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# RESEARCH ARTICLE



# The effect of high involvement work systems on organisational performance and employee well-being in a Spanish industrial context

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#### **Abstract**

This study investigates whether employee perceptions of High Involvement Work Systems (HIWS) mediate the positive relationship between implemented-HIWS and the parallel outcomes of employee well-being and organisational performance. To test these relationships, data was collected from 20,646 employees and 2066 managers in 198 organisations from Spanish industrial companies (mainly small and medium enterprises, SMEs). Results from a 2-1-2 multilevel structural equation modelling analysis showed that implemented-HIWS are positively related to perceived-HIWS, which in turn, are positively associated with both financial performance and the well-being outcomes of job satisfaction and positive affect while being negatively associated with the well-being outcome of negative affect. Finally, the study also showed a direct negative effect of implemented-HIWS on job satisfaction suggesting that the source from which HIWS are rated matters for their consequences on some well-being outcomes. We discuss the implications of these results for theory and practice.

Abbreviations: CFA, confirmatory factor analysis; CFI, comparative fit index; d.f., degrees of freedom; EBITDA, earnings before interests, taxes, depreciation and amortisation; HIWP, high involvement work practices; HIWS, high involvement work systems; HPWP, high performance work practices; HPWS, high performance work systems; HR, human resource; HRM, human resource management; ICC, intraclass correlation coefficient; MLR, Mplus option for maximum likelihood estimation with robust standard errors; MSEM, multilevel structural equation modelling; NA, negative affect; PA, positive affect; PIRK, power, information, reward and knowledge; RMSEA, root-mean-square error of approximation; SHRM, strategic human resource management; SME, small and medium enterprises; TLI, Tucker-Lewis index.

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#### **KEYWORDS**

employee well-being, high involvement work systems, negative affect, organisational performance, positive affect, satisfaction, strategic HRM

#### **Practitioner notes**

#### What is known?

- The process model of strategic human resource management purports that implemented-high involvement work systems (HIWS) influence perceived-HIWS, which in turn, positively influence employee well-being and organisational performance. However, mixed empirical evidence is reported for the effects of implemented-HIWS on perceived-HIWS.
- Empirical evidence on the relationship between HIWS and organisational outcomes is accumulating.
  However, evidence for the effects of HIWS, in comparison to high performance work systems more
  generally, on multiple employee well-being outcomes (in combination with financial performance) is
  significantly under researched.
- There is limited empirical evidence regarding the effectiveness of HIWS in improving employee wellbeing and organisational performance outcomes in the industrial context in Spain and especially among SMEs.

#### What this paper adds?

- Empirically tests the relationship between implemented-HIWS and perceived-HIWS, and their subsequent
  influence on well-being and financial performance thereby providing a more nuanced understanding of
  whether and how human resource management positively affects pertinent outcomes.
- Adopts a broad approach to employee well-being encompassing job satisfaction and employees affective/ emotional states (positive and negative affect) of which the latter has been significantly underresearched.
- Analyses the proposed research model on a very large representative sample of both employees and managers from the Spanish industrial context (74% of the sample are small medium enterpises with less than 250 employees).

# Implications for practitioners

- In general, perceived-HIWS exert benefits for both employees and organisations alike (win-win effect) in the SME context albeit implemented-HIWS have a direct negative effect on job satisfaction (win-lose).
- To exert their effects on well-being and performance outcomes, managers' perceptions of HIWS serve as a contextual cue which activates employees' perceptions of HIWS.

## 1 | INTRODUCTION

High Involvement Work Systems (HIWS) represent an overall management orientation that focuses on providing employees with greater involvement as a means of improving the employee experience at work and the overall competitiveness of the organisation (Boxall & Macky, 2009; Wood, 2020). Evidence permeates the literature attesting that HIWS contributes to higher levels of organisational performance (Vandenberg et al., 1999). Previous studies have also found that HIWS yield positive effects on individual level well-being (Butts et al., 2009). Despite this, compared to high performance work systems (HPWS) more generally, research on the effects of involvement practices, on both well-being and organisational performance outcomes simultaneously, remains under researched (Wood, 2020). It is also noteworthy to highlight that evidence for the effectiveness of HRM in general and HIWS in

particular, in SMEs, is severely lacking (Harney & Alkhalaf, 2021). In the Basque Country (located in in the northen part of Spain), which is the context of the present study, industry represents 22% of the gross value added of the economy with a predominance of SMEs of up to 99% (Martinez-Granado et al., 2012). Moreover, since SMEs in this context are initiated by local entrepreneurs, there is often a limited managerial literacy whereby a traditional control-oriented HR strategy is often employed. More recently, however, there is a trend to move towards a HR strategy that focuses on enhancing involvement. Therefore, given the strategic importance of this context, the dominance of owner-managers and the prospects of examining changes in HR approaches, this context represents an exemplary one to study the effects of HIWS (Harney & Alkhalaf, 2021).

