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**Performance at the Cost of Well-being? Testing the multi-level effects of HR practices on organisational performance via employee experiences and well-being.**

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3 **Performance at the Cost of Well-being? Testing the multi-level effects of HR practices on**  
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5 **organisational performance via employee experiences and well-being.**  
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8 **Purpose** While the potential for HR practices (HRP) to improve organisational performance is  
9 well-established, the mechanisms by which this occurs are complex. Individual HRP may affect  
10 organisational performance either by mutual gains (improving both organisational performance and  
11 employee well-being) or by conflicting outcomes (organisational performance is improved at the  
12 expense of employee well-being). Models which combine HRPs may mask these differences and  
13 we therefore test pathways for four individual HR practices.  
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21 **Method** HR practices (employee involvement, pay, performance management, and training) were  
22 hypothesised to influence organisational performance directly and indirectly via employee  
23 experiences of work (communication, autonomy) and employee well-being. The study used a large  
24 secondary dataset, the UK Workplace Employee Relations Survey 2011, to test these relationships  
25 in a multi-level model.  
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33 **Findings** Employee experiences of work strongly predicted well-being. In addition, we identified  
34 three different pathways from HRP to organisational performance. Pay showed indirect negative  
35 effects, involvement had direct positive effects and performance management had a mixture of both  
36 positive direct and negative indirect effects on performance.  
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42 **Originality** Using a disaggregated analysis of HRP and demonstrating their differing effects, this  
43 study questions the feasibility of a universal model of HRP effects. By using multi-level modelling,  
44 we develop understanding of employee perspectives and integrate these into organisational-level  
45 models, demonstrating that performance effects are partially mediated by both employee  
46 experiences of work and employee well-being. Finally, we highlight the complexity of performance  
47 effects achieved via both employee benefits and an intensification of employee experiences.  
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55 *Keywords: Human Resource Practices, employee experiences, well-being at work, Organisational*  
56 *performance, multi-level analysis*  
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## Introduction

For over 20 years, strategic human resource management (SHRM) research has sought to evidence that high performance human resource practices (HRP) lead to better organisational performance, the so-called HR/performance link. On balance, the relationship is accepted (e.g. Harney and Alkhalaf, 2021), despite recognition of its complexity (Guest, 2011, Wang et al., 2021). Central to improved understanding of this relationship is consideration of the role of employee well-being (Guest, 2017, Peccei and van De Voorde 2019): if, as researchers increasingly argue, the HR/performance link is mediated by employee attitudes and behaviours (Boxall et al., 2016), then understanding of HRP's impact on employees and their well-being is required (Peccei and van De Voorde 2019). Yet there is debate as to how performance gains accrue. That is, whether via mutual gains for employee well-being and organisation performance or via conflicting outcomes whereby organisational performance improves at the expense of employee well-being (Ramsay et al., 2000, Peccei and van De Voorde 2019). Our aim here is to address these gaps by exploring employee experiences and well-being within the HR/performance relationship.

Most SHRM research takes place at the organisational level with limited consideration of the employee level (Batt and Banerjee, 2012). Here, we respond to calls for multi-level research that builds both individual and organisational perspectives into the modelling of HR/performance relationships (Croon et al., 2015, Whyman et al., 2015). We test the model using Workplace Employee Relations Survey (WERS) 2011 data and conduct a multi-level mediated analysis, nesting individuals within their workplaces. We draw on previous research investigating whether well-being mediates the relationship between involvement HRPs and organisational performance (Boxall et al., 2016) and broaden to include HRP focused on performance management, training and pay. Theorising that individual HRP may affect employee experiences and well-being in different ways, we depart from SHRM research traditions which have combined several HRP into a

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3 single index or scale (e.g. Macky and Boxall, 2007) and conduct separate analyses to disaggregate  
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5 the relative effects of each HRP and surface otherwise hidden variations (Whyman et al., 2015).  
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8 Our research has three main aims. First, we test Peccei et al.'s (2012) conceptual model of  
9  
10 organisational gains and employee well-being. Second, we use multi-level modelling to develop  
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12 understanding of employee perspectives and integrate these with organisational-level data to  
13  
14 explore the mutual gains versus conflicting outcomes hypotheses. Third, we aim to demonstrate the  
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16 importance of disaggregated analysis of HRPs and surface their differential effects. We argue that  
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18 the mechanisms by which HRP impact performance improvement may vary by individual practice  
19  
20 so that mutual gains, conflicting outcomes and lose-lose scenarios can all be present within an  
21  
22 overall system. In doing so, we hope to provide an important evidence base and a point of departure  
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24 for future research, arguing that in the search for a single model to explain organisational  
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26 performance, there is a risk of ignoring the differential effects of individual HRPs.  
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### 33 **Theoretical Framework**

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35 We draw on SHRM theory which is premised on the application of HRP as a means to  
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37 improve organisational performance (e.g. Delery and Doty, 1996). Such HRP are usually termed  
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39 high performance, that is, they are progressive and designed to enhance performance rather than  
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41 traditional and bureaucratic (Authors, 2022), and have been shown to have a sustained positive  
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43 effect on organisation performance (Tregaskis et al., 2013). While contested, a growing body of  
44  
45 evidence suggests that HRP do indeed lead to higher performance (Harney and Alkhalaf, 2021) but  
46  
47 there is debate over whether organisational performance gains are beneficial or detrimental to  
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49 employees (Ramsay et al., 2000, Ogboyanna, 2019) and this is a key aspect of our research.  
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53 There is general agreement that employee attitudes and behaviours mediate the  
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55 HR/performance relationship, that is, HRP create positive employee attitudes towards the  
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57 organisation (Boxall et al., 2016) which in turn enhances discretionary behaviours (Kooij et al.,  
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2013) and ultimately improves performance (Van De Voorde et al., 2010). Research focus has thus shifted from *content*, where best practice/fit debates may distract from understanding (Qiao et al., 2009), to *process*, with emphasis on understanding HRP implementation (Do and Shipton, 2019). This brings employees centre-stage as their perceptions of and responses to HRP are critical (Nishii et al., 2008). Where HRP create positive employee experiences, improved well-being is likely to result (Kooij et al., 2013). That well-being enhances performance is well-established (Peccei et al., 2012, Van de Voorde et al., 2012). Employee experiences and well-being are thus important mediators of the HR/performance relationship as outlined in Peccei et al.'s (2012, Figure 1) 'bathtub' model.

