



# From high-performance work systems and resilience to employee well-being during crises: exploring the moderating role of employee ambidexterity

Charles Hanu<sup>1,2,3</sup> · Njabulo Khumalo<sup>4</sup>

Accepted: 14 August 2023 / Published online: 29 August 2023  
© The Author(s) 2023

## Abstract

This study examines the moderating role of employee ambidexterity on how high-performance work systems and employee resilience relates to organisational resilience and employee well-being during crises. Additionally, it explores the influence of organisational resilience on employee well-being during crises. This study used a quantitative approach. Two-wave cross-sectional data were obtained from 324 employees of pharmaceutical manufacturing firms in Ghana and analysed using Structural Equation Modelling-Partial Least Squares. The findings indicated that a high-performance work system plays a crucial role in enhancing the link between organizational resilience and employee well-being. Although employee resilience was found to influence on organizational resilience and employee well-being positively, this effect is not statistically significant. The results also indicate that the role of exploitation ambidexterity is vital in strengthening the relationship between high-performance work systems, employee resilience, organizational resilience, and employee well-being, particularly during crises. This provides a comprehensive analysis of the influence of high-performance work systems, employee resilience, and employee ambidexterity on both organizational resilience and employee well-being. Additionally, using personal and organisational resources to examine how they promote employee well-being during crises empirically provides new insights into resilience and well-being literature.

**Keywords** High-performance work systems · Resilience · Ambidexterity · Well-being · Crises

## Introduction

Given the challenges of a disruptive business environment, organisational resilience and employee well-being have become increasingly essential research areas. Among the

industries prone to business disruption is the pharmaceutical industry. Although Ghana's pharmaceutical manufacturing sector has experienced significant growth, it is disposed to fierce competition, economic downturns, and an annual population growth rate of 2.1 per cent (Access & Delivery Partnership, 2016; Aduhene & Osei-Assibey, 2021; Ghana Statistical Service, 2021). The sector also operates in a highly regulated and complex environment, coupled with stringent quality standards, evolving regulatory requirements, the need for rapid innovation, supply chain disruptions, and global health emergencies (Aduhene & Osei-Assibey, 2021; Agyekum et al., 2021), posing significant challenges to organisational resilience and employee well-being. Given these sector characteristics, understanding the factors that can enable pharmaceutical firms effectively manage crises and concurrently promote their employees' well-being is critical for their long-term success and sustainability (Mao et al., 2023; Näswall et al., 2019; Rasool et al., 2021).

The human resource management literature suggests that organisations can implement high-performance work

✉ Charles Hanu  
22175100@dut4life.ac.za; charles.hanu@ttu.edu.gh

Njabulo Khumalo  
Njabulokhumalo4@gmail.com

<sup>1</sup> Department of Human Resources, Faculty of Management Sciences, Durban University of Technology, Durban, South Africa  
<sup>2</sup> Rabat Business School, Université Internationale de Rabat, Rabat, Morocco  
<sup>3</sup> Faculty of Business Studies, Takoradi Technical University, Takoradi, Ghana  
<sup>4</sup> School of Management, IT and Governance, College of Law and Management Studies, University of KwaZulu-Natal, Durban, South Africa

systems (HPWS) programmes, such as improving employee abilities, motivation, and opportunities, to enhance organisational resilience and well-being (Al-Taweel, 2021; Näswall et al., 2019). However, organisational resilience is also a function of other factors, such as individual resilience, described as an individual's ability to cope with adversity (Hillmann & Guenther, 2021; Näswall et al., 2019). This is because resilient employees can maintain their well-being, engage in work, and help the organisation adapt and overcome challenges (Al-Taweel, 2021; Hillmann & Guenther, 2021). Moreover, organisational resilience can directly affect employee well-being by providing a safe and supportive work environment (Liu et al., 2019).

Additionally, this study suggests that employees' ambidextrous behaviour, which refers to their ability to balance competing demands and be both explorative and exploitative in their work, can also influence how HPWS and employee resilience relate to organisational resilience and employee well-being (Caniëls & Veld, 2019; Mu et al., 2022). Scholars reported that ambidextrous employees can navigate work challenges, demonstrate resilience, and better contribute to organisational resilience and well-being (Heinze, 2022; Mu et al., 2022).

Existing studies have emphasised the predictive influence of HPWS and employee resilience on organisational resilience (Al-Taweel, 2021; Zhou et al., 2022) and employee well-being (Miao & Cao, 2019; Zhang et al., 2020). However, a void exists in the literature regarding which factor has a greater influence on organisational resilience and employee well-being during crises, especially in an emerging economy. Furthermore, there is a limited understanding of organisational resilience's predictive role in promoting employee well-being during crises (Hillmann & Guenther, 2021; Prayag et al., 2020). Additionally, while research on ambidexterity has examined its antecedents and outcomes (Affum-Osei et al., 2020; Heinze, 2022), a significant research gap remains. Notably, no study has explored the distinct moderating roles of exploitation and exploration ambidexterity in relation to HPWS, employee resilience, organisational resilience, and employee well-being during crises (Rintala et al., 2022). Therefore, there is a need to examine the differential impacts of these two ambidexterity dimensions on the relationships among HPWS, employee resilience, organisational resilience, and employee well-being during challenging times.

This study addresses the gaps by comprehensively investigating how HPWS, employee resilience, and employee ambidexterity interact to promote organisational resilience and employee well-being during crises in Ghana's pharmaceutical manufacturing sector. Specifically, the study examines the combined effects of how HPWS and employee resilience relate to organisational resilience and employee well-being. Furthermore, the study delves into the influence

of organisational resilience on employee well-being in this context. Finally, it assesses the moderating effect of employee ambidexterity types on how HPWS and employee resilience relate to organisational resilience and employee well-being during crises within the research context.

This study draws on the Conservation of Resources (COR) and the Ability-Motivation-Opportunity (AMO) theories. The COR theory, proposed by Hobfoll (1989), suggests that individuals and organisations strive to acquire, protect, and retain resources to maintain and enhance well-being. Resource loss threatens employee well-being during crises, leading to adaptation efforts (Hobfoll et al., 2018). In this study, the COR theory explains crises' effect on resources and the role of HPWS and employee resilience in promoting organisational resilience and employee well-being (Güler & Çetin, 2019; Hobfoll et al., 2018). Moreover, employee ambidexterity moderates resource depletion risk by balancing exploitation and exploration (Güler & Çetin, 2019; Hobfoll et al., 2018). Thus, the COR theory informs the study's conceptualisation, recognising the resource challenges faced by the pharmaceutical manufacturing sector in Ghana during crises. The study views HPWS and employee resilience as resources organisations use to enhance resilience and mitigate the adverse effects of crises on employee well-being.

The AMO theory emphasises the significance of employee abilities, motivation, and opportunity in achieving performance outcomes (Mu et al., 2022; Rosing & Zacher, 2017). In this study, the AMO theory helps examine how employee ability, motivation, and opportunity affect organisational resilience and well-being during crises. HPWS equips employees to perform their jobs effectively, especially in challenging times. The AMO theory also recognises employee resilience and ambidexterity as components of employee motivation. Employee resilience reflects the drive to overcome challenges and adapt to change, while employee ambidexterity refers to balancing exploration and exploitation. Additionally, organisational resilience enables employees to leverage their abilities, motivation, and opportunity to promote their well-being despite crises-related challenges. By incorporating the AMO theory, this study provides a theoretical framework that links HPWS, employee resilience, employee ambidexterity, organisational resilience, and employee well-being.