Therefore, the first objective of this study is to test whether HIWS improve employee well-being and organisational performance outcomes (i.e., follows a mutual-gains perspective) in the context of Spanish industrial SMEs. Following a stakeholder perspective (Beer et al., 2015), we consider different types of employee well-being as outcomes in parallel with organisational performance since researchers have highlighted that employee well-being should be considered as an important outcome in its own right (Guest, 2017; Peccei & Van De Voorde, 2019). Studying well-being and organisational performance as parallel outcomes also aligns with our focus on high-involvement HRM as this HRM approach considers the importance of outcomes for multiple stakeholders (i.e., addresses managerial and employee interests simultaneously) (Wood, 2020). In conceptualising employees' well-being, we measure both happiness and health components; job satisfaction and positive affect (PA) as the happiness dimensions and negative affect (NA) as the mental health dimension of well-being. Affect is also considered an emotional aspect of well-being while job satisfaction contains a cognitive component and research has called for a consideration of both outcomes together in terms of their link with HR practices (Mostafa, 2017). By investigating such outcomes together in the same model, it is possible to shed light on the effects of HIWS on the scarcely studied emotional/health-related well-being outcomes (Oppenauer & Van De Voorde, 2018), while at the same time discerning whether trade-offs emerge between different aspects of well-being (Van de Voorde et al., 2012).

Nevertheless, if employees are to experience HIWS, they must first be implemented by the manager. The SHRM process model of Nishii and Wright (2008) purports that implemented HR practices (such as HIWS) by management have a positive effect on employees' perception of HR practices, which in turn, influence employee and organisational outcomes. Although a growing number of studies have emerged operationalising HR practices as perceived by employees in the relationship between implemented-HIWS, well-being and performance (Van Beurden et al., 2021; Wang et al., 2020), to date, there are still very few studies combining both types of HRM perceptions (particularly as they pertain to the high involvement paradigm) and relating them to well-being and performance. As the implemented-HIWS by managers can influence how employees rate them, it is critical to combine both measures to understand how employees perceive HIWS (e.g., Den Hartog et al., 2013; Jiang et al., 2017). However, as studies have found mixed empirical evidence on the relationship between implemented-HIWS and perceived-HIWS (e.g., Liao et al., 2009), and in the quest to further understand this relationship, our second aim is to test a multi-level model (See Figure 1) linking macro-level contextual factors (i.e., implemented-HIWS) to individual-level perceptions of HIWPs (i.e., perceived-HIWS), and in turn, on employee well-being and organisational performance (Beer et al., 2015; Jiang & Messersmith, 2018).

# 2 | THEORETICAL BACKGROUND AND HYPOTHESES

HIWS comprise HR practices which emanate from the high involvement management approach to workforce management developed by Lawler (1986). The underlying premise of this stakeholder approach is that providing employees with higher levels of involvement (and having an overall involvement philosophy embedded in the organisation) will lead to enhanced well-being and performance. While sharing characteristics with HPWS, the HPWS approach is more concerned with choosing the best combination of practices to maximise performance from a shareholder perspective (Wood, 2020). The high involvement orientation entails two dimensions. The first is role involvement

FIGURE 1 Research model

which focuses on maximising employee autonomy and responsibility by designing enriched jobs. The second is organisational involvement, which is focussed on employee participation in decision making beyond the traditional narrow confines of the job through utilising practices such as information-sharing, training and development, and participation (Wood & Ogbonnaya, 2018). The PIRK model developed by Lawler (1986) which comprises the four characteristics of power (P), information (I), rewards (R) and knowledge (K), is the most widely used framework to understand the effects of HIWS on employee well-being and performance (Boxall & Macky, 2009). Indeed, high involvement practices are believed to evoke the processes of PIRK among employees, which satisfies their higher order needs (e.g. recognition, support, autonomy, and challenge) and which in turn leads to higher morale (well-being) and organisational performance (Vandenberg et al., 1999). In this study, we examined four high-involvement practices which are aimed at achieving these outcomes and are especially relevant to the context. Specifically, autonomy represents a practice associated with role involvement and training, information and participation represent practices associated with organisational involvement.

Work methods autonomy refers to the extent to which employees can determine what they do and how they do it (Wood, 2020) thus giving them more freedom and responsibility at work (Jiang et al., 2013). Training refers to the investment the company makes in the professional development of its employees which improves their competence to perform job tasks (Vandenberg et al., 1999). Training and development represents a socio-emotional investment in employees which can leverage their skills to develop discretionary effort for the benefit of the organisation while employees benefit through skills development and career enhancement (Jiang et al., 2013). Information refers to practices aimed at conveying to employees important issues related to the organisation such as financial information and market challenges. When this information is provided, employees have a greater understanding of their job, how it creates value, and how it fits into the broader organisation as a whole. Finally, Participation refers to the scope given to employees to participate in strategic decisions and objectives beyond the confines of their job. It offers employees the opportunity to put forward ideas that can help increase company productivity (Jiang et al., 2012). While reward practices linked to performance are sometimes included as part of a HIWS, they are excluded from the present study. That is because performance related pay and other forms of contingent performance management are less applicable in the context of SMEs (which form the majority of our sample) since they face significant budgetary constraints and hence poorer pay in comparison to larger firms (Harney & Nolan, 2014). Contingent reward is therefore not implicitly part of this context and as such we expect little variation in the implemented- and perceived-reward dimension of a HIWS practice. Overall, we propose that these four practices constitute a high involvement work system (HIWS) implemented as a result of a managerial orientation seeking to enhance employee involvement (Wood, 2020). As such, we treat the HIWS construct as a latent variable which is consistent with most studies in this stream of research (e.g., Garmendia et al., 2021; Vandenberg et al., 1999).