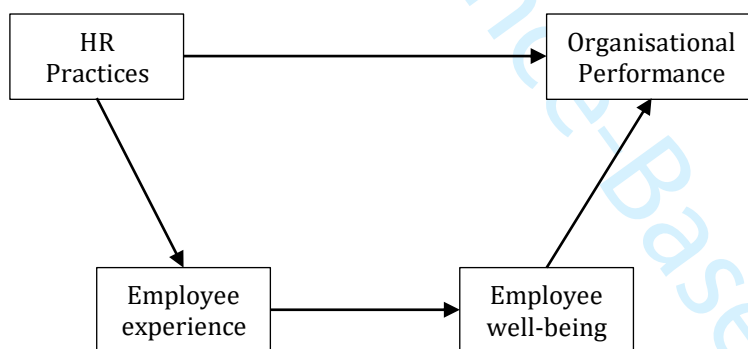


Figure 1 The 'bathtub' model of the HR-performance link (Peccei et al., 2012, Figure 2.4, p.40)

While the importance of employee experiences and well-being is increasingly recognised, there is unresolved debate as to how performance gains accrue (Boreham et al., 2015), that is, whether HRP operate to employee benefit or detriment. Peccei (2004) labelled these alternatives as the optimistic versus pessimistic perspective (later mutual gains vs conflicting outcomes (Peccei et al., 2012)). Optimistic perspectives posit that enhanced performance derives from mutual gains whereby HRP create positive employee experiences which enhance well-being (Bowen and Ostroff, 2004). Strong mutual gains occur where improved well-being and performance are related and weak mutual gains where well-being and performance both improve but there is no direct relationship (Peccei et al., 2012). Pessimistic perspectives argue that performance improvements

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3 derive from conflicting outcomes i.e. that organisational performance gains derive from HRP that  
4 are detrimental to employee experiences via increasing stress, work intensification and job  
5 insecurity and reducing well-being (Ramsay et al., 2000). Van de Vorde et al.'s (2012) meta-  
6 analysis of well-being tentatively evidences greater mutual gains than conflicting outcomes, but  
7 different HRP have different effects. Here we conduct comparative analysis of four individual  
8 HRP to explore how organisational-level HRP/performance relationships are mediated by  
9 employee-level experiences and well-being.  
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19 Organizational-level factors are known to influence individual-level outcomes (Saridakis et  
20 al., 2013) and multi-level analysis accounts for variance in outcomes due to organisation  
21 membership in a way not possible in single-level analysis (Croon et al., 2015). Indeed, multi-level  
22 modelling (MLM) is increasingly used in management research because it allows for more  
23 sophisticated assessment of cross-level relationships, with individuals 'nested' in higher level  
24 groups (Shiu et al., 2015). In this case, the individual employees are grouped within their respective  
25 organisations so that individual-level responses can be utilised with organisational-level metrics.  
26 MLM is also ideally suited to testing mediating relationships across levels (Fong and Snape, 2015),  
27 that is, testing how organisational-level practices might influence employee experiences or well-  
28 being and how these individual-level experiences may in turn influence organisational-level  
29 performance. Finally, MLM provides a way to analyse data from multiple informants within the  
30 organisation by identifying both individual and group-level differences, an important element in  
31 strengthening management research (Bou-Llusar et al., 2016).  
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49 We now consider the model's relationships in more detail. We first outline, relatively briefly  
50 as it is generally well understood, the employee experiences/well-being relationship (Peccei and van  
51 De Voorde 2019). We then move to consider in some detail the HRP/employee experiences  
52 relationship which is least well understood (Peccei et al., 2012).  
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### *Employee Experiences and Well-being*

Employee experiences form an important part of the model tested and we operationalise them using the concept of job resources which have been proposed ‘as a way of parsimoniously classifying key job attributes and other [employee] work experiences.’ (Peccei et al. 2012, p.26). HRP create ‘job resources’ if positively perceived or experienced by employees (Brown et al., 2014). In turn, these job resources increase engagement and well-being. Job resources comprise: stimulation of personal growth (van den Tooren and de Jong, 2014); job control and autonomy (Cullinane et al., 2014); freedom to make job-related decisions and to use skills and abilities (Brown et al., 2014); and communication and participation, meaning employees are well informed and have realistic expectations (Bakker and Demerouti, 2007). Job resources are well-established predictors of well-being (Peccei and van De Voorde 2019).

Well-being is the overall quality of employee experience and functioning (Warr, 2007) and is widely noted as important for positive individual and organisational outcomes (Peccei and van De Voorde 2019, Zhao and Lui, 2020). Guest (2017), for example, notes that HR practices should seek to improve employee well-being if performance gains are to accrue, and other work has noted the detrimental effects of practices that negatively impact well-being (Peccei and van De Voorde 2019). Well-being has been conceptualised in a variety of ways, from a narrow approach using job satisfaction (e.g. Konrad et al., 2013, Pacheco et al., 2016) to a wider measure of general mental health (Rafferty and Jimmieson, 2017, Guerci et al., 2019). Here, we follow Warr (2007) and use a domain-specific conceptualisation of well-being in order to measure the relationships with work-based practices and outcomes more closely. Warr’s (1990) comprehensive model of work-based well-being incorporates the three axes of job satisfaction, job-related anxiety and job-related depression. Job resources can both increase job satisfaction (Warr, 2007, Brown et al., 2014) and reduce negative affect (Bakker and Demerouti, 2007). We therefore hypothesise that employee



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3 experiences, conceptualised in terms of experience of job resources, will positively influence  
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5 employee well-being.  
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8 H1: Employee experiences are positively related to employee well-being.  
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10 Enhanced well-being is a well-established route to improved performance (Peccei and van  
11 De Voorde 2019, Guerci et al., 2019) via the ‘happy/productive worker’ thesis (Wright, 2006). The  
12 link between well-being and performance has been demonstrated in meta-analyses such as that by  
13 Ford et al (2011), which compared psychological well-being to physical health and found the  
14 former a stronger correlate of performance than the latter, and (Guerci et al., 2019).  
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21 H2: Employee well-being is positively related to organisational performance.  
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24 What is less well understood is how HRP influence employee experiences and we turn to  
25 discuss this now.  
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### 31 ***Human Resource Practices***

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33 In this study, we use HRP to refer both to work practices (*i.e.* how the work is organised)  
34 and employment practices (*i.e.* practices used to recruit, develop and motivate employees) (Boxall  
35 and Macky, 2009). SHRM has traditionally adopted a systems approach premised on a view of HRP  
36 as synergistic groups of practices that operate to influence workers’ abilities (A), motivations (M)  
37 and opportunities (O) to perform, an AMO model (Boxall et al., 2016). Many SHRM researchers  
38 adopt AMO as it supports theorisation of HRP’s performance-enhancing effects (e.g. Ogboyan et  
39 al., 2017). (Oppenauer and van De Voorde 2018)  
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49 Research has also typically used indexes of HRP (e.g. Boxall and Macky, 2007) that assume  
50 more practices is better and will unproblematically improve performance (Jiang et al., 2012). Yet  
51 Boxall et al. (2016), drawing on research by Chowhan (2016) and Andreeva and Sergeeva (2016),  
52 caution against simply adding HRPs into a unitary index. More nuanced analyses have explored the  
53 performance-enhancing effects of HRP via the three AMO elements (e.g. Jiang et al., 2012,  
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3 Chowhan, 2016). This more disaggregated approach starts to answer Boxall's question (above) as to  
4 whether some HRP are mutually beneficial and others conflicting. These elements continue  
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6 nevertheless to comprise sub-bundles of HRP. For example, both Jiang et al. (2012) and Chowhan  
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8 (2016) construct Ability indexes that comprise selection and training, Jiang et al.'s (2012)  
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10 Motivation index comprises performance management and pay and Chowhan's (2016) includes  
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12 pay/benefits and career opportunities. Differential effects of HRPs could thus still be masked  
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14 (Ogboyanna et al., 2017). This might explain mixed evidence on mutual gains versus conflicting  
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16 outcomes. In our analysis, therefore, we go further and analyse the separate effects of individual  
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18 HRPs and investigate four widely adopted high-performance HRP: training, performance  
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20 management, pay, and involvement: Godard (2010), Wright and Boswell (2002), and Van de  
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22 Voorde et al (2012) use all four in their SHRM research. Existing research has largely evidenced  
23  
24 positive relationships between organisational performance and performance management (West et  
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26 al., 2002), training (Jiang et al., 2012), pay (Whyman et al., 2015) though the evidence is mixed  
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28 here (e.g. Godard, 2010), and involvement (Wood et al., 2012). We therefore expect to replicate  
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30 these findings:  
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37 H3: HRP are positively related to organisational performance