By examining the combined effects of HPWS, employee resilience, and employee ambidexterity on organisational resilience and employee well-being, this study provides a comprehensive understanding of the complex relationships between these variables. Additionally, investigating the distinct moderating roles of exploitation and exploration ambidexterity provides a better understanding of how different employee ambidexterity types can influence these relationships within the research context. Drawing on the COR and

the AMO theories, this study extends the theoretical understanding of these relationships in an emerging economy context. The study's focus on Ghana's pharmaceutical manufacturing firms, acknowledging its unique challenges and characteristics, contributes to industry-specific knowledge, guiding managers in managing adversity and supporting employee well-being. The findings stress the significance of implementing HPWS, promoting employee resilience, and developing employee ambidexterity as actionable strategies for enhancing organisational resilience and employee well-being during crises in the pharmaceutical manufacturing sector of emerging economies.

The remaining sections focused on a review of research conceptualisation and hypothesis development, research methodology, and results interpretation. Finally, the study concludes with discussions of results within the research context, contributions, limitations, and future research direction.

## Theoretical background and hypothesis development

### Organisational resilience

Researchers and practitioners have shown increasing interest in organisational resilience, which is essential to managing a disruptive business environment. Resilience is “an organization's comprehensive situational awareness and effective management of critical weaknesses and adaptability within a complex, ever-changing, and interconnected setting” (Seville et al., 2008, p. 259). A resilient organisation is future-ready to adapt, survive, and thrive when facing challenges (Lengnick-Hall et al., 2011; Seville, 2017). Resilient organisations anticipate, prepare for, respond, and adapt to maintain their functions and recover from adversities threatening their survival (Hillmann & Guenther, 2021; Liang & Cao, 2021).

The literature documents varied conceptualisations of organisational resilience. This study focused on planned and adaptive resilience conceptualisation, which concerns organisations' processes to be resilient (Duchek, 2020; Seville, 2017). For example, planned resilience involves deliberate plans organisations undertake in preparing for and adapting to challenges (Hepfer & Lawrence, 2022; Ma et al., 2019). This requires organisations to initiate, update and redesign organisational structures, predetermined plans, capabilities, and relationships to enhance their ability to thrive in adversity (Lee et al., 2013; Prayag et al., 2020). Thus, firms are resilient to the extent that they deliberately and continuously develop resilient capabilities that they can activate before, during, and after a crisis (Tasic et al., 2020).

Contrarily, adaptive resilience refers to “the firm's capacity to adeptly assimilate, create tailored strategies for unique

situations, and ultimately embrace transformative endeavours to leverage unexpected disruptions that pose a risk to the firm's survival” (Lengnick-Hall et al., 2011, p. 224). The adaptive process goes beyond simply ‘bouncing back’ to the previous state to emerging stronger from adversity by ‘bouncing forward’ to exploit opportunities and build a successful future (Lengnick-Hall et al., 2011; Ruiz-Martin et al., 2018). Adaptive resilience requires organisations to develop new capabilities in responding to changing situations, reinventing their business models, and changing before it becomes apparent (Cooper et al., 2014; Lengnick-Hall et al., 2011).

Studies focusing on planned and adaptive resilience concern factors that can make organisations resilient. Researchers posit many antecedents and measures of organisational resilience (Linnenluecke, 2017; Seville, 2017). This study examines organisational resilience based on thirteen resilient indicators (e.g., Lee et al., 2013; Seville, 2017). These authors identified leadership and culture, change readiness, and networks and relationships as the three main pillars of organisational resilience.

### The effect of organisational resilience on employee well-being

The “well-being” concept is integral to measuring employees' health and happiness, especially during crises. Employee well-being is the general assessment of one's life, encompassing both the quality of an employee's experience and their performance at work, incorporates factors such as life satisfaction and emotional well-being, all of which impact individual productivity (Huang et al., 2016). Hedonic and subjective well-being are two distinct ways to measure employee well-being (Braaten & Huta, 2018; Diener et al., 2017; Pradhan & Hati, 2022). While hedonic well-being focuses on an individual's happiness and contentment in life, subjective well-being pertains to their overall level of satisfaction with their life (Braaten & Huta, 2018; Czerw, 2019; Dhiman, 2021; Diener et al., 2017).

Employee well-being can be adversely affected during crises. For example, employees may experience fear, uncertainty, increased stress levels, anxiety, emotional exhaustion and loss of associates during crises, such as the COVID-19 pandemic or other significant disruptions (Charoensukmongkol & Phungsoonthorn, 2021; Chen & Eyoun, 2021). Work-life balance can also be compromised due to remote work arrangements, increased workloads, and blurred boundaries between work and personal life (Adisa et al., 2022; Akanji et al., 2022). Additionally, job insecurity and concerns about health and safety may add to employees' distress (Anand et al., 2023; Chen & Eyoun, 2021).

However, not all employees experience the same level of well-being during crises. The literature reports that resilient

organisations can manage challenges enabling their employees to achieve higher job satisfaction and psychological well-being (Diener et al., 2017; Pradhan & Hati, 2022). For example, Lamb and Cogan (2016) noted the influence of resilience on employee well-being in a qualitative study. In quantitative studies, limited studies linked organisational resilience to employee well-being, such as emotional well-being, life satisfaction, and overall job satisfaction (Liu et al., 2019). Taking a clue from organisations' role in facilitating employee well-being, this study posits that:

H<sub>1</sub>: Organisational resilience will positively and significantly affect employee well-being during crises.

### The effect of HPWS on organisational resilience and employee well-being

The extant literature on strategic human resource management emphasises using HR systems that are internally consistent and reinforcing to achieve individual and organisational performance instead of concentrating on a distinct HR practice (Bartram et al., 2021; Guest, 2017). One such HR system is the high-performance work system (HPWS), a holistic approach to managing employees, encompassing thorough recruitment and selection processes, motivating compensation and performance management systems, as well as active engagement and extensive training initiatives aimed at enhancing the expertise and capabilities of both existing and potential staff within a company" (Huselid, 1995, p. 635). Some researchers have grounded HPWS on the Ability-Motivation-Opportunity model (Fu et al., 2015; Shahzad et al., 2019). The AMO framework suggests that ability, motivation, and opportunity are resources employees must have to perform successfully in a specific context (Boxall & Purcell, 2011; Cai et al., 2020; Mat et al., 2021).

Ability refers to the skills, knowledge, talent, and experience an organisation requires employees to possess (Nadeem & Rahat, 2021). Organisations develop employee abilities through scientific recruitment and selection processes, job rotation, training, and continuous development strategies (Nadeem & Rahat, 2021; Zhang et al., 2020). Besides, motivation describes the willingness and enthusiasm with which employees perform their work (Nadeem & Rahat, 2021); Motivation-enhancing practices such as performance management, incentives and rewards, extensive benefits, job security, and career development are designed to stimulate employees' efforts and behaviours toward accomplishing specific goals (Nadeem & Rahat, 2021; Zhang et al., 2020). Opportunity-enhancing practices inspire employees to be creative, share new ideas, assume responsibility for setting goals and complete their expected tasks (Bhatti et al., 2021). Such activities include employee participation in decision-making, teamwork, flexible job design, knowledge sharing,

employee involvement, goal setting, and increased job autonomy (de Reuver et al., 2021; Zhang et al., 2020).