# 2.1 | Perceived-high involvement work systems, employee well-being and organisational performance

Although progressive approaches to workforce management such as HIWS are generally believed to improve outcomes for organisations and employees, this view is not widely upheld, with some scholars arguing that they can impair employee outcomes. Both a mutual gains and conflicting outcomes perspective have been advanced to explain these contrasting views (e.g., see Peccei & Van de Voorde, 2019). Reflective of the latter view, some scholars purport that management practices, including those which are involvement oriented, can intensify work for employees since they are part of a liberal market (capitalist) approach seeking to get them to work harder, longer and faster (Godard, 2004; Ramsay et al., 2000).

Some empirical research substantiates this perspective since high performance work systems (HPWS) have been found to cause strain (Ramsay et al., 2000) and lead to overload and exhaustion (Kroon et al., 2009). Another version of this intensification approach suggestes that the performance gains through HPWS are achieved at the expense of workers well-being (e.g., Ramsay et al., 2000). Nevertheless, researchers more recently have suggested that it is imperative to differentiate between the types of HR practices when discerning their effects on well-being and performance (Wood, 2020). In this respect, Wood (2020) highlights that unlike HPWP, HIWS represents a stakeholder approach concerned with employee needs as an end in itself. This view is shared by Macky and Boxall (2008, p. 51), who highlight that the use of HIWS seems to be a more 'high road approach to organisational success that also benefits employees'. On this basis, and in broader recognition that HIWS are more likely to improve well-being and organisational performance (e.g., Boxall & Macky, 2009; Guest, 2017), we advance a mutual gains (win-win) perspective in this study.

This study includes both manager and employee perceptions of HIWS. Although these perceptions are likely to be related as the implemented HIWS by managers provide the context for the employees' perceptions of HIWS, they are not necessarily the same. This is also reflected by the moderate correlation studies have found between the two, and are sometimes even conflicting, highlighting that employees may have different perceptions of HIWS as compared to their managers (Aryee et al., 2012; Den Hartog et al., 2013; Elorza et al., 2011; Liao et al., 2009). In addition, studies have found that it is the employees' experience of HR practices rather than managers' implemented HR practices that affect employee and organisational outcomes (Den Hartog et al., 2013; Jensen et al., 2013; Liao et al., 2009). Regarding the relationship between employee perceptions of HIWS and organisational performance, human capital theory offers a pertinent explanation. Indeed, HIWS ensure that employees are in control of work and that their skills, knowledge and creativity are brought to bear on work activities, which ultimately culminates into a competitive advantage for the organisation (Riordan et al., 2005). While instrumentally equipping employees with the knowledge and skills required to succeed on the job, HIWS also signals to employees that investment in human capital is important and that the organisation cares about their well-being which further elevates performance. The positive link between HIWS and organisational performance measures has been supported in past research (e.g., Riordan et al., 2005; Song et al., 2021; Vandenberg et al., 1999; Wood et al., 2012).

The second relationship concerns the relationship between employee perceptions of HIWS and employee well-being. Employee well-being is conceptualised in terms of job satisfaction (satisfaction targeted at the job level) and positive affect (feelings of active happiness), and mental health well-being in terms of negative affect (feelings of depression, anxiety and other psychological symptoms related to stress) (Pinquart, 2001). The human relations perspective has long acknowledged the positive link between involvement and improved employee well-being. Indeed, HIWS are believed to produce a positive work environment for employees which activates positive emotions given that this particular work environment is perceived as meaningful and personally beneficial to them (Riordan et al., 2005). While being instrumental in helping employees accomplish their tasks, overcome demands and withstand stress (Kilroy et al., 2016; Wood & De Menezes, 2011), HIWS also satisfy employees higher order needs such as challenge, autonomy, recognition, and support, thereby playing an important role in improving well-being (Vandenberg et al., 1999). For instance, prior empirical research has found that HIWS improve well-being outcomes such as job satisfaction

and organisational commitment, and play an important role in reducing stress and burnout (Butts et al., 2009; Kilroy et al., 2016). Therefore, we also expect HIWS to improve employee well-being in the form of job satisfaction and positive affect, and to reduce negative affect, as well as to improve organisational performance in parallel.