#### 38 ***HRP and employee experiences***

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41 A growing stream of research has demonstrated that HRP can both make work more  
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43 resource-rich and enjoyable and/or intensify work (Guerci et al., 2019)(Van De Voorde et al.,  
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45 2016), meaning it is important to assess how HRP are experienced by employees (Nishii et al.,  
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47 2008) in order to understand their effect on well-being. We theorise this using the Job Demands and  
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49 Resources model (JDR, Bakker and Demerouti, 2007) and build on a growing stream of research  
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51 demonstrating that employee perceptions of job demands and resources mediate the  
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53 HRP/performance relationships (Van De Voorde et al., 2016). The JDR model has been proposed as  
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55 'a way of parsimoniously classifying key job attributes and other [employee] work experiences.'  
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3 (Peccei et al. 2012, p.26). The 4 HRP we include here all have the capacity to generate both  
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5 resources and demands, and our work here is thus more exploratory, aiming to identify the  
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7 mechanisms of HRP effect on employee well-being rather than predict solely positive or negative  
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9 relationships.  
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12 Performance management practices are designed to enhance individual and thus  
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14 organisational performance (Pfeffer, 1998). There is some, albeit limited, evidence to support their  
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16 effectiveness (West et al., 2002). There is also debate as to whether performance gains are achieved  
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18 to employee benefit or detriment. Developmentally-focused systems based on training,  
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20 communication and support might increase employee job resources by stimulating personal growth  
21  
22 and offering the opportunity to use skills and abilities (Brown et al., 2014); they might further  
23  
24 ensure clear communication and creation of realistic opportunities via objective setting and  
25  
26 performance appraisal (Bakker and Demerouti, 2007). If job resources are thus enhanced, well-  
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28 being and improved organisational performance accrue via mutual gains. Performance systems can,  
29  
30 however, be much harder in nature and achieve performance gains via target setting, monitoring  
31  
32 and control. Such approaches are unlikely to enhance job resources and the stress occasioned by  
33  
34 work intensification is likely to reduce well-being (Ramsay et al., 2000) and performance gains will  
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36 accrue to employee detriment, that is, via conflicting outcomes (Peccei and van De Voorde 2019).  
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42 Training is a commonly adopted high-performance HRP and comprises both initial and  
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44 ongoing skills development. The case for training is clear when drawing on a human capital  
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46 approach which sees employees as an asset for investment (Pfeffer, 1998). Highly-skilled  
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48 employees might undertake more complex tasks or deliver easier tasks to a higher standard, driving  
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50 increased individual and organisational performance. Training may also improve employee  
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52 experiences in that it enhances job resources, for example, stimulating personal growth (van den  
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54 Tooren and de Jong, 2014), increasing use of skills and job-related decision making (Brown et al.,  
55  
56 2014) and providing employees with a greater sense of personal control (Whyman et al., 2015).  
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3 Increased job resources will positively influence well-being, creating a strong mutual gains outcome  
4 (Peccei et al., 2012) in which employee experiences/well-being mediate the training/organisational  
5 performance relationship. Despite a largely positive evidence base, some studies have not supported  
6 training's role in improving performance (e.g. Delery and Doty, 1996) and, most recently, Garavan  
7 et al. (2021) have noted the extremely complex relationships between training and performance.  
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12 We consider here high-performance pay practices. One key practice is contingent pay, that  
13 is, pay is linked, at least in part, to employee performance. This is supposed to drive higher  
14 individual and thus organisational performance, although evidence is mixed (Godard, 2010).  
15 Optimistic perspectives posit that employees derive financial benefit from organisational  
16 performance gains (Pfeffer, 1998). More pessimistically, contingent pay simply transfers risk to  
17 employees who, in practice, have limited opportunity to influence their own/organisational  
18 performance and benefit from increased pay (Aguinis and Pierce, 2008). Contingent pay is unlikely  
19 to enhance job resources: it is unlikely to stimulate personal growth (van den Tooren and de Jong,  
20 2014) nor improve autonomy and job-related decision making (Brown et al., 2014). Indeed, risk  
21 transfer to employees may increase stress and/or work intensification and reduce well-being,  
22 performance gains accruing via conflicting outcomes. Non-pay benefits, the provision of which  
23 might create more positive employee experiences, are also relevant.  
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43 Involvement practices provide mechanisms for communication and influencing how jobs are  
44 done and, sometimes, how the wider team/organisation operates. This includes both initiatives such  
45 as team briefings, quality circles and employee surveys and the degree of autonomy and control  
46 afforded to employees. Much research links involvement to improved organisational performance:  
47 opportunities to have voice and influence are linked to improved individual performance (Wood et  
48 al., 2012). In addition, there is substantial evidence that involvement is linked to improved  
49 employee experiences. Involvement practices stimulate personal growth (van den Tooren and de  
50 Jong, 2014); offer job control (Cullinane et al., 2014); afford the freedom to make job-related  
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3 decisions (Brown et al., 2014) and support communication and participation (Bakker and  
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5 Demerouti, 2007). Thus, there is good evidence for a mutual gains relationship whereby  
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7 involvement positively influences both organisational performance and employee experiences and  
8  
9 well-being. On the other hand, however, involvement has also been shown to increase employee  
10  
11 responsibility, with the resultant work intensification and longer working hours increasing stress  
12  
13 (Godard, 2010). Here, performance gains accrue via conflicting outcomes on well-being. Testing  
14  
15 the potential mediating pathway of involvement HRP on organisational performance via employee  
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17 experiences and well-being may help to explain these conflicting results.  
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22 In summary, there is evidence that HRPs might enhance job resources via skill utilisation,  
23  
24 job variety, autonomy, fair treatment, or increase job demands via work overload and  
25  
26 intensification. They may make the work environment more resourceful or more intense (Van De  
27  
28 Voorde et al., 2016) and individual HRPs may have different effects, reinforcing the importance of  
29  
30 their disaggregation (Ogboyanna et al., 2017).  
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33  
34 SHRM suggests that HRPs are synergistic and research to explore their performance effects  
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36 has tended to combine them in a single index or scale (e.g. Macky and Boxall, 2007, Zhang and  
37  
38 Llewelyn Morris, 2014). We, however, draw on Godard (2010), Whyman et al (2015) and Van De  
39  
40 Voorde (2010), who argue for disaggregating HRP so that differential effects are not masked. This  
41  
42 supports understanding of the distinctive contribution of each HRP (Wright and Boswell, 2002) and  
43  
44 requires a relatively parsimonious model in order to compare their relationships. By using Peccei's  
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46 'bathtub' model, this study aims to identify the extent to which a single model can accurately  
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48 capture the direct and indirect relationships of different HRPs  
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## Method

