\Delta R^2$	0.12**		0.37**		0.21**	

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

HPWS = high-performance work systems; WB = employee well-being; JC = job characteristics; MW = meaningful work

**Table 4.** Results of comparison of parallel- and sequential-mediation-effect models.

Model	$\chi^2/df$	RMSEA	CFI	TLI	SRMR	AIC	BIC
Sequential-mediation model	825.154/ 344	0.062	0.931	0.924	0.043	23920.759	24271.007
Parallel-mediation model	862.432/ 345	0.064	0.926	0.919	0.053	23956.037	24302.393

**Table 5.** Results of mediation analysis.

Mediation Path	Indirect Effect	Relative Effect Size	95% CI
HPWS—JC—WB	0.01	1.11%	[-0.112, 0.124]
HPWS—MW—WB	0.21	24.32%	[0.097, 0.322]
HPWS—JC—MW—WB	0.06	7.22%	[0.027, 0.108]

Relative Effect Size = Indirect Effect Size/Total Effect Size; Total Effect = Direct Effect + Indirect Effect; CI = confidence interval; HPWS=high-performance work systems; WB = employee well-being. JC = job characteristics; MW = meaningful work.

## 4. Discussion

This study has explored the relationship between HPWS and employee well-being from an SDT perspective and has found that job characteristics do not play a mediating role in the relationship. There are several possible reasons. First, according to the JCM, job characteristics indirectly affect employee attitudes through their sense of meaning with regard to their work [17]. This sequential-mediation model further validates the conclusion.

Secondly, this study considers job characteristics as a single concept while the JCM is divided into different dimensions. How these different dimensions interact with each other needs further analysis.

Why is the hypothesis of a sequential-mediation model verified in this study? First, HPWS practices such as training programs, information sharing and worker-involvement mechanisms provide employees with more opportunities to work independently, feel the meaningfulness of work, achieve clear task identity, acquire diverse skills and receive

timely feedback, thereby enhancing job characteristics. Second, job characteristics related to autonomy, skill variety and task identity give employees more freedom to plan their workday and set up new work procedures, and so meet their autonomy needs. *Task identity* means that a certain job within a package of tasks has a clear beginning and ending, so that employees can work on a complete process rather than small parts of it, thus gaining a sense of achievement. As for feedback, when employees are informed of the effectiveness of their recent performance, their competence needs can be met. *Task significance* means that the employee's work has a substantial impact on colleagues. Helping other to resolve job issues can confirm beliefs about task significance, therefore improving interpersonal relationships and meeting relatedness needs. SDT suggests that people are motivated to change when their three main psychological needs are fulfilled, which thus can promote well-being [18].

The JCM [17] proposed that job characteristics have an indirect effect on well-being. Subsequent research has found that meaningful work is the most effective mediation variable between job characteristics and individual attitudes and

behaviors [53]. The present study supports the conclusion that the impact of job characteristics on employee well-being is achieved through meaningful work. Its findings have significance for both theory and practice.

#### 4.1. Theoretical Implications

First, for the HRM field, this study has demonstrated that HPWS are positively related to employee well-being in the Chinese organizational context. Although the reciprocity principle of HRM states that HPWS can benefit both organizations (organizational performance) and employees (employee well-being), few studies have investigated the positive effects of HPWS on employee well-being [16].

Furthermore, most studies on the antecedent variables of employee well-being have focused on individual characteristics and organizational climate, paying less attention to organizational management practices and job characteristics. This study combines the findings of both HRM and positive psychology and explores the positively effective mechanisms of HPWS on employee well-being, thereby further enriching and expanding the literature on HRM and well-being.

Second, by using the JCM, this study contributes to research on HPWS at the micro level by closely examining the mechanisms of HPWS as they affect employee well-being. Most previous studies of HPWS have focused on the level of the organization or the group, and little attention has been paid to individuals [23]. Work plays an important role in people's lives, and the experience of work and the needs satisfaction achieved at work affect employee well-being. This research explores the relationship between HPWS and employee well-being. Moreover, it enhances understanding of how HPWS affect the sense of meaningful work and then employee well-being using a sequential-mediation model, which extends the impact and knowledge of the mechanisms associated with HPWS.