Empirical multilevel studies tend to find support for a positive relationship between HIWS, organisational performance and well-being, especially as it pertains to the well-being outcome of job satisfaction (Garmendia et al., 2021; Wood & Ogbonnaya, 2018; Zatzick & Iverson, 2011), thus supporting a mutual gains perspective (win-win for employer and employees). Extant research focuses mainly on so called cognitive happiness forms of well-being (job satisfaction) and more research that incorporates emotion-based measures of happiness and health related well-being (i.e. positive and negative affect) is needed (Edgar et al., 2018; Macky & Boxall, 2008; Peccei & Van De Voorde, 2019). Indeed, we are missing important information about employees' affective happiness and mental health experiences at work arising from HIWS, and more broadly we lack information on the nomological network of affect within organisations (Mostafa, 2017). Therefore, following the theoretical argumentation outlined above (i.e. human relations perspective), and the accumulating evidence that HIWS contribute to reducing stress and improving job satisfaction (Butts et al., 2009) and improving positive emotions (Mostafa, 2017; Wood et al., 2012), we also suggest that HIWS may improve multiple aspects of employee well-being: that is that HIWS will be positively related to job satisfaction and PA and negatively related to NA. Therefore, we have formulated the following hypothesis including employee well-being and organisational performance as parallel outcomes:

**Hypothesis 1** Employee perceptions of HIWS are (i) positively associated with organisational performance and (ii) positively associated with job satisfaction and PA and negatively associated with NA.

# 2.2 | The mediating role of the perceived-high involvement work systems in the relationship between implemented-high involvement work systems and outcomes

Theoretical models in strategic HRM, such as the SHRM process model, suggest that perceived-HR practices mediate the relationship between implemented-HR practices and outcomes (Nishii & Wright, 2008). Ensuring a positive relationship between implemented HIWS and employees' perceptions of HIWS may be important because, a lack of consistency can cause employees to develop attitudes and behaviours which are not consistent with organisational goals (and cause perceptions of mixed signals about their organisations intentions towards their general well-being), thereby undermining the effectiveness of HR practices (Bowen & Ostroff, 2004). In this study, the *descriptive* measures of the implemented-HIWS represent the 'objective' organisational context in which individuals operate. Following social information processing theory, these contexts shape employees' *evaluative* perceptions of HIWS, which in turn influence their reactions (Beijer et al., 2019).

Despite the investigated relationship between manager and employee perceptions of HR practices in prior research, surprisingly, there has been a lack of theory which connects these constructs. Building on the recent work of Jiang and colleagues (2017), we purport that social information processing theory provides a solid theoretical foundation upon which to formulate a positive relationship between implemented- and perceived-HIWS. Social information processing theory (Salancik & Pfeffer, 1978) proposes that individual's perceptions at work are shaped by the social environment in which they operate. Specifically, employees heavily depend on information gathered from others in their work environment (particularly managers) when forming impressions about the nature of the organisation and its HR practices (Jiang et al., 2017; Wang et al., 2021). In this respect, implemented-HIWS provides a contextual cue for employees to shape their perceptions of the work environment and the HIWS adopted. This is largely because of the central role of managers as implementers of HR practices. Indeed, managers are charged with the responsibility of implementing HR practices and have a better understanding of them, thereby acting as a valuable source of information that influences employees' perceptions of practices. Therefore, following social information processing theory and in line with existing empirical evidence, implemented-HIWS are likely to affect perceived-HIWS (Wang et al., 2021).

Some multilevel studies show that the perceived HR practices are closer to outcomes than the implemented HR practices (given the distinction between proximal and distal sources), demonstrating the mediating role of the perceived HR practices in the relationship between the implemented HR practices and performance (Aryee et al., 2012; Vermeeren, 2014), well-being (Ang et al., 2013), and both outcomes simultaneously (Den Hartog et al., 2013; Elorza et al., 2011; Garmendia et al., 2021). In addition, researchers have recently called into question the validity of manager's perceptions of HR practices alone as predictors of employee and organisational outcomes (Beijer et al., 2019). Finally, the majority of studies mentioned above use a HPWS approach rather than a HIWS approach in the quest to understand the relationship between manager rated and employee rated HR practices and the subsequent influence on employee and organisational outcomes. We seek to address this imbalance by contributing to the high involvement paradigm which has been significially under researchered compared to HPWS more generally (Wood, 2020). Therefore, the following mediational hypotheses are proposed:

**Hypothesis 2** Employee perceptions of HIWS mediate the relationship between the implemented-HIWS and organisational performance.

**Hypothesis 3** Employee perceptions of HIWS mediate the relationship between the implemented-HIWS and well-being (job satisfaction, PA and NA).

## 3 | METHOD

# 3.1 | Sample and procedure

The data collection was carried out during the 2013–2019 year period. The research team was stable during these years and the procedure was the same for all the industrial companies under study. Two different types of data were gathered; HRM (and well-being) data and financial data. For the HRM (and well-being) data, the procedure included two different questionnaires to gather data from both managers and employees. On the one hand, the board of directors were invited to complete a survey to gather data about the implemented-HIWS. 26% of companies belonged to machine tooling, 16% to automotive industry, 13% to components manufacturing, 23% to electronic products, and 22% were not identified under a specific subsector.