### *Data and Sample*

Our data are drawn from the Workplace Employee Relations Survey 2011 (WERS 2011) (Department for Business Innovation and Skills et al., 2011), the most recent version of a series of cross-sectional UK employment surveys at workplace and individual levels. This dataset is unique in providing a stratified representative sample of UK workplaces with 5 or more employees that allows individual employee responses to be associated with their employing organisation's responses, thus providing multi-level data. The data is in the public domain and the full survey instruments can be downloaded from the website (further details at [www.wers2011.info/](http://www.wers2011.info/)).

We used two of the WERS2011 data collection instruments: the Survey of Managers (MQ) and Survey of Employees (SEQ), as per other similar studies (e.g. Whyman et al., 2015, Wood et al., 2012). Workplace data collection comprised a structured interview with the most senior HRM (or equivalent) manager (MQ) followed by self-report questionnaire (SEQ) completion by a random sample of employees. Between one and 25 employees per workplace completed the SEQ (median=7, mean=8.48, SD=6.97).

We combined MQ and SEQ responses in STATA, using syntax files and procedures from the UK Data Archive, creating a single dataset with individual-level data nested within workplace data. We exported data into SPSS and created indices and scales (described below and shown in the Supplemental Information). The final sample, limited by study variables, comprised 22,738 employees nested in 2680 organisations and was exported to Mplus (Version 7.3) (Muthén and Muthén, 1998-2012) for multi-level analysis.

## *Measures*

### *HRP Measures*

Four HR practices were measured using indices comprising organisational-level MQ items, chosen by the authors based on theoretical concepts and existing empirical literature (e.g. Chowhan, 2016). Using indexes rather than composite scales allows a measure of different practices standardised across both categorical and scale items (Chowhan, 2016). Also known as a ‘causal indicator scale’, this means that internal consistency (e.g. Cronbach’s alpha) is not a meaningful way of measuring the scale’s reliability (Spector and Jex, 1998); rather, the items are indicators of separate constructs that ‘form a coherent whole’ (De Menezes and Wood, 2006: 109).

The HRP items were either skewed or bimodal, and we followed De Menezes and Wood in recoding items of interest into binary variables, using the median proportion of usage as the cut-off. These recoded variables were then summed into an index, using equal weighting of the elements. Higher scores on each HRP index indicate higher than median intensity of use of the practices within that bundle.

*Performance Management* (N = 19,842) comprised 3 items: proportion of non-managerial employees appraised, whether performance appraisal results in evaluation of training needs and whether performance appraisal is linked to pay.

*Training* (N = 20,202) comprised 4 items: whether employees had a standard induction programme, what proportion of employees had training in the past year, what proportion were formally trained to do another job and the number of days training in the past year.

*Pay* (N = 14,296) comprised 6 items: frequency of pay review, whether employees (or representatives) were consulted about pay review, whether employees received merit pay, whether employees received profit-related pay or bonuses, and the number of non-pay terms and conditions for i) managers and ii) the largest occupational group.



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3 *Involvement* (N = 14,616) comprised 10 items: the extent of employee involvement in work  
4 organisation, their discretion over how they work, their control over pace of work and the variety in  
5 their work; together with whether meetings between managers and all their reports occur, the  
6 number of meetings, the proportion of time devoted to staff contributions in meetings with i) line  
7 managers and ii) senior managers, whether quality circles are set up and whether there is a formal  
8 survey of the employee views.  
9

### 16 *Employee Experiences*

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18  
19 Employee experiences were conceptualised in terms of job resources (Bakker and  
20 Demerouti, 2007), specifically employee perceptions of communication (Bowen and Ostroff, 2004)  
21 and their perceptions of control / autonomy in their work (Wood et al., 2012) as measured by  
22 individual-level SEQ. Seven items in the SEQ were identified as representing job resources,  
23 including employee ratings of how well their managers communicated with them, levels of staffing,  
24 feedback on their work, control or autonomy over their tasks and pace of work. Items were  
25 measured on 1-5 ordinal scale and combined to create a scale of Employee Experiences using the  
26 mean of all seven items ( $\alpha = .942$ , N = 21,838, 'EE').  
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### 37 *Employee Well-being*

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40 We measured well-being using Warr's (1990) circumplex model of workplace affect. We  
41 combined the individual-level SEQ items of job satisfaction, depression-enthusiasm and anxiety-  
42 comfort on a 1-5 ordinal scale (reverse-scored where necessary) to produce an Employee Well-  
43 being scale using the mean of all 14 items ( $\alpha = .905$ , N = 21,862, 'WB').  
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49 *Satisfaction*: items comprised employee satisfaction with: sense of achievement, scope for  
50 using own initiative, influence over job, training received, opportunity for skill development, pay,  
51 job security and work itself.  
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56 *Anxiety-contentment*: items comprised employees' perceptions of how often their job has  
57 made them feel: tense, worried and uneasy.  
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3            *Depression-Enthusiasm*: items comprised employees' perceptions of how often their job has  
4 made them feel: depressed, gloomy and miserable  
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### 6 7 8 *Organisational Performance*

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10            Organisational performance was measured using 3 MQ items which asked managers to rate  
11 their organisation's financial performance, quality, and productivity on a five-point scale from 'a lot  
12 below average' to 'a lot better than average' for the industry sector ( $\alpha=.65$ ,  $n=21805$ ). This reflects  
13 Wood and Obgoyanna's (2016) conceptualisation of performance using WERS2011 data. While the  
14 alpha co-efficient is slightly below the commonly accepted cut-off of 0.7, this serves as a 'rule of  
15 thumb' and we take account of research context and contributing items in its interpretation (Cortina,  
16 1993) to justify its use in three ways. First, our model does not require fine-grained performance  
17 distinctions; second, the scale contains only three items and its alpha might be expected to be lower  
18 than multi-item scales; third, the item inter-correlations are all strong and significantly positive (all  $r$   
19  $\geq 0.45$ ,  $p < 0.001$ ). While this scale is a subjective measure of performance, other highly-respected  
20 studies have adopted similar approaches (e.g. Wood et al., 2012). Indeed, Singh et al. (2016) have  
21 evidenced that subjective performance measures compare favourably with objective measures in  
22 relation to validity and reliability.  
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### 39 40 *Analysis*