A well-designed HPWS has three dimensions that mutually reinforce HR practices, and no single component of the AMO model is sufficient to achieve performance and agility (Shahzad et al., 2019). One example of a high-performance work system is a robust performance management system. This system clearly defines and aligns employees' performance goals and expectations with the organisation's strategic objectives. Managers and supervisors provide continuous feedback, coaching, and support to help employees achieve their targets and enhance their capabilities (Kubiak, 2022; Lu et al., 2023). Regular performance evaluations are conducted to assess individual progress and identify areas for improvement. Additionally, employees who meet or exceed their performance targets are acknowledged through recognition programs, such as bonuses, salary increments, and opportunities for career advancement, awards, or certificates of excellence (Manzoor et al., 2021). Studies have suggested that implementing such a high-performance work system cultivates a culture of continuous improvement and supports employees in developing their skills and competencies, ultimately contributing to improved organisational resilience times (Al-Taweel, 2021; Guerrero, 2021; Hanu & Khumalo, 2023; Zhou et al., 2022) and employee well-being (Agarwal, 2021; Miao & Cao, 2019; Zhang et al., 2020) during challenging. In the context of the pharmaceutical manufacturing sector in Ghana, a well-designed HPWS can be a valuable asset during crises such as the COVID-19 pandemic. By providing employees with the necessary skills, motivation, and opportunity, the organisation can maintain agility despite disruptions. Therefore, this study posits that

H<sub>2</sub>: HPWS will significantly and positively affect organisational resilience during crises.

H<sub>3</sub>: HPWS will have a significant positive effect on employee well-being during crises.

### The effect of employee resilience on organisational resilience and employee well-being

Employee resilience is gaining increasing attention because of the challenges associated with the modern workplace (Annor & Amponsah-Tawiah, 2020; Zhou et al., 2022). According to Luthans (2002), employee resilience is an individual's ability to effectively deal with substantial changes, challenges, or potential risks. It embodies the positive mental strength to recover and adapt from adverse situations, uncertainties, conflicts, failures, and even positive transitions, progress, and added responsibilities (p. 702). This research operationalised employee resilience as an essential internal resource that enables an employee to adapt and respond to challenging circumstances effectively (Näswall

et al., 2015; Tonkin et al., 2018). Thus, resilient employees can thrive and respond positively to challenges confronting the organisations' existence and competitiveness (Liang & Cao, 2021; Linnenluecke, 2017).

Some studies reported that employee resilience is positively related to organisational resilience during crises (Hillmann & Guenther, 2021; Liang & Cao, 2021; Prayag et al., 2023; Zhou et al., 2022). These authors emphasise that enhancing employee resilience is vital for organisational resilience because the latter is a function of employee skills, knowledge, abilities, and traits. However, a survey of 312 US employees of the Bureau of Land Management revealed that employees perceived themselves as resilient but had very low confidence in their organisation's resilience (Nyaupane et al., 2020). Despite the contrary view by Nyaupane et al. (2020), this study focuses on the predictive role of employee resilience.

Additionally, researchers posit that individuals' specific traits or personal resources are equally responsible for their well-being (Tripathi, 2011). Consequently, the resilience literature has examined the influence of employee resilience in facilitating employee well-being (Bhattacharyya et al., 2019; Malik & Garg, 2020; Prayag et al., 2020). Taking a clue from these empirical studies, this study put forth the following hypotheses:

H<sub>4</sub>: Employee resilience will significantly positively affect organisational resilience during crises.

H<sub>5</sub>: Employee resilience will significantly positively affect well-being during crises.

### The moderating role of employee ambidexterity on H2-H5

Employee ambidexterity describes employees' behavioural orientation towards combining exploration and exploitation-related activities within a specific time (Mom et al., 2009; Mu et al., 2022). Individual ambidexterity refers to employees' ability to balance and integrate exploration and exploitation demands in adapting to changing environments. Exploration ambidexterity involves employee behaviours associated with risk-taking, searching for, discovering, creating, and experimenting with new opportunities (Hanu et al., 2023), while exploitation ambidexterity focuses on employees' ability to select, implement, improve, and refine existing processes and activities (Caniëls & Veld, 2019; Rosing & Zacher, 2017). Thus, employee ambidexterity involves cycling between different activities flexibly by exploiting existing competencies and exploring new capabilities in changing environments (Good & Michel, 2013; Rosing & Zacher, 2017). The extant individual ambidexterity literature essentially examined the investigated the factors that lead to

ambidexterity and the resulting consequences (Caniëls & Veld, 2019; Mu et al., 2022). While some studies focused on the ambidextrous behaviours of managers and leaders (Bell & Hofmeyr, 2021; Heinze, 2022; Hou et al., 2022; Jiang et al., 2021), others focused on operative employees' ambidexterity (Hanu et al., 2023; Affum-Osei et al., 2020). Although ambidexterity is the sum of exploitation and exploration activities, some scholars have examined their distinct impact on individual and organisational outcomes (Hanu et al., 2023; Mom et al., 2007). However, limited studies have examined their distinct moderating role on relationships between different variables (Rintala et al., 2022). Examining their differential effect is vital since exploitation and exploration activities differ. For instance, if employees exhibit higher exploitative ambidexterity levels, the effect of HPWS and employee resilience on organisational resilience and employee well-being will be more pronounced (Cooke et al., 2019; Mu et al., 2022; Rosing & Zacher, 2017).

In contrast, the effect of exploratory ambidexterity on HPWS and employee resilience related to organisational resilience and employee well-being will reduce if employees demonstrate a higher level of exploratory ambidexterity. This is because exploratory ambidexterity focuses on searching for and developing new knowledge and resources, which requires greater flexibility and adaptation that is inadequate to ensure organisational resilience and employee well-being in the face of significant disruptions or changes (Luu et al., 2018; Mu et al., 2022). Given the study context and grounded on relevant literature (Bell & Hofmeyr, 2021; Hanu et al., 2023; Heinze, 2022; Mu et al., 2022), this study argues that employees will activate distinct ambidextrous behaviours during crises and hence posits the following hypotheses:

H<sub>2a</sub>: Exploitation ambidexterity enhances the positive relationship between HPWS and organisational resilience during crises.

H<sub>2b</sub>: Exploration ambidexterity will reduce the positive relationship between HPWS and organisational resilience during crises.

H<sub>3a</sub>: Exploitation ambidexterity will enhance the positive relationship between HPWS and employee well-being during crises.

H<sub>3b</sub>: Exploration ambidexterity will reduce the positive relationship between HPWS and employee well-being during crises.

H<sub>4a</sub>: Exploitation ambidexterity will enhance the positive relationship between employee and organisational resilience during crises.

H<sub>4b</sub>: Exploration ambidexterity will reduce the positive relationship between employee and organisational resilience during crises.

H<sub>5a</sub>: Exploitation ambidexterity will enhance the positive relationship between employee and organisational resilience during crises.

H<sub>5b</sub>: Exploration ambidexterity will reduce the positive relationship between employee resilience and well-being during crises.

## Conceptual framework

Figure 1 represents the conceptual framework of this study. The framework shows the influence of HPWS and employee resilience (independent variables) on organisational resilience and employee well-being (dependent variables). The model also suggests that although exploitation and exploration ambidexterity are individual behavioural tendencies, they can influence the relationship between the organisational-level factors (HPWS and organisational resilience) and the individual-level factors (employee resilience and well-being). Thus, this study posits that the independent factors' influence on the dependent constructs may vary depending on the ambidexterity dimension. Finally, the model suggests that organisational resilience will enhance employee well-being during crises. The study develops and tests five primary and eight sub-hypotheses based on the relevant literature.