A total of 2066 manager surveys were collected from 198 Spanish industrial companies (an average of 12 per company, with a minimum of 1 and a maximum of 125). In larger companies (specifically in two cases where the company had more than 1000 employees), line managers were also invited to participate in order to obtain a more reliable measurement of the implemented-HIWS. In addition, at the same time as the information from the management board was collected, another survey questionnaire was employed for employees to gather information about their perceived-HIWS and well-being measures (job satisfaction, PA and NA). Managers, with the help of the researchers, informed their employees about the purpose of the survey and organised them into groups, summoning them at specific times to a meeting room (each group at a time) so that they could complete the questionnaires. The researchers attended the groups in the room and briefly presented the survey to employees, clarified doubts and collected the surveys. Participants were asked to answer honestly and absolute anonymity was guaranteed. Both manager and employee participation in the survey was voluntary. In total, 20,646 surveys were collected from 198 companies (an average of 104 employees per company, with a minimum of 6 and a maximum of 3046). The average employee participation per company was 73% with a minimum of 22% and a maximum of 100%. Of the respondents, 78% were men. In terms of tenure, 17% had less than 5 years, 21% had between 5 and 10 years, 39% between 10 and 20 years and 23% more than 20 years. All workers are full-time.

Regarding financial data, the researchers gathered the company's financial performance figures from a national database. The financial performance figures were collected at the end of the year and the year after the survey. Therefore, performance figures are time-lagged representing future financial performance. Thus, the final sample

consists of 2066 managers informing about the implemented-HIWS (company level), 20,646 employees informing about the perceived-HIWS and well-being (individual level) and, finally, financial performance figures from archival data of the 198 companies involved (company level).

## 3.2 | Measures: Individual level

Perceived-HIWS (employee rated). Training, Information, Participation and Autonomy were measured using three items each (Balluerka et al., 2020). The original scale was developed by Vandenberg et al. (1999) and contextualised for the Spanish industrial setting. A sample item for autonomy is: 'The job allows me to make a lot of decisions on my own'. A sample item for participation is: 'I participate in the definition, control and monitoring of the management plan annually'. A sample item for information is: 'I am informed about our company's plans for the future (challenges, targets, investments,...)'. A sample item for training is: 'I think that the company values and promotes my training'.

Job Satisfaction (employee rated). Three items from the scale of Rafferty and Griffin (2006) were used to measure job satisfaction. A sample item is: 'Overall, I am satisfied with the kind of work I do'.

Positive and Negative affect (employee rated). We extracted the measures of positive and negative affect by drawing from the circumplex model following the guidelines proposed by Cropanzano, Weiss, Hale and Reb (2017). PA corresponds to high hedonic tone/high arousal, while NA corresponds to low hedonic tone/high arousal. We used four items each for PA and NA. The heading of the items is: 'In the work I do in the company I feel ...' followed by emotions like 'enthusiastic' and 'excited' for the PA construct and 'angry' and 'furious' for the NA construct.

The response options for all items range from 1 ('Strongly disagree') to 6 ('Strongly agree') for both HIWS practices and well-being measures. Confirmatory factor analysis (CFA) was performed to check for construct validity. In this study, we followed Hu and Bentler's (1999) fit criteria to assess the overall fit of the structural models; recommending cut-off values of 0.95 for the CFI and TLI and less than 0.06 for the RMSEA.

Since  $\chi^2$  is very sensitive to large sample sizes (as it is the case in this study at the individual level), this statistic will likely be significant and therefore prone to reject acceptable models. Therefore, in line with recommendations, additional fit indices are used (CFI, TLI and RMSEA) to make an overall assessment of model fit rather than just relying solely on the  $\chi^2$  (Hu & Bentler, 1999). A CFA model with 23 items loading on seven factors (three items for each of the factors of information, autonomy, training, participation and job satisfaction and four items for positive affect and negative affect) provided a good fit to the data:  $\chi^2(209) = 11,880.5$ , p < 0.001; TLI = 0.94; CFI = 0.95; RMSEA = 0.05. The construct validity of the seven factors is confirmed because all factor loadings are statistically significant and greater than 0.70 except for one item that yielded an acceptable 0.65 factor loading. The composite reliability of the seven factors is greater than 0.79 (greater than the commonly accepted cut-off value of 0.70). The correlations between the seven factors ranged from a minimum of -0.23 to a maximum of 0.78. Discriminant validity of the constructs was confirmed using Anderson and Gerbing's (1988) nested procedure (restricting to a perfect correlation those factors with the highest correlations). In all nested models, restricted pairs of factors showed a significantly poorer fit to the data; for example, between information and positive affect the  $\chi^2$  difference (d.f.) was 4068,6 (1), p < 0.001. Therefore, in the following analyses we included the average training, information, participation, autonomy, satisfaction, positive and negative affect scores as manifest variables rather than as latent variables in our model.

# 3.3 | Measures at organisational level

Implemented-HIWS (manager rated). The same items used to assess the perceived-HIWS were used to assess the implemented-HIWS with the difference being that the reference point of the items was changed to make sure that managers provide a descriptive measure of the implemented-HIWS. A sample item for autonomy is: 'In my area of responsibility, we (the managers) have designed people's jobs so that they can make many decisions for themselves'.