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42            MLM accounts for the fact that employees are 'nested' within workplaces, that is, the  
43 employee-level responses are not statistically independent from each other as they experience  
44 similar organisational contexts (Wood et al., 2012). It would not be appropriate to aggregate these  
45 individual-level responses to the workplace-level since this aggregation would then reflect  
46 combined between- and within-group variation. Instead, MLM evaluates the variance attributable to  
47 individual and group factors in order to test predictive relationships across and between levels. We  
48 test a two-level (2-1-1-2) mediation model (Figure 1). In this model, HRP and organisational  
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3 performance are measured at organisational level (2) and employee experiences and well-being  
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5 measured at individual level (1).  
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7  
8 MLM was conducted in Mplus (version 7.3), adopting coding from Croon et al (2015). We  
9  
10 used a single-step analysis (Croon et al., 2015, Wood et al., 2012) which estimates simultaneously  
11  
12 both direct and indirect effects of employee experiences and well-being in explaining organisational  
13  
14 performance. Indirect effects were tested for significance by means of a Sobel Test. We adopted a  
15  
16 scale-based approach as we test and compare a mediation model for four separate HRP. While a  
17  
18 factor-analytic item-based approach is sometimes preferred because it allows for correction of  
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20 measurement error in observed indicators, Croon et al.'s (2015) comparison of the two did not  
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22 demonstrate a stronger estimate of effects in the factor-analytic approach.  
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## 29 **Results**

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31 HRP show largely significant positive correlations, indicating workplaces that adopt one  
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33 practice are likely also to adopt the others (Table 1). Employee experiences are significantly more  
34  
35 positive where the workplace uses involvement, performance and training practices, but there is a  
36  
37 negative association with pay practices. Similarly, well-being is associated with increased use of  
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39 involvement, performance and training practices but not pay. Increased organisational performance  
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41 is associated with higher involvement and training HR practices, job resources and well-being, but  
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43 is negatively related to pay. Significant correlations between variables of interest warrant further  
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45 analysis of the predictive relationships.  
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Table 1: Means, standard deviations and inter-correlations

	Mean	SD	Min	Max	1	2	3	4	5	6
1. Involvement	16.47	1.83	1	20						
2. Pay	10.10	1.12	6	12	-.017*					
3. Performance Management	5.14	.62	3	6	.156**	.060**				
4. Training	7.05	.76	4	8	.110**	.069**	.122**			
5. Employee experiences	3.26	.96	1	5	.042**	-.024**	.074**	.034**		
6. Well-being	3.73	.68	1	5	.036**	-.004	.041**	.034**	.728**	
7. Organisational Performance	3.73	.60	1	5	.032**	-.054**	.013	.080**	.049**	.036**

Significance levels (this and all subsequent tables):\*  $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

Multi-level analysis is appropriate as demonstrated by intra-class correlation coefficients (ICCs, Table 2), measuring the extent to which experiences and well-being of individuals in the same workplace differ compared to individuals in other workplaces. ICCs indicate that between 10% and 18% of the variance is explained by workplace, which is typical for organisational research (Bliese, 2000). There were no correlations between variables above .7 and all VIF values were well within the acceptable range (i.e. below 2), indicating no multicollinearity.

Table 2: Intra-class correlation coefficients

Predictor	Employee experiences	Well-being
Performance management	0.163	0.115
Pay	0.142	0.100
Training	0.173	0.119
Involvement	0.180	0.127

We conducted separate multi-level mediated model analyses for each HRP and report these in two stages (as per Croon et al., 2015). First, we present estimates of the regression coefficients (unstandardised Bs and standardised  $\beta$ ) for each HRP for the between-group regression model, together with the standard error and z-value for the Bs (Table 3). Second, we present estimates of the direct, indirect and total effects of HRP on organisational performance (Table 4). There are

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3 three indirect effects: mediated by employee experiences; mediated by well-being and mediated by  
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5 both employee experiences and well-being.  
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Evidence-Based HRM

Table 3. Multi-level mediation models: between-group path analysis

Predictors	Outcomes	Performance Management					Training					Pay					Involvement				
		R <sup>2</sup>	B	SE(B)	Z	β	R <sup>2</sup>	B	SE(B)	Z	β	R <sup>2</sup>	B	SE(B)	Z	β	R <sup>2</sup>	B	SE(B)	Z	β
HRP	Emp Exp	.004	.040	.019	2.143*	.065	.001	-.017	.016	-1.064	-.034	.010	-.032	.012	-2.562†	-.100	.008	.020	.008	2.476*	.091
HRP	Well-being	.611‡	-.025	.009	-2.852†	-.068	.613‡	-.015	.007	-2.105*	-.049	.604‡	-.007	.006	-1.230	-.039	.618‡	.003	.004	.712	.021
Emp Exp			.467	.018	25.590‡	.783		.457	.017	26.664‡	.780		.462	.023	2.487‡	.772		.469	.022	21.471‡	.784
HRP	Org Perf	.082‡	.079	.022	3.601‡	.084	.079‡	.019	.017	1.156	.025	.106‡	.026	.015	1.716	.049	.076‡	.017	.008	1.995*	.051
Emp Exp			.188	.086	2.177*	.122		.201	.083	2.435*	.136		.374	.116	3.234‡	.218		.280	.095	2.954†	.189
Well-being			.426	.155	2.745†	.165		.407	.151	2.697†	.161		.366	.214	1.713	.128		.224	.169	1.328	.091

Note. HRP = Human Resource Practice; Emp Exp = Employee Experiences; Org Perf = Organisational Performance.

\* p < .05, † p < .01, ‡ p < .001

Table 4: Direct, indirect and total effects of HR practices on organisational performance

HRpractice	Type of effect	Unstandardised	Standardised
Perf Mgmt	Direct	0.079***	0.084***
	Indirect via		
	Emp Exp	0.007	0.008
	WB	-0.010*	-0.011*
	Emp Exp & WB	0.008	0.008
	Total	0.084***	0.089***
Training	Direct	0.019	0.025
	Indirect via		
	Emp Exp	-0.003	-0.005
	WB	-0.006	-0.008
	Emp Exp & WB	-0.003	-0.004
	Total	0.006	0.009
Pay	Direct	0.026	0.049
	Indirect via		
	Emp Exp	-0.012*	-0.022*
	WB	-0.003	-0.005
	Emp Exp & WB	-0.005	-0.010
	Total	0.006	0.012
Involvement	Direct	0.017*	0.051*
	Indirect via		
	Emp Exp	0.006	0.017*
	WB	0.001	0.002
	Emp Exp & WB	0.002	0.006
	Total	0.025**	0.077**

Note. Emp Exp = Employee Experiences; Perf Mgmt = Performance Management; WB = Employee Well-being.