## Methodology

### Sample and procedure

This study employed a quantitative approach, collecting data from 324 respondents in 40 pharmaceutical manufacturing firms in Ghana through an online questionnaire. The respondents were selected using a simple random technique facilitated by the researchers' access to the entire target sample frame (Martínez-Mesa et al., 2016). Deliberately focusing on pharmaceutical manufacturing firms allowed

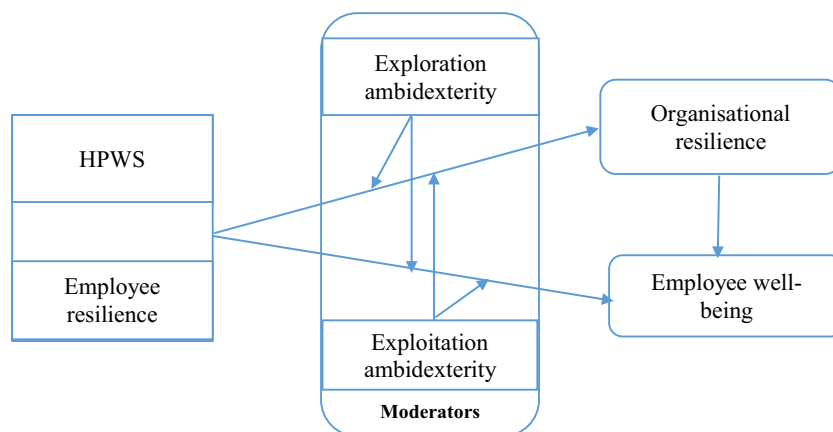
for a more precise examination of the research hypotheses within a sector characterised by shared industry dynamics, organisational structures, and workforce composition. This targeted approach also enhanced the validity and applicability of contextually relevant findings directly applied to pharmaceutical firms.

Data were collected in two waves. Time 1 took four weeks and gathered information on employee resilience, exploratory ambidexterity, and ability-enhancing practices of the HPWS. Time 2 data collection began four weeks after Time 1 ended and lasted six weeks. During Time 2, data on organisational resilience, exploitation ambidexterity, opportunity-enhancing practices, and motivation-enhancing practices were collected. This temporal design enables the examination of cause-effect relationships and minimises the likelihood of encountering common method variance (Maier et al., 2023; Podsakoff et al., 2012). The questionnaires provided clear instructions, inviting voluntary participation while ensuring respondent confidentiality and anonymity.

The questionnaires used in this study required a digital consent code for both Time 1 and Time 2. The purpose of the code was to merge the datasets. Scholars commonly use this approach, as demonstrated in previous management literature (e.g., Greenbaum et al., 2012; Lai et al., 2021). The online questionnaire was administered through the official WhatsApp platform of the focal firms, with approval obtained from the HR department of each firm. An HR official was assigned to facilitate the questionnaire administration within each firm. To ensure data collection, one of the researchers maintained periodic contact with the HR officials by phone.

At the end of Time 1, 371 responses were received, and 342 responses were obtained at the end of Time 2. After matching the data and accounting for the valid datasets, 324 valid data were obtained. The demographic profiles of the respondents, in terms of gender (male: 58.34%, female: 41.66%), age group (21–30 years: 22.53%, 31–40 years: 59.25%, 41–50 years: 13.88%, 51–60 years: 4.32%),

Fig. 1 The research model



education (Diploma: 11.11%, undergraduate: 47.83%, post-graduate: 33.33%, Others: 7.72), length of service (1–3 years: 19.75%, 4–6 years: 33.64%, 7–10 years: 31.79%, 11 years and above: 14.81%).

## Measures

Employee resilience was evaluated by employing a set of nine items taken from Näswall et al. (2019). These items were used as they had been constructed in the original version. An example of one of these items is: “I often re-evaluate my performance and continually improve the way I do my work.”

In addition, high-performance work systems were measured using the 22 items from Bhatti et al. (2020). The items consisted of ability-enhancing practices (seven items), motivation-enhancing practices (six items), and opportunity-enhancing practices (nine items). A sample item is: “The work majority of the staff do in this company is organized around teams.”

Exploration and exploitation ambidexterity was assessed with six and five items, respectively. The items were sourced from those Mom et al. (2007) developed to measure managers’ ambidextrous behaviours. For example, a sample item of exploitation ambidexterity is: “From last year, I have been involved in tasks that I can properly conduct at work by using my present knowledge”, while a sample for exploration ambidexterity is: “From last year, I undertook work activities that required learning new skills or knowledge.”

Further, data on organisational resilience were elicited using 13 items adopted from Lee et al. (2013). Five of the 13 items in the original version were modified. A sample item is: “My company builds strong and trusting relationships with other organisations we might have to work with during a crisis”.

Furthermore, the assessment of employee well-being was conducted using the set of eight adapted items devised by Diener et al. (2010). An example of the items is: “My work life is purposeful and meaningful.”

It was necessary to modify some of the previously validated items to make them simple to comprehend and to fit the context of the pharmaceutical industry in an emerging economy. The items are anchored on a five-point Likert scale ranging from “strongly disagree (1)” to strongly agree (5).

## Common method bias

An exploratory factor analysis of the items using Harman’s single-factor test accounted for 23.17% of the variance, satisfying the recommended value of less than 50%. Additionally, the non-response rate for the two phases of the data revealed insignificant differences between the first 25% and the last 25% of the data responses. The results showed no

substantial differences ( $p > 0.05$ ) between each phase of the constructs measured. These outcomes demonstrate that common method variance and non-response bias posed no challenges in this study (Armstrong & Overton, 1977; Harman, 1976).

## Results

### Measurement assessment

The data quality for the study was tested following the procedure Hair et al. (2017) recommended. The results (Table 1) show that the item loading, Cronbach’s alpha, and composite reliability have estimates greater than 0.70 minimum criterion, indicating that the scales satisfy reliability requirements (Hair et al., 2017). Table 1 also shows that constructs have an AVE exceeding the 0.50 threshold, satisfying the convergent validity and accounts for over 50% of the variance in their respective items (Hair et al., 2020; Sarstedt et al., 2021).

The results of the constructs’ discriminant validities are shown in Table 2. The Fornell-Larcker values exceed the minimum 0.70 threshold of the AVE square root (Fornell & Larcker, 1981; Henseler et al., 2015). Additionally, the heterotrait–monotrait (HTMT) ratio shows that all the values satisfy the recommended threshold, which is below 0.85 for distinct concepts and 0.90 for similar concepts (Henseler et al., 2015). Hence, the Fornell-Larcker criterion and the HTMT values indicate that the constructs are distinct.

### Structural model assessment

The Structural model assessment result is shown in Table 3. The study’s result revealed a significant positive relationship between organisational resilience and employee well-being ( $\beta = 0.693$ ,  $t$ -value = 12.360,  $p = 0.000$ ), confirming  $H_1$ . Further, the results showed that HPWS significantly positively affects organisational resilience ( $\beta = 0.687$ ,  $t = 5.977$ ,  $p = 0.000$ ) and employee well-being ( $\beta = 0.584$ ,  $t = 8.585$ ,  $p = 0.000$ ), confirming  $H_2$  and  $H_3$  respectively. Additionally, the findings indicate a positive but insignificant relationship between employee and organisational resilience ( $\beta = 0.168$ ,  $t = 1.541$ ,  $p = 0.124$ ) and employee well-being ( $\beta = 0.117$ ,  $t$ -value = 1.530,  $p = 0.127$ ), objecting to  $H_4$  and  $H_5$ .