CFA was performed to assess the construct validity of the variables. A model with 12 items loading on four factors provided a good fit to the data:  $\chi^2(60) = 835.3$ , p < 0.001; TLI = 0.95; CFI = 0.96; RMSEA = 0.07. All factor

loadings were statistically significant and higher than 0.79. Composite reliability for the factors are greater than 0.86. Discriminant validity was confirmed since subsequent restricted models (with perfect correlation) between factors that present the highest correlations provided a significant poorer fit to the data. For example, in the case of Information and Participation the  $\chi^2$  difference (d.f.) was 405,9 (1); p < 0.001. Overall, construct validity and reliability analyses provided acceptable results. Thus, the average value of the three items for each factor was calculated to use in subsequent analyses. Finally, in order to justify the aggregation, we calculated intraclass correlations indexes (Shrout & Fleiss, 1979) for each of the items and the scales. The ICC (1,k) for the items ranged from 0.65 to 0.82 with a mean of 0.75, whereas values for the scales ranged from 0.84 to 0.93 with a mean of 0.90. All values were above or at the level of the acceptable cut-off value of 0.70. Therefore, managers' responses were aggregated into an organisational level value.

Financial performance (archival data). Earnings Before Interests, Taxes, Depreciation and Amortisation (EBITDA) was used as a measure of organisational financial performance. Some companies showed high variability on performance figures from 1 year to the next one because they work with big projects lasting more than 1 year. So, we used the average of EBITDA (transformed into its logarithm) of the survey year-end and the next year performance.

# 3.4 | Control variables at organisational level

Organisational size. The natural logarithm of the number of employees was used to control for size, as employees working in larger companies have shown to report lower well-being (Beer, 1964).

Manufacturing strategy. A dummy variable was created in order to control for the manufacturing strategy as it may have exerted an effect on outcomes (MacDuffie, 1995). A continuous manufacturing strategy of standardised products is coded as 1, and a more flexible strategy of special customised projects is coded as 0.

## 3.5 | Analysis

The hypotheses propose a multilevel mediation analysis whereby individual level perceived-HIWS are proposed to mediate the relationship between organisational level implemented-HIWS and organisational performance (as well as individual level well-being). This implies top-down and bottom-up relationships in the same model. These models are known as 2-1-2 multilevel mediation models (Van der Laken et al., 2018). A multilevel structural equation modelling (MSEM) technique was used to test the proposed hypotheses since it overcomes limitations of traditional multilevel techniques to deal with bottom-up relationships and has proven to outperform them (Preacher et al., 2010). All the hypotheses are tested in one single model and follows the one-stage procedure to understand direct and indirect pathways of the mediational hypotheses.

Implemented and perceived HIWS are both included as latent variables (i.e., using the observed average training, information, participation, and autonomy scores as indicators) in our model. Implemented HIWS (reported by managers) is the independent variable and perceived-HIWS (reported by employees) is the mediating variable as proposed by the process model of HRM (Nishii & Wright, 2008). The well-being variables (job satisfaction, positive affect and negative affect) are treated as independent manifest variables rather than as part of a single latent construct, since the current research is interested to discern whether potential trade-offs exist between well-being dimensions when influenced by perceived-HIWS. The default MLR estimator for multilevel analysis was used to perform the analyses in a multilevel latent covariate model in Mplus software.

#### 4 | RESULTS

Table 1 shows the descriptive statistics for the within- and between-level variables. Figure 2 illustrates the structural equation model tested and the results obtained. The proposed model provided a good fit to the data:  $\chi^2(66) = 1058.3$ ,

TABLE 1 Descriptive statistics and correlations for within- and between-group variables

	Mean	SD	1	2	3	4	5	6	7	8
Between-level	ricuii	<b>5</b> 2	-	_		•	3		•	
var.										
1. Mgmt. autonomy	4.43	0.71	1							
2. Mgmt. information	4.41	0.76	0.59**	1						
3. Mgmt. training	4.26	0.66	0.53**	0.46**	1					
4. Mgmt. participat.	3.89	0.88	0.63**	0.76**	0.42**	1				
5. Emply. autonomy	4.10	0.47	0.19*	-0.09	0.22**	0.07	1			
6. Emply information	3.90	0.55	0.35**	0.39**	0.32**	0.36**	0.61**	1		
7. Emply training	3.62	0.63	0.21**	0.02	0.38**	0.12	0.71**	0.71**	1	
8. Emply participation	3.29	0.64	0.34**	0.18*	0.35**	0.31**	0.73**	0.80**	0.79**	1
9. Job satisfaction	4.43	0.43	0.16*	-0.03	0.24**	0.11	0.74**	0.64**	0.84**	0.73**
10. Positive affect	4.32	0.42	0.12	0.02	0.27**	0.10	0.68**	0.61**	0.75**	0.70**
11. Negative affect	2.49	0.44	-0.18*	0.00	-0.23**	-0.03	-0.57**	-0.52**	-0.57**	-0.54**
12. EBITDA (log)	4.00	0.18	0.01	0.33**	0.01	0.31**	-0.25**	0.03	-0.18	-0.15
13. Size (log value)	1.79	0.55	0.00	0.20*	-0.12	0.17*	-0.41**	-0.25**	-0.40**	-0.41**
14. Manufact. strategy	0.24	0.42	-0.16	0.12	-0.10	0.03	-0.44**	-0.20**	-0.34**	-0.34**
Within-level var.										
15. Emply autonomy	3.88	1.33								
16. Emply information	3.75	1.17								
17. Emply training	3.37	1.34								
18. Emply participat.	3.07	1.39								
19. Job satisfaction	4.28	1.12								
20. Positive affect	4.21	0.98								
21. Negative affect	2.58	1.17								

Note: N = 198 companies (between-level); 2066 managers and 20,646 employees (within-level); Values below diagonals are correlations.