\*  $p < .05$ , †  $p < .01$ , ‡  $p < .001$

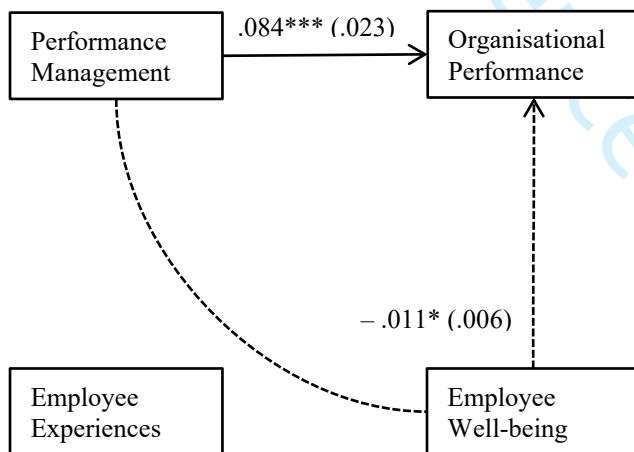
Hypothesis 1 (HRP are positively related to organisational performance) was partially confirmed, with a significant direct positive effect of performance management and involvement on organisational performance. The direct effects of Training and Pay, although positive, were not significant. Hypothesis 2 (employee well-being is positively related to organisational performance) was also partially supported, with well-being positively predicting organisational performance in the analyses for performance management and training but not reaching significance in the analyses for pay and involvement.

The most striking result is the large effect of employee experiences on well-being, predicting around 61% of variance in each of the four models, supporting hypothesis 3. Although most remaining effects are relatively small, the majority are significantly different from zero and provide important insight into relationships between different HRPs and organisational performance (Croon et al., 2015). Variances explained are also comparable to similar research based upon WERS datasets (e.g. Wood et al., 2012).

We interpret results for each HRP below, presenting significant results from multi-level mediation models in diagrammatic format (Figures 2.1-2.3 show standardised parameters and their standard errors; solid lines indicate direct effects, dotted lines indicate indirect (mediated) effects). We discuss the full results below but, for ease of reading, the figures represent only mediated models (Table 4).

Of the four HRP, PM has a direct positive effect on employee experiences and well-being, and also the largest direct positive effect on organisational performance. PM also exerts an indirect effect on performance via well-being, but not via employee experiences. This indirect effect is negative, indicating that PM increases organisational performance to the detriment of well-being.

Figure 2.1: Performance Management.



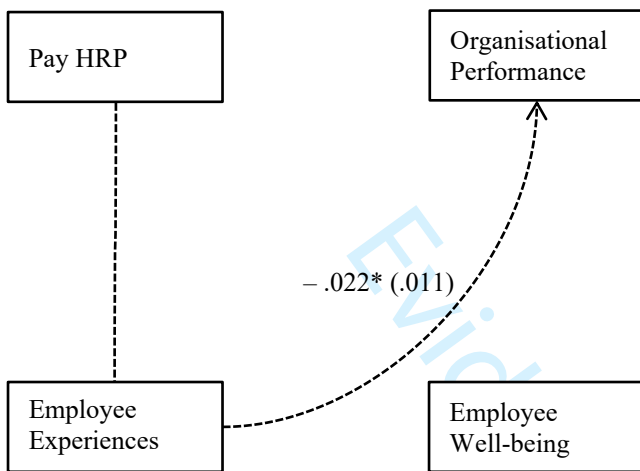
*Note.* Solid line indicates standardised direct effects while dashed line indicates standardised indirect effects (standard error in brackets). \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

Training has a direct negative effect on employee well-being but no significant direct effect on employee experiences or organisational performance. There is no indirect effect through well-being or employee experiences. Median or above use of training is not associated with any direct or indirect improvement in organisational performance.

Pay has a direct negative effect on employee experiences, though not directly on employee well-being or organisational performance. Interestingly, pay has a mediated negative effect on performance via employee experiences: increased use of high performance pay practices results in decreased organisational

performance via worsened employee experiences. However, this mediated effect is small, not resulting in an overall drop in organisational performance for the full (direct and indirect) mediated model.

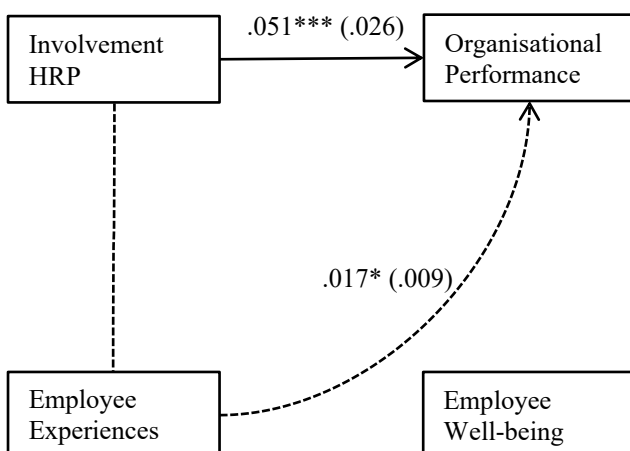
Figure 2.2 Pay



Note. Solid line indicates standardised direct effects while dashed line indicates standardised indirect effects (standard error in brackets). \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

Involvement has a direct positive effect on employee experiences and organisational performance but no significant direct effect on well-being. There is also a positive indirect effect of involvement on performance via employee experiences but not well-being.

Figure 2.3 Involvement



Note. Solid line indicates standardised direct effects while dashed line indicates standardised indirect effects (standard error in brackets). \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$



## Discussion

Our multi-level mediated analysis of four separate HRP, using Peccei et al.'s (2012) 'bathtub' model, investigated the direct and indirect effects of each HRP on organisational performance. We evidenced complex relationships between HRP, employee experiences and well-being and organisational performance and illustrated three different pathways from HR practice to organisational performance. These included indirect negative effects on organisational performance (pay), direct positive effects (involvement) and a mixture of both positive direct and negative indirect effects (performance management). Perhaps most surprisingly, training had neither direct nor indirect effects on organisational performance.

The models contain somewhat low effect sizes (but are consistent with other highly respected studies e.g. Wood et al., 2012), possibly artefacts of complex measurements developed from the dataset. Designed to maximise representativeness, WERS has a high level of heterogeneity. This may increase measurement error in Level 2 variables and decreased common method variance in workplace rather than individual measures, resulting in small cross-level effects (Croon et al, 2015). Secondary data analysis often creates compromise between the advantages of a large, comprehensive dataset and the drawbacks of a data collection process not specifically designed to answer the questions the researchers ask of the dataset.