The moderating analysis indicates that exploitation ambidexterity has a significant positive moderating effect on HPWS and organisational resilience linkage was positive and significant ( $\beta = 0.449$ ,  $t$ -value = 2.916,  $p = 0.000$ ), which supports  $H_{2a}$ . In contrast, the moderating effect of exploration ambidexterity on this relationship was positive but insignificant ( $\beta = 0.274$ ,  $t$ -value = 1.616,  $p = 0.064$ ), rejecting  $H_{2b}$ . Further, the results show a significant positive moderate

**Table 1** Reliability and validity assessment

Constructs	Item	Loading	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
HPWS			<b>0.867</b>	<b>0.873</b>	<b>0.900</b>	<b>0.601</b>
	AB3	0.814				
	AB4	0.808				
	MO4	0.795				
	MO6	0.721				
	OP2	0.787				
	OP3	0.719				
Employee Resilience			<b>0.860</b>	<b>0.863</b>	<b>0.905</b>	<b>0.705</b>
	EmR1	0.813				
	EmR5	0.859				
	EmR8	0.901				
	EmR9	0.781				
Organisational Resilience			<b>0.787</b>	<b>0.788</b>	<b>0.863</b>	<b>0.612</b>
	OR3	0.861				
	OR10	0.779				
	OR11	0.706				
	OR12	0.777				
Exploitation ambidexterity			<b>0.852</b>	<b>0.888</b>	<b>0.911</b>	<b>0.773</b>
	ExpL1	0.890				
	ExpL2	0.938				
	ExpL4	0.805				
Exploration ambidexterity			<b>0.859</b>	<b>0.890</b>	<b>0.904</b>	<b>0.703</b>
	ExpR1	0.909				
	ExpR3	0.915				
	ExpR4	0.780				
	ExpR5	0.736				
Employee well-being			<b>0.902</b>	<b>0.927</b>	<b>0.924</b>	<b>0.671</b>
	EWB1	0.905				
	EWB2	0.796				
	EWB3	0.863				
	EWB6	0.705				
	EWB7	0.878				
	EWB	0.748				

effect of how exploitation ambidexterity strengthens HPWS and employee well-being linkage ( $\beta=0.601$ ,  $t\text{-value}=3.417$ ,  $p=0.002$ ), supporting  $H_{3a}$ . However, exploration ambidexterity was found to have a positive but insignificant moderating effect on HPWS and employee well-being relationship ( $\beta=0.091$ ,  $t\text{-value}=1.910$ ,  $p=0.056$ ), rejecting  $H_{3b}$ . Regarding the predictive role of employee resilience, exploitation ambidexterity had a significant positive effect on its relationship with organisational resilience ( $\beta=0.372$ ,  $t\text{-value}=4.311$ ,  $p=0.001$ ), while exploration ambidexterity had a negative but significant moderating influence of employee resilience and organisational resilience

relationship ( $\beta=-0.296$ ,  $t\text{-value}=4.211$ ,  $p=0.002$ ), supporting  $H_{4a}$  and  $H_{4b}$ , respectively. Finally, exploitation ambidexterity had a significant positive moderating influence on the employee resilience and employee well-being relationship ( $\beta=0.452$ ,  $t\text{-value}=5.842$ ,  $p=0.000$ ), while the exploration dimension had a negative but significant moderating impact on employee resilience and employee well-being linkage ( $\beta=-0.449$ ,  $t\text{-value}=2.916$ ,  $p=0.004$ ), accepting  $H_{5a}$  and  $H_{5b}$ .

The data were further analysed for the variance inflation factor (VIF). The VIF results show that the item values are below 0.3, meaning multicollinearity is not a problem in the data set. Table 4 shows the models' explanatory power



**Table 2** Discriminant validity

Constructs	1	2	3	4	5	6
Fornell-Larcker Criterion						
Employee Resilience (1)	<b>0.840</b>					
Employee Well-being (2)	0.715	<b>0.819</b>				
Exploitation Ambidexterity (3)	0.379	0.381	<b>0.879</b>			
Exploration Ambidexterity (4)	0.497	0.576	0.663	<b>0.839</b>		
HPWS (5)	0.623	0.688	0.461	0.550	<b>0.775</b>	
Organisational Resilience (6)	0.550	0.592	0.585	0.439	0.699	<b>0.782</b>
Heterotrait-monotrait Ratio						
Employee Resilience (1)						
Employee Well-being (2)	<b>0.841</b>					
Exploitation Ambidexterity (3)	0.447	<b>0.417</b>				
Exploration Ambidexterity (4)	0.554	0.627	<b>0.776</b>			
HPWS (5)	0.712	0.760	0.511	<b>0.603</b>		
Organisational Resilience (6)	0.650	0.666	0.695	0.511	<b>0.853</b>	

**Table 3** Summary of path coefficients and significance levels

Constructs	$\beta$	T	$p$	Decision
OrgRes -> EWB	0.693	12.360	0.000	H <sub>1</sub> = Supported
HPWS -> OrgRes	0.687	5.977	0.000	H <sub>2</sub> = Supported
HPWS -> EWB	0.584	8.585	0.000	H <sub>3</sub> = Supported
EmRes -> OrgRes	0.168	1.541	0.124	H <sub>4</sub> = Not Supported
EmRes -> EWB	0.117	1.530	0.127	H <sub>5</sub> = Not Supported
Moderating effect				
ExpLAmbi x HPWS-> OrgRes	0.449	2.916	0.000	H <sub>2a</sub> = Supported
ExpRAmbi x HPWS-> OrgRes	0.274	1.616	0.064	H <sub>2b</sub> = Not Supported
ExpLAmbi x HPWS-> EWB	0.601	3.417	0.002	H <sub>3a</sub> = Supported
ExpRAmbi x HPWS-> EWB	0.091	1.910	0.056	H <sub>3b</sub> = Not Supported
ExpLAmbi x EmRes->OrgRes	0.372	4.311	0.001	H <sub>4a</sub> = Supported
ExpRAmbi x EmRes->OrgRes	-0.296	4.211	0.001	H <sub>4b</sub> = Supported
ExpLAmbi x EmRes->EWB	0.451	5.842	0.000	H <sub>5a</sub> = Supported
ExpRAmbi x EmRes-> EWB	-0.449	2.916	0.004	H <sub>5b</sub> = Supported

EmRes: Employee resilience; OrgRes: Organisational resilience; ExpLAmbi: Exploitation Ambidexterity; ExpRAmbi: Exploration Ambidexterity; EWB: Employee well-being

**Table 4** Explanatory power assessment results ( $R^2$ ,  $f^2$  and  $Q^2$ )

Construct	$R^2$	Adjusted $R^2$	$f^2$	$Q^2$
HPWS	-	-	0.349	-
Employee resilience	-	-	0.046	-
Exploitation ambidexterity	-	-	0.248	-
Exploration ambidexterity	-	-	0.052	-
Organisational resilience	0.608	0.595	0.540	0.295
Employee well-being	0.351	0.346	-	0.037

assessment, effect size, and predictive relevance. The results show that explanatory power was high, the effect sizes were acceptable, and the model’s predictive relevance was adequate and satisfactory (Hair et al., 2020).

## Discussion

Employee well-being involves various dimensions contributing to employees’ positive experiences, satisfaction, and flourishing in the workplace (Pradhan & Hati, 2022). Resilience is a crucial trait within the broader context of employee well-being, enabling individuals to cope effectively with crises. This study used COR and AMO theories to examine how personal and organisational resources influence employee well-being, specifically focusing on organisational resilience, HPWS, and employee resilience. The study developed and tested five main and eight sub-hypotheses, revealing the significance of these factors in promoting well-being of employee. The results enrich

understanding of how organisations can support their employees during challenging times. The results are discussed in the subsequent sections.

## Main hypotheses

First, this study examined the influence of organisational resilience on employee well-being during crises ( $H_1$ ). The positive and significant relationship between organisational resilience and employee well-being is consistent with previous studies that underscored the importance of resilient organisations in promoting positive outcomes for employees (Lamb & Cogan, 2016; Liu et al., 2020). The result suggests that a resilient organisation can effectively manage its resources, maintain operations, and provide support to employees contributing to their well-being (Chen & Chi-Kin Lee, 2022; Huang et al., 2016). Pharmaceutical manufacturing firms that navigate crises provide job security, training, and support to enable employees to perform effectively and enhance their well-being (Braaten & Huta, 2018; Diener et al., 2017). Resilient firms in this study context create an environment where employees can cope with stress, adapt to change, and build positive relationships that promote well-being. By nurturing resilient organisations, pharmaceutical manufacturing firms can cultivate a workforce that thrives in challenging situations and experiences enhanced well-being outcomes.