<sup>\*</sup>p < 0.05. \*\*p < 0.01.

14 15

1												
0.86**	1											
-0.68**	-0.62**	1										
-0.14	0.09	0.08	1									
		0.28**	0.74**	1								
-0.41**	-0.37**	0.36**	0.36**	0.42**	1							
						1						
						0.54**	1					
						0.49**	0.58**	1				
						0.57**	0.59**	0.57**	1			
						0.53**	0.52**	0.58**	0.47**	1		
						0.47**	0.47**	0.50**	0.43**	0.69**	1	
						-0.21**	-0.28**	-0.32**	-0.19**	-0.43**	-0.38**	1

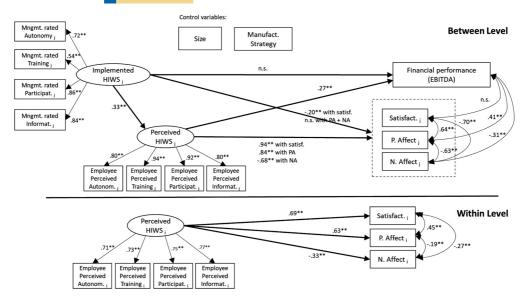


FIGURE 2 Multilevel mediation latent covariate model (2-1-2 model). \*p < 0.05. \*\*p < 0.01

p < 0.001; TLI = 0.96; CFI = 0.97; RMSEA = 0.03. Results show that perceived-HIWS are significantly and positively related with organisational performance ( $\beta = 0.27$ , p < 0.01) and with employee well-being: the findings show a positive relationship with job satisfaction ( $\beta = 0.94$ , p < 0.01) and PA ( $\beta = 0.84$ , p < 0.01) and a negative relationship with NA ( $\beta = -0.68$ , p < 0.01). Therefore, Hypothesis 1 is confirmed.

Model indirect statistics provided by Mplus show a statistically significant indirect effect of perceived-HIWS in the relationship between implemented-HIWS and organisational performance ( $\beta$  = 0.10, p < 0.01). Therefore, Hypothesis 2 is confirmed. Finally, Mplus model indirect statistics show a significant indirect positive effect of perceived-HIWS in the relationship between implemented-HIWS and job satisfaction ( $\beta$  = 0.33, p < 0.01), and PA ( $\beta$  = 0.29, p < 0.01) and a negative effect on NA ( $\beta$  = -0.23, p < 0.01). Thus, Hypothesis 3 is confirmed.

## 5 | DISCUSSION

This study investigated perceived-HIWS as a mediator in the relationship between implemented-HIWS and the pertinent outcomes of financial performance and well-being. In line with expectations, perceived-HIWS were positively associated with financial performance as well as employee well-being (positively with PA and job satisfaction and negatively with NA). Therefore, our findings support the mutual gains perspective in line with previous empirical research (e.g. Garmendia et al., 2021) and lends further credence to the benefits of HIWS (Boxall & Macky, 2009; Wood, 2020) especially in the SME context (Harney & Alkhalaf, 2021). However, our study adds to the extant literature further by incorporating affective/emotional components of employee well-being for which there has been a significant lack of research on to date (Edgar et al., 2018; Mostafa, 2017). In so doing, we also address the void given to active happiness and health related well-being outcomes in prior HRM research (Peccei & Van De Voorde, 2019), and ascertain whether trade-offs may exist between different aspects of employee well-being arising from HIWS (e.g., Van de Voorde et al., 2012). In this respect, no evidence for trade-offs emerged from perceived-HIWS. The high involvement research stream assumes that HIWS will contribute to greater organisational performance through enhanced employee discretion. However, this increased discretion may come at the expense of work intensification (Boxall & Macky, 2009). Work intensification can manifest through increased NA, as emotions like NA are closely

related to stress (Watson, 1988). However, the results of this study show that the perceived-HIWS are negatively related to NA, suggesting that, perceptions of HIWS are unlikely to intensify work to such an extent that employee's emotions are negatively affected. Indeed, the progressive nature of HIWS as advocated by the human relations perspective (Riordan et al., 2005) may compensate for any resultant increase in workload or even decrease workload (Kilroy et al., 2016).