In line with SHRM theory, two HRP (performance management and involvement) predicted higher organisational performance, albeit in different ways. Performance management evidenced very complex relationships, predicting better employee experiences but lower well-being and a negative mediated effect on organisational performance via well-being. This mediated effect was, however, small and did not substantially reduce total effect. Improved employee experiences might indicate a developmental form of performance management enhancing job resources (Brown et al., 2014, Bakker and Demerouti, 2007). However, its negative impact on well-being (dominant in the mediated model) is more indicative of hard performance management which increases performance via monitoring, control and work intensification (Aguinis and Pierce, 2008). The negative consequences for well-being mean that the large impact performance management practices have on organisational performance (West et al., 2002) result from conflicting outcomes not mutual gains (Peccei et al., 2012). The sustainability of these performance gains is

1 questionable. It might also shed light on the seemingly surprising result that training had no overall effect on  
2 organisational performance and a small negative effect on well-being. Our results provide little evidence of  
3 a human capital approach in which investment in skills delivers higher performance (as per e.g. Delery and  
4 Doty, 1996). There could be a number of causes; training might be statutory (e.g. health and safety) rather  
5 than focusing on skill development; or, training may be poorly-designed and ineffective (Whyman et al.,  
6 2015). Indeed our measure of ‘how many’ training practices provides no insight into their efficacy and it is  
7 difficult to explain training’s differential effects on employee experiences and well-being. This reflects  
8 recent research in the field that notes the very complex relationships between training and performance  
9 (Garavan et al., 2021) and is an area that would benefit from further research.

21 Pay had no overall nor direct effect on organisational performance, suggesting a limited role for  
22 high-performance pay practices (contra Whyman et al., 2015, supporting Godard, 2010). As might be  
23 expected, these practices had a negative impact on employee experiences (van den Tooren and de Jong,  
24 2014) which reduced organisational performance. This decrease may be masked in the overall model by  
25 other aspects of individual workers’ experience or organisational practice that works to counter this effect.

33 Finally, involvement had both a directly positive effect on organisational performance and a  
34 mediated effect via improved employee experiences. This was the only practice with wholly positive direct  
35 and indirect effects, which is supportive of other research (e.g. Wood et al., 2012).. Managers’ perspectives  
36 on autonomy are reflected in employee experiences (Whyman et al., 2015) and indicate that involvement  
37 offers a mutual gains mechanism that improves both employee and organisational outcomes (Peccei et al.,  
38 2012). The lack of effect on well-being is an area for further exploration. Also worthy of note is that  
39 involvement, a work design practice (Boxall and Macky, 2007), is the only practice to have positive effects  
40 via mutual gains. This could suggest that work design is more effective than employment practice (our other  
41 three practices), although further research is again required.

54 In summary, we demonstrate four different pathways for the effects of HRP on individual and  
55 organisational outcomes. None fully supports Peccei et al.’s (2012) mediated bathtub model, where HRP  
56 affects organisational performance via both employee experiences and well-being. While this could result  
57 from how employee experiences and well-being were measured, we used well-established models and the

1 findings may instead indicate that a single model for HRP effect on organisational performance is overly  
2  
3  
4 simplistic.

5  
6 Importantly, our findings also support a large body of research evidencing that employee experiences  
7  
8 have substantial positive effects on well-being (Warr, 2007). We noted at the outset that HRP effects on  
9  
10 employee experiences are little understood (Peccei et al., 2012) and our results demonstrate complex  
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12 relationships. We argue, however, that better understanding is central to application of HRP that work to  
13  
14 effectively influence the employee experiences/well-being relationship.  
15

### 16 17 *Limitations*

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19 Despite the use of a robust, large, nationally representative dataset, there are limitations to our  
20  
21 analysis. First, measures of the concepts were constructed post-hoc from the available survey items. In some  
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23 instances, items reflected original measures (e.g. Warr's model of workplace well-being); in others, the item  
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25 choice was based on expert understanding and limited by available survey items. Further, this data is cross-  
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27 sectional and the proposed predictive relationships await further longitudinal testing. Finally, the  
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29 WERS2011 dataset is now fairly dated and the results here may therefore not be as relevant to current  
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31 practices and experiences as could be hoped. However, this remains the most recent survey to include these  
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33 variables and therefore ideally suited to testing the multi-level relationships described in a thorough HRM  
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35 model. In addition, the data were collected in the wake of the 2008 recession, a time of significant challenge  
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37 and change for organisations, similar to the recent COVID-19 pandemic.  
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### 45 **Conclusions**

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47 Our research explores employee-level mediators in the HRP/performance relationship and  
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49 demonstrates complexity in the relationships under consideration. We make three theoretical contributions.  
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51 First, we test Peccei et al.'s (2012) conceptual 'bath tub' model and provide empirical support for its  
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53 positive mediation thesis in respect of involvement. There is, however, limited support for the other HRP.  
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55 Our research is ground-breaking in its disaggregated analysis of HRPs and demonstration of their differing  
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57 effects and calls into question the feasibility of a universal model of HRP effects. There is, however, clear  
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59 evidence of the positive impact of both employee experiences on well-being (Peccei et al., 2012) and well-  
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1 being on performance (Kooij et al., 2013). Better understanding of how to design HRP to improve employee  
2 experiences could then have substantial implications for well-being.  
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6 Second, we respond to calls for multi-level modelling to develop understanding of employee  
7 perspectives and integrate these into organisational-level models (Batt and Banerjee, 2012, Croon et al.,  
8 2015). HRP effects upon employees and their responses are increasingly recognised as important in the  
9 HR/performance relationship (Purcell and Hutchinson, 2007). Our work contributes in demonstrating that  
10 performance effects were partially mediated by both employee experiences of work and employee well-  
11 being. Further, it sheds light on the unresolved conflicting outcomes versus mutual gains debate, albeit again  
12 in highlighting complexity whereby performance effects were achieved via both employee benefits and an  
13 intensification of employee experiences (Ramsay et al., 2000).  
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24 Third, we disaggregate HRPs (Whyman et al., 2015), to develop understanding of the relative effects  
25 of each. This reveals patterns hidden in the more typical approach of combining HRP into a single index or  
26 scale (e.g. Boxall and Macky, 2007). Our findings provide greater optimism for work design practices, here  
27 involvement, where performance effects are derived from mutual gains, than for employment practices  
28 where either no performance effects accrue (pay and training) or accrue via conflicting outcomes  
29 (performance management). Given this complexity, we note again that it is ambitious to aspire to one model  
30 that captures effects of all practices, particularly given their contingent and contextually-dependent nature.  
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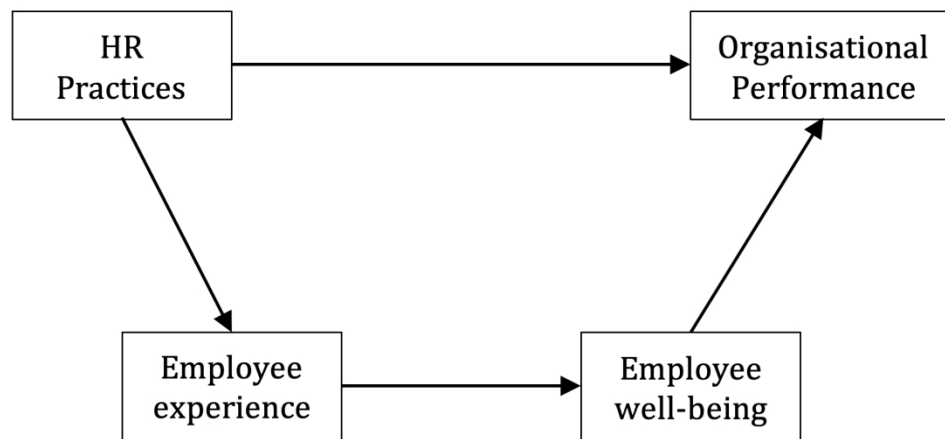