Second, the study found a significant positive influence of HPWS on organisational resilience ( $H_2$ ) and employee well-being ( $H_3$ ). HPWS was identified as the most critical predictor compared to employee resilience in pharmaceutical manufacturing firms. The results are consistent with prior studies that emphasise the role of HPWS in enhancing organisational resilience (Al-Taweel, 2021; Guerrero, 2021; Hanu & Khumalo, 2023; Zhou et al., 2022) and employee well-being (Agarwal, 2021; Miao & Cao, 2019; Zhang et al., 2020). The study suggests that HPWS practices, such as training, skill development, and employee involvement, provide employees with the necessary resources and opportunities to effectively respond to crises and maintain their well-being (Guerrero, 2021). Thus, implementing comprehensive HR systems that support employee abilities, motivation, and opportunities is essential for enhancing organisational resilience and employee well-being (Agarwal, 2021; Miao & Cao, 2019).

Third, resilient employees contribute significantly to organisational resilience and employee well-being. Resilient employees are flexible, adaptable, and thrive in dynamic environments. Resilient individuals build positive relationships, manage stress effectively, and maintain a positive outlook, leading to higher job satisfaction, motivation, and overall employee well-being (Chitra & Karunanidhi, 2021; Prayag et al., 2020). In examining the effect of employee

resilience on organisational resilience ( $H_4$ ) and employee well-being ( $H_5$ ), the finding suggests that while employee resilience influences organisational resilience, its effect is not as strong as that of HPWS, which is inconsistent with previous studies establishing the positive influence of employee resilience on organisational outcomes (Liang & Cao, 2021; Nilakant et al., 2016). However, this finding suggests that in the research context, employee resilience alone may not be sufficient for organisation resilience, consistent with a study conducted by Nyaupane et al. (2020). Thus, employees may rely on other factors, such as a supportive work environment, employee engagement, continuous learning and development, and a positive organisational culture, to navigate crises rather than solely relying on resilience. During crises, employees may also prioritise other factors such as resource access, work-life balance, or job security (Ortiz-Bonnin et al., 2023; Straus et al., 2022). For example, employees with a proactive mindset can take the initiative, continuously improve their performance, anticipate future challenges, and seek opportunities (Hanu et al., 2023; Shih & Nguyen, 2023).

Similarly, work-life balance plays a crucial role in employee well-being (Nabawanuka & Ekmekcioglu, 2022; Yang & Jo, 2022), and organisations that value and supportive work-life balance help employees manage their personal and professional responsibilities effectively. The insignificant employee resilience and well-being relationship in this study may be due to limited opportunities for resilience utilisation in the research context. This finding contrasts with studies by Prayag et al. (2020) and Bhattacharyya et al. (2019), highlighting employee resilience's significant contribution to outcomes.

## The moderating role of exploitation and exploration ambidexterity

The study examines how exploitation and exploration ambidexterity moderate the relationships among HPWS, employee resilience, organisational resilience, and employee well-being during crises. The results revealed that *exploitation* ambidexterity positively and significantly moderates the link between HPWS and organisational resilience ( $H_{2a}$ ), indicating that leveraging existing resources enhances organisational resilience in the research context. In contrast, *exploration* ambidexterity has a positive but insignificant moderating effect on HPWS and organisational resilience linkage ( $H_{2b}$ ), suggesting that exploration activities may not significantly contribute to organisational resilience during crises. These findings align with previous studies emphasising the importance of leveraging existing resources for resilience while acknowledging the challenges of exploration activities (Agarwal, 2021; Rintala et al., 2022).

Regarding employee resilience and well-being, the study found that *exploitation* ambidexterity positively moderates HPWS and employee well-being relationships during crises ( $H_{3a}$ ). This indicates that employees who engage in exploitation activities effectively utilise HPWS resources to maintain well-being during crises. This result is consistent with previous research emphasising the importance of resource utilisation in promoting employee well-being (Agarwal, 2021; Park et al., 2014). However, *the exploration* ambidexterity's moderating effect on the HPWS and employee well-being relationship was positive but insignificant ( $H_{3b}$ ), suggesting that employees engaging in exploration activities during crises may struggle to leverage HPWS resources to maintain their well-being (Agarwal, 2021). Exploration activities may be challenging to integrate with HPWS due to limited resources availability or support during crises in the study context (Agarwal, 2021; Hanu et al., 2023).

Additionally, the study found that *exploitation* ambidexterity positively moderates how employee resilience relates to organisational resilience ( $H_{4b}$ ). This result indicates that employees who exploit existing resources during a crisis contribute positively to organisational resilience. On the other hand, employee *exploration* ambidexterity, though significant, have a negative effect on employee resilience and organisational resilience linkage ( $H_{4b}$ ). This suggests that employees prioritising exploration activities during crises may hinder the organisation's resilience. Prior studies have emphasised that balancing exploration and exploitation is crucial for enhancing organisational resilience (e.g., Heinze, 2022; Rosing & Zacher, 2017). Thus, excessive focus on exploration can deplete employee resilience and eventually decrease organisational resilience (Cai et al., 2020; Hobfoll et al., 2018; Mat et al., 2021). These findings align with previous research emphasising the importance of balancing exploration and exploitation (Mat et al., 2021; Cai et al., 2020). Therefore, maintaining a balance between the two is vital for overall organisational resilience.

Finally, the study found that employee *exploitation* ambidexterity positively moderates the influence of employee resilience on well-being ( $H5a$ ), meaning that employees who engage in exploitation behaviours can increase their resilience and improve their well-being during a crisis. This is consistent with previous studies highlighting the role of resource conservation in promoting well-being (Hobfoll et al., 2018). On the other hand, employee *exploration* ambidexterity negatively moderates how employee resilience relates to well-being during crises ( $H5b$ ). This suggests employees' well-being may decline when they explore new skills and opportunities to cope with crises. This is because they may not have the necessary resources or support to deal with the crisis, which can negatively affect their well-being. Thus, the study's findings indicate that pursuing exploration

may come at the expense of maintaining well-being and resilience during challenging times.

## Theoretical implications

The theoretical implications of this study are twofold. First, this study extends understanding of factors contributing to employee well-being. By examining the role of employee resilience, ambidexterity, HPWS, and organisational resilience, this study provides insights into how these resources interact and influence employee well-being during crises. The findings suggest that organisational resilience is significant in promoting employee well-being, highlighting the need for organisations to adapt and respond to challenges. This study extends the COR theory by emphasising the significance of organisational resources in facilitating employee well-being during crises.

Second, this research adds to the literature on individual ambidexterity by investigating the distinct moderating roles of exploitation and exploration ambidexterity. The findings indicate that exploitation ambidexterity enhances HPWS, organisational resilience, and employee well-being relationships, whereas exploration ambidexterity has a limited moderating effect. This finding emphasises balancing exploration and exploitation activities during crises. This study contributes to understanding how different ambidextrous behaviours influence the relationships between variables during crises and provides insights into the boundary conditions of ambidexterity and its implications for organisational and employee outcomes.

## Practical implications

This study has several important implications for managers. First, the findings emphasise the significant positive effects of HPWS on organisational resilience and employee well-being during crises. Therefore, it is imperative for managers to give precedence to incorporating High-Performance Work Systems (HPWS) into their operations. These may include activities like refining employee recruitment and selection processes, establishing effective incentive compensation and performance management systems, and fostering broad employee engagement and training initiatives (Bhatti et al., 2021; Nadeem & Rahat, 2021). These practices can enhance employee abilities, motivation, and opportunities, ultimately contributing to organisational resilience and improving employee well-being.