The findings also show a significant indirect effect of perceived-HIWS in the relationship between implement-ed-HIWS and outcomes (both well-being and financial performance). This evidence confirms previous research (Den Hartog et al., 2013; Elorza et al., 2011; Garmendia et al., 2021) showing that implemented-HIWS are more weakly associated with outcomes than are perceived-HIWS, and provides empirical support for a central tenet in the SHRM process model (Nishii & Wright, 2008). Specifically, our study demonstrates the utility of social information processing theory (Salancik & Pfeffer, 1978) in understanding HIWS in the organisational context and in particular as a relevant theory for developing insights into the factors that shape employee perceptions of HIWS (Jiang et al., 2017; Wang et al., 2021). Indeed the positive relationship found between managers' perceptions of HIWS and employees' perceptions of HIWS also contributes to the burgeoning empirical evidence on this topic (which has revealed contradictory results to date) and indirectly unravels the mechanisms through which implemented-HIWS produce improved employee well-being and organisational performance, that is, sheds light on the 'black box' problem (Jiang et al., 2013). The relatively moderate regression coefficient suggest that other factors might influence this relationship, such as the quality of communication (Den Hartog et al., 2013) as well as other demographic and interpersonal similarity variables between managers and employees (Jiang et al., 2017; Wang et al., 2021). Future studies could incorporate such variables to enrich our understanding of this issue.

A rather surprising finding from our analyses is that implemented-HIWS also show a negative direct effect on job satisfaction. This finding however, is consistent with the results of Wood et al. (2012) who found manager-rated high involvement practices led to dissatisfaction albeit their study did not assess employees' perceptions of HIWS. Other previous studies have found a similar negative direct effect when the implemented- and the perceived-HIWS are included together in the same model (Elorza et al., 2011). A potential explanation for this finding is that the perceived-HIWS partials out the variance of the implemented-HIWS that has a positive effect on job satisfaction (visible in the indirect path) and uncovers another variance of the implemented-HIWS that has a negative effect on job satisfaction (visible in the direct path). When supervisors rate that HIWS are implemented but employees do not experience them directly from their line managers (who are the implementers of HIWS), this might create a situation where managers' rhetoric exerts a disappointment in employees' expectations, thereby leading to lower levels of job satisfaction. This would also be consistent with the postulations of social information processing theory (Salancik & Pfeffer, 1978) that employees tend to rely on more proximal sources of information than those of a distal nature (Jiang et al., 2017) and therefore really rely on the cues sent by managers to make sense of HR practices and subsequently accurately assess whether they are satisfied. Therefore, more studies combining the implemented- and the perceived-HIWS in the same study are needed in order to better understand the different effects (positive and negative) that implemented-HIWS could have on well-being variables, which is especially important in light of growing postulations that only manager ratings of HIWS are problematic and less reliable (Beijer et al., 2019).

# 5.1 | Limitations and directions for future research

Our study contains several limitations. First, although the CFA showed the discriminant validity of the four HIWS practices and the three well-being types, common method variance bias could be present between the perceived-HIWS and well-being variables. In order to detect whether common method bias is indeed present, we decided to run additional tests (not included in this paper but available from the first author) following Ostroff, Kinicki and Clark's (2002) 'split design' analysis for multilevel studies. The individual level respondents within a company were randomly divided in two groups: half of them informing about the independent variable (perceived-HIWS) and the

other half informing on the dependant variables (well-being variables). The regression coefficients at the group level did not differ significantly from the ones already reported in the paper and the results of the hypothesis testing were the same. This gives confidence that common method variance is not distorting the conclusions of this research. Second, the data is cross-sectional (though performance data is time lagged) and therefore cause and effect relationships cannot be confidently derived for all variables. Future longitudinal research is needed to ascertain the direction of causality between the focal variables. Third, although the sample consisting of SMEs from a limited geographical area (the Basque Country, northern Spain), is unique in this field of research, this particular sample might limit the generalisability of the findings. Future studies could focus on other non-industrial sectors and SMEs from other geographical contexts. Fourth, while the practices chosen as part of the HIWS are in alignment with the literature and suited to the context, other potentially important practices, such as incentive compensation and job security, were not considered and could influence the results. Moreover, we used the latent variable approach consistent with the HIWS literature (Wood & Ogbonnaya, 2018), in order to obtain a reflective measure of the management involvement approach. Following this latent approach, the selection of all practices that constitute the system is not so crucial as in the traditional additive (formative) indexes that measure the involvement system (Wood, 2020). Nevertheless, we recommend future studies to examine the synergy and differential effects of HIWS to deepen our understanding of how they impact employee well-being and organisational performance.

# 5.2 | Managerial implications

From a practical perspective, the findings of the study suggest that the perceived-HIWS are positively related to financial performance and well-being (positively to job satisfaction and PA and negatively to NA). Therefore, HIWS, create the conditions for employees to use and enhance their skills to better perform their jobs (human capital theory) and create a positive work environment conducive to positive emotions and well-being (human relations theory; Riordan et al., 2005). The implemented-HIWS by managers send signals to employees that the organisation is committed to them in the long term and act as a conduit for employees to experience the necessary PIRK processes (Vandenberg et al., 1999). Therefore, this study shows that HIWS constitute valuable resources that satisfy employees motivational needs and help them perform their jobs. However, managers need to be careful that implemented-HIWS can also have a negative side-effect (cause dissatisfaction). This is likely to occur in contexts where management rhetoric (about a high intended HIWS) is far from the reality that employees perceive (low perceived HIWS) resulting in disappointment in expectations that leads to a decline in job satisfaction.

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#### CONFLICT OF INTEREST

The authors declare no potential conflicts of interest with respect to the authorship and/or publication of this article.

#### DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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