Figure 1. The 'bathtub' model of the HR-performance link (Peccei et al., 2012, Figure 2.4, p.40)

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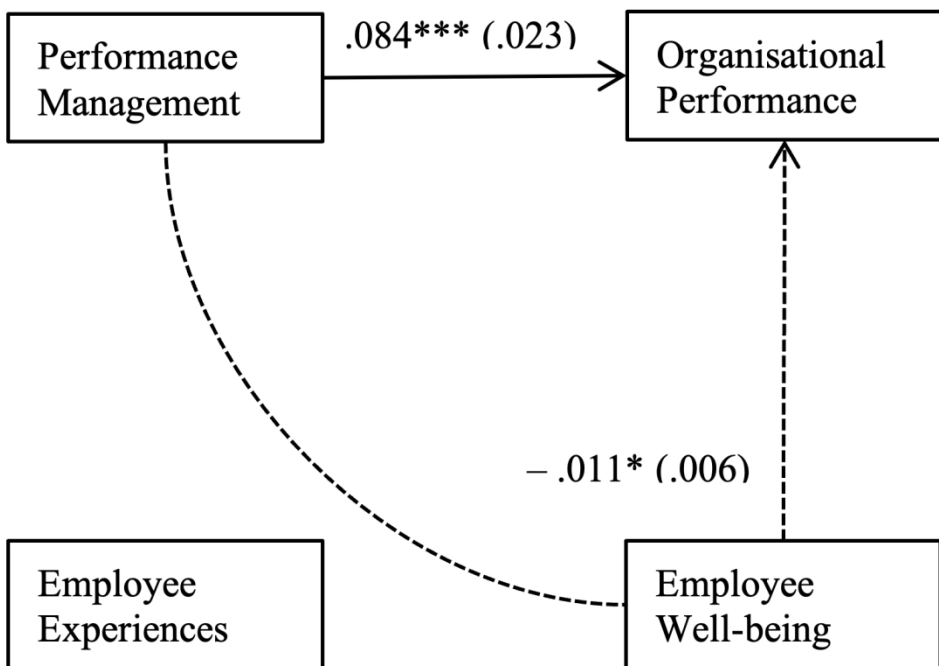


Figure 2.1 Performance Management  
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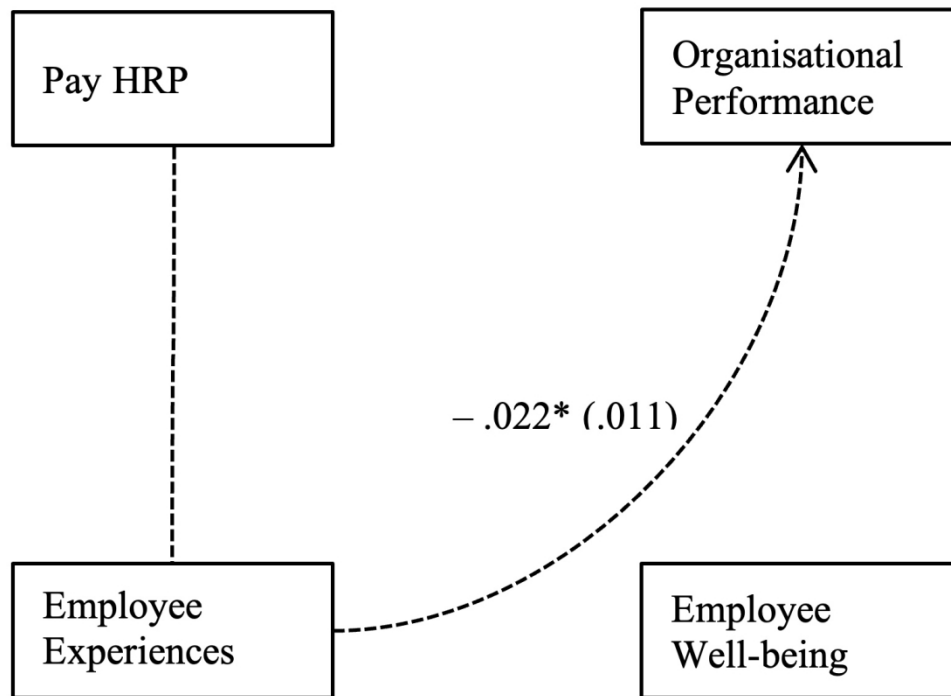


Figure 2.2 Pay

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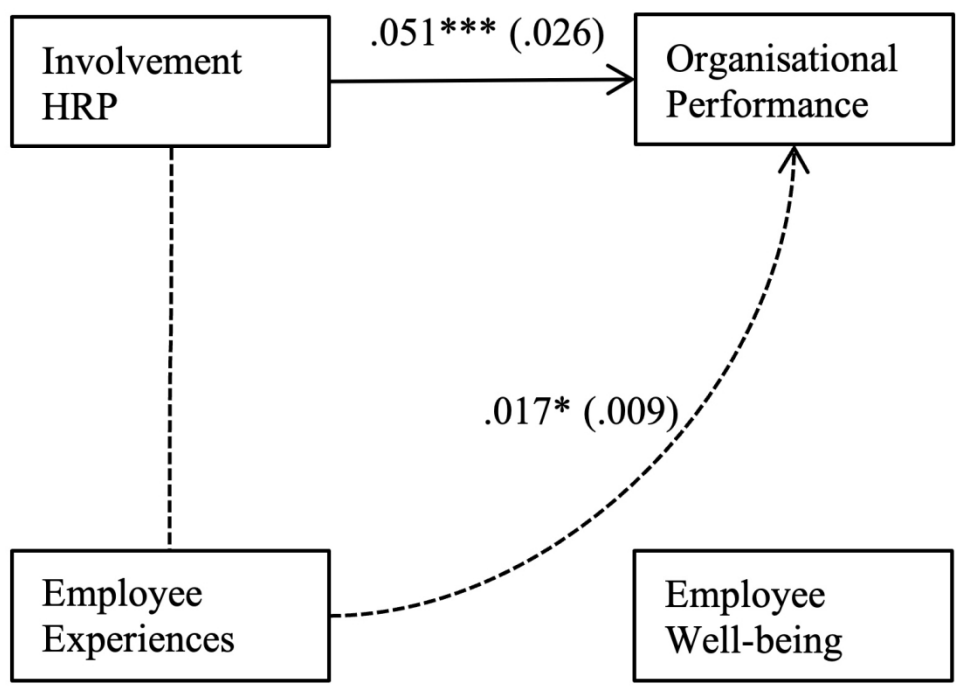


Figure 2.3 Involvement  
285x202mm (144 x 144 DPI)