Second, this study underscores the importance of building and maintaining organisational resilience to support employee well-being. Managers should invest in strategies and initiatives to enhance organisational resilience, such as developing strong leadership and a supportive organisational culture, fostering change readiness, and building networks

and relationships (Seville, 2017). By doing so, organisations can better navigate crises, maintain operations, and provide a safe and supportive work environment, positively impacting employee well-being.

Third, while employee resilience positively affected organisational resilience, its impact was not sufficiently significant to rely solely on employee resilience to enhance resilience. Therefore, managers should continue to nurture employee resilience through training, support, and implementation of other strategies to build organisational resilience. This includes fostering innovation and creativity, developing strong networks and relationships, and implementing robust business continuity plans (Seville, 2017). By diversifying resilience-building strategies, organisations can enhance their ability to withstand and recover from crises while supporting employee well-being.

Finally, the study underlines the differential effects of exploitation and exploration ambidexterity on the relationships between HPWS, employee resilience, organisational resilience, and employee well-being (Cooke et al., 2019). Managers should recognise the importance of balancing exploitation and exploration activities during crises. This involves creating a work environment that supports and encourages employees to exploit existing resources and capabilities while promoting a culture of exploration, adaptation, and learning. By acknowledging and promoting both dimensions of ambidexterity, managers can harness the full potential of their employees and enhance organisational resilience and employee well-being during crises.

### Limitations and future direction

This study has some limitations. First, the data collection was cross-sectional, making establishing a cause-effect relationship difficult. Future studies may use longitudinal designs to test the framework and outcomes. The study conceptualised HPWS as a composite construct, and future studies may examine the distinct effects of ability, motivation, and opportunity-enhancing practices on organisational resilience and employee well-being. Furthermore, it is worth noting that while the study augments our comprehension of employee well-being during crises, other factors may also play a role in this context. Subsequent studies could examine additional characteristics and factors such as a proactive mindset, a positive organisational culture, ongoing learning opportunities, employee engagement, and maintaining a healthy work-life balance. These factors create a foundation for success in the face of challenges and enable individuals and organisations to thrive in a dynamic and complex work environment. Investigating them will provide a more comprehensive understanding of the complex dynamics in promoting employee well-being during crises. Finally, mixed methods studies may enhance the results of this study.

Nonetheless, the study provides insights into how individual and organisational resources contribute to employee well-being during crises.

### Conclusion

This study used the COR and AMO theories to explore the influence of HPWS and employee resilience on organisational resilience and employee well-being. The study also examined the moderating effects of exploitation and exploration ambidexterity on these relationships. The results suggest that implementing HPWS better enhances employee well-being and organisational resilience during crises than employee resilience. Exploitation ambidexterity is a more effective coping strategy for improving employee well-being and organisational resilience during crises. Organisations can use the study's findings to design and implement HPWS, ambidexterity, and resilience programs to achieve employee well-being during crises.

**Supplementary information** The online version contains supplementary material available at <https://doi.org/10.1007/s12144-023-05138-3>.

**Funding** Open access funding provided by Durban University of Technology.

**Data availability** The dataset can be obtained from the corresponding author upon reasonable request.

### Declarations

**Conflict of interest** The authors declare that they have no conflict of interest.

**Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

### References

- Access and Delivery Partnership (2016). How local production of pharmaceuticals can be promoted in Africa: The case of Ghana. [https://adphealth.org/upload/resource/Ghana\\_Local\\_Pharma\\_Production.pdf](https://adphealth.org/upload/resource/Ghana_Local_Pharma_Production.pdf). Retrieved June 11, 2022.
- Adisa, T. A., Antonacopoulou, E., Beaugard, T. A., Dickmann, M., & Adekoya, O. D. (2022). Exploring the impact of COVID-19 on employees' boundary management and work-life balance. *British Journal of Management*, 33(4), 1694–1709. <https://doi.org/10.1111/1467-8551.12643>

- Aduhene, D. T., & Osei-Assibey, E. (2021). Socio-economic impact of COVID-19 on Ghana's economy: Challenges and prospects. *International Journal of Social Economics*, 48(4), 543–556. <https://doi.org/10.1108/IJSE-08-2020-0582>
- Affum-Osei, E., Adom Asante, E., Kwarteng Forkouh, S., & Abdul-Nasiru, I. (2020). Career adaptability and ambidextrous behaviour among customer-service representatives: The role of perceived organisational support. *Journal of Personal Selling and Sales Management*, 40(1), 4–18. <https://doi.org/10.1080/08853134.2019.1594241>
- Agarwal, P. (2021). Shattered but smiling: Human resource management and the well-being of hotel employees during COVID-19. *International Journal of Hospitality Management*, 93,. <https://doi.org/10.1016/j.ijhm.2020.102765>
- Agyekum, M. W., Afrifa-Anane, G. F., Kyei-Arthur, F., & Addo, B. (2021). Acceptability of COVID-19 vaccination among health care workers in Ghana. *Advances in Public Health*, 1–8. <https://doi.org/10.1155/2021/9998176>
- Akanji, B., Mordi, C., Ajonbadi, H., & Adekoya, O. (2022). The impact of COVID-19 on the work–life balance of working mothers: evidence from Nigerian academics. *Personnel Review*, (ahead-of-print). *Personnel Review*, 52(3), 703–723. <https://doi.org/10.1108/PR-08-2020-0636>
- Al-Taweel, I. R. (2021). Impact of high-performance work practices in human resource management of health dispensaries in Qassim Region, Kingdom of Saudi Arabia, towards organisational resilience and productivity. *Business Process Management Journal*, 27(7), 2088–2109. <https://doi.org/10.1108/BPMJ-11-2020-0498>
- Anand, A., Dalmaso, A., Vessal, S. R., Parameswar, N., Rajasekar, J., & Dhal, M. (2023). The effect of job security, insecurity, and burnout on employee organisational commitment. *Journal of Business Research*, 162, 113843. <https://doi.org/10.1016/j.jbusres.2023.113843>
- Annor, F., & Amponsah-Tawiah, K. (2020). Relationship between workplace bullying and employees' subjective well-being: Does resilience make a difference? *Employee Responsibilities and Rights Journal*, 32, 123–135. <https://doi.org/10.1007/s10672-020-09348-w>
- Armstrong, J. S., & Overton, T. S. (1977). Estimating non-response bias in mail surveys. *Journal of Marketing Research*, 14(3), 396–402. <https://doi.org/10.1177/002224377701400320>
- Bartram, T., Cooper, B., Cooke, F. L., & Wang, J. (2021). High-performance work systems and job performance: The mediating role of social identity, social climate and empowerment in chinese banks. *Personnel Review*, 50(1), 285–302. <https://doi.org/10.1108/PR-08-2019-0425>
- Bell, L., & Hofmeyr, K. (2021). Enabling organisational ambidexterity: A leadership perspective. *South African Journal of Business Management*, 52(1), a2268.
- Bhattacharyya, P., Jena, L. K., & Pradhan, S. (2019). Resilience as a mediator between workplace humour and well-being at work: An enquiry on the healthcare professionals. *Journal of Health Management*, 21(1), 160–176. <https://doi.org/10.1177/0972063418821815>
- Bhatti, S. H., Zakariya, R., Vrontis, D., Santoro, G., & Christofi, M. (2020). High-performance work systems, innovation and knowledge sharing: An empirical analysis in the context of project-based organizations. *Employee Relations*, 43(2), 438–458. <https://doi.org/10.1108/ER-10-2019-0403>
- Bhatti, S. H., Zakariya, R., Vrontis, D., Santoro, G., & Christofi, M. (2021). High-performance work systems, innovation and knowledge sharing: An empirical analysis in the context of project-based organisations. *Employee Relations: The International Journal*, 43(2), 438–458. <https://doi.org/10.1108/ER-10-2019-0403>
- Boxall, P., & Purcell, J. (2011). *Strategy and human resource management (3ed.)*. Palgrave Macmillan.
- Braaten, A., & Huta, V. (2018). A preliminary exploration of how worldviews relate to eudaimonic and hedonic orientations. *International Journal of Existential Psychology and Psychotherapy*, 7(2), 11.
- Cai, W., Khapova, S., Bossink, B., Lysova, E., & Yuan, J. (2020). Optimising employee creativity in the digital era: Uncovering the interactional effects of abilities, motivations, and opportunities. *International Journal of Environmental Research and Public Health*, 17(3), 1038. <https://doi.org/10.3390/ijerph17031038>
- Caniëls, M. C., & Veld, M. (2019). Employee ambidexterity, high-performance work systems and innovative work behaviour: How much balance do we need? *The International Journal of Human Resource Management*, 30(4), 565–585. <https://doi.org/10.1080/09585192.2016.1216881>
- Charoensukmongkol, P., & Phungsoonthorn, T. (2021). The effectiveness of supervisor support in lessening perceived uncertainties and emotional exhaustion of university employees during the COVID-19 crisis: The constraining role of organisational intrusiveness. *The Journal of General Psychology*, 148(4), 431–450. <https://doi.org/10.1080/00221309.2020.1795613>
- Chen, H., & Eyoum, K. (2021). Do mindfulness and perceived organisational support work? Fear of COVID-19 on restaurant frontline employees' job insecurity and emotional exhaustion. *International Journal of Hospitality Management*, 94,. <https://doi.org/10.1016/j.ijhm.2020.102850>
- Chen, J., & Chi-Kin Lee, C. K. (2022). Teacher resilience matters: A buffering and boosting effect between job driving factors and their well-being and job performance. *Teachers and Teaching*, 28(7), 890–907. <https://doi.org/10.1080/13540602.2022.2116574>
- Chitra, T., & Karunanidhi, S. (2021). The impact of resilience training on occupational stress, resilience, job satisfaction, and psychological well-being of female police officers. *Journal of Police and Criminal Psychology*, 36(1), 8–23. <https://doi.org/10.1007/s11896-018-9294-9>
- Cooke, F. L., Cooper, B., Bartram, T., Wang, J., & Mei, H. (2019). Mapping the relationships between high-performance work systems, employee resilience and engagement: A study of the banking industry in China. *The International Journal of Human Resource Management*, 30(8), 1239–1260. <https://doi.org/10.1080/09585192.2015.1137618>
- Cooper, C. L., Liu, Y., & Tarba, S. Y. (2014). Resilience, HRM practices and impact on organisational performance and employee well-being. *International Journal of Human Resource Management*, 2015 Special Issue. <https://doi.org/10.1080/09585192.2014.926688>
- Czerw, A. (2019). Diagnosing well-being in work context—eudemonic well-being in the workplace questionnaire. *Current Psychology*, 38, 331–346. <https://doi.org/10.1007/s12144-017-9614-8>
- De Reuver, R., Van de Voorde, K., & Kilroy, S. (2021). When do bundles of high-performance work systems reduce employee absenteeism? The moderating role of workload. *The International Journal of Human Resource Management*, 32(13), 2889–2909. <https://doi.org/10.1080/09585192.2019.1616594>
- Dhiman, S. (Ed.). (2021). *The Palgrave handbook of workplace well-being*. Palgrave Macmillan.
- Diener, E., Heintzelman, S. J., Kushlev, K., Tay, L., Wirtz, D., Lutes, L. D., & Oishi, S. (2017). Findings all psychologists should know from the new science on subjective well-being. *Canadian Psychology*, 58(2), 87–104. <https://doi.org/10.1037/cap0000063>
- Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D. W., Oishi, S., & Biswas-Diener, R. (2010). New well-being measures: Short scales to assess flourishing and positive and negative feelings.

- Social Indicators Research*, 97, 143–156. <https://doi.org/10.1007/s11205-009-9493-y>
- Duchek, S. (2020). Organisational resilience: A capability-based conceptualisation. *Business Research*, 13(1), 215–246. <https://doi.org/10.1007/s40685-019-0085-7>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.1177/002224378101800104>
- Fu, N., Ma, Q., Bosak, J., & Flood, P. (2015). Exploring the relationships between HPWS, organisational ambidexterity and firm performance in chinese professional service firms. *Journal of Chinese Human Resource Management*, 6(1), 52–70. <https://doi.org/10.1080/09585192.2016.1216881>
- Ghana Statistical Service, (2021). What You Need to Know About the 2021 PHC Provisional Results. <https://census2021.statsghana.gov.gh/gssmain/fileUpload/pressrelease/What%20You%20Need%20to%20Know%20About%20the%202021%20PHC%20Provisional%20Results%20.pdf>. Retrieved October 26, 2022.
- Good, D., & Michel, E. J. (2013). Individual ambidexterity: Exploring and exploiting in dynamic contexts. *The Journal of Psychology*, 147(5), 435–453. <https://doi.org/10.1080/00223980.2012.710663>
- Greenbaum, R. L., Mawritz, M. B., & Eissa, G. (2012). Bottom-line mentality as an antecedent of social undermining and the moderating roles of core self-evaluations and conscientiousness. *Journal of Applied Psychology*, 97(2), 343–359. <https://doi.org/10.1037/a0025217>
- Guerrero, M. (2021). Ambidexterity and entrepreneurship studies: A literature review and research agenda. *Foundations and Trends in Entrepreneurship*, 17(5–6), 436–650. <https://doi.org/10.1561/0300000097>
- Guest, D. E. (2017). Human resource management and employee well-being: Towards a new analytic framework. *Human Resource Management Journal*, 27(1), 22–38. <https://doi.org/10.1111/1748-8583.12139>
- Güler, M., & Çetin, F. (2019). The relationship between personal resources and well-being: The role of resource-threatening and resource-consuming factors. *Management Research Review*, 42(2), 199–214. <https://doi.org/10.1108/MRR-01-2018-0002>
- Hair, J. F., Jr., Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of Business Research*, 109, 101–110. <https://doi.org/10.1016/j.jbusres.2019.11.069>
- Hair, J.F., Hult, G.T.M., Ringle, C., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)*, 2nd ed., Sage, Thousand Oaks, CA.
- Hanu, C., & Khumalo, N. (2023). Developing ambidexterity and resilience: the predictive role of high-performance work systems. *South African Journal of Human Resource Management*, 21(0), a2226. <https://doi.org/10.4102/sajhrm.v21i0.2226>
- Hanu, C., Amegbe, H., Yawson, M. D. T. A., & Mensah, P. (2023). Differential impact of work-based learning on employee agility, ambidexterity and proactive goal generation. *Journal of Workplace Learning*, 35(1), 92–111. <https://doi.org/10.1108/JWL-01-2022-0005>
- Harman, H. H. (1976). *Modern factor analysis*. University of Chicago Press.
- Kubiak, E. (2022). Increasing perceived work meaningfulness by implementing psychological need-satisfying performance management practices. *Human Resource Management Review*, 32(3), 100792. <https://doi.org/10.1016/j.hrmr.2020.100792>
- Liu, L., Wu, D., Wang, L., Qu, Y., & Wu, H. (2020). Effort-Reward imbalance, resilience and perceived organizational support: a moderated mediation model of fatigue in Chinese nurses. *Risk Management and Healthcare Policy*, 893–901.
- Lu, Y., Zhang, M. M., Yang, M. M., & Wang, Y. (2023). Sustainable human resource management practices, employee resilience, and employee outcomes: Toward common good values. *Human Resource Management*, 62(3), 331–353. <https://doi.org/10.1002/hrm.22153>
- Manzoor, F., Wei, L., & Asif, M. (2021). Intrinsic rewards and