In addition, this study explores the mediating effect of job characteristics between HPWS and employee well-being based on SDT, providing a new direction for future research in HRM. Most previous studies used information theory and attribution theory [54] to explain the interaction and relationship between HPWS and employee well-being. Jiang, Takeuchi and Lepak (2013) proposed that future research on HPWS at the individual level should pay more attention to the impact of HR systems on personal motivation, as perceived by employees. In keeping with this suggestion, this study has attempted to clarify the relationship between HPWS and employee well-being using SDT. Previous explanations of the relationship between the two variables have mostly used the job demands-resources model [7] and attribution theory [54]. Few existing studies have explored the impact mechanism of HPWS from the perspective of motivation, and the theoretical perspective used to explain the mechanism between HPWS and employee well-being has been limited [55]. Therefore, this study has answered the call to attach importance to the role of SDT in HRM systems,

using and testing SDT in this research context.

#### 4.2. Managerial Implications

The findings of this study have several important management implications. First, the study confirms the positive impact of HPWS on employee well-being. Organizations should pay serious attention to HPWS, not only to the planning and design of HRM systems but also to specific implementation effects and how HRM systems are perceived by employees. First, organizations can allow more HR managers to work with managers of business units. This can not only help managers better understand the design basis and corresponding value of HRM systems but also increase professional knowledge of what actually goes on in the business unit. Next, HR managers should establish more channels to publicize and interpret the HRM systems of their organization, so that employees at all levels can obtain such information more easily. At the same time, such managers must actively guide employees to interpret HRM policies and practices so as to improve their effectiveness. As well, HR managers need to establish a democratic management system and provide employees with more opportunities to participate in the management or the optimization of HR activities. If HR managers interact more frequently with employees and can receive more feedback on the implementation of HPMS, then they can formulate more effective HRM policies.

Second, organizations should attend to job characteristics so as to ensure that employees continue receive positive experiences from their work. Job characteristics are positively related to employees finding their work meaningful. The job characteristics of most positions in an organization can be improved through process adjustments, management optimization, and information technology so as to enhance employee perceptions. For example, job feedback is largely limited by job attributes. Hairdressers have always received job feedback quickly, but writers used to have to wait a long time. With the advent of the Internet, communicating information has become very easy. Now, many writers can receive feedback through messages, gratuities and likes on social media. Organizations can scientifically design the channels, content and frequency for job feedback, using multiple technologies, and so improve feedback about the essential characteristics of the job.

Organizations can also expand employee skills through job rotation, participation in projects and other means, thus giving employees more opportunities to perform. Organizations can also let employees decide their work methods, priorities, time and place, and make other work-related decisions so as to gain more autonomy.

In addition, organizations should help employees enhance the meaningfulness of their work, creating a win-win situation for both employees and the organization. Knowledge employees and new-generation employees are increasingly the main force in the workplace, and such employees have a strong desire to experience a sense of meaning and realize personal

value. At the same time, they expect that organizations will give them positive support. Organizations should help employees expand the meaningfulness of their daily work. Doing so will improve the well-being of employees. Furthermore, employees who find their work meaningful will be more efficient. Organizations can conduct training to optimize employee awareness and help them discover the value of their job from new and different perspectives. They can also organize experiential workshops to allow employees to have a positive experience during the event, thereby inspiring proactive exploration of the meaning of work. Managers can also give employees more feedback on their work performance and can provide them with information about the true impact of their work or their specific contributions in order to help them gain a sense of the meaningfulness of their work from multiple perspectives.

## 5. Limitations and Future Research Directions

The study contains several limitations. First, although this study collected data at three points in time, some common-method bias remains. Theoretically, if individual variables can be tracked at multiple points in time, the relationship between the variables can be more rigorously verified. In future research, more rounds of data collection should occur.

Second, the study explores and validates the sequential-mediation model of HPWS – job characteristics – meaningful work – employee well-being, but the effect size is small. Therefore, the mediation variables that exist in the relationship warrant further exploration.

Third, this study focused only on the impact of HPWS on employee well-being; however, from the perspective of stakeholder theory [56], HPWS affect not only employees within the organization but also others such as family members, customers, and partners.

Therefore, in the future, focusing on the impact of HPWS on well-being of different groups will help expand the understanding of the effects of such systems.

## Abbreviations

HPWS	High-Performance Work Systems
SDT	Self-determination Theory
HR	Human Resource
AMO	Motivation, and Opportunity

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## Conflicts of Interest

The authors declare no conflicts of interest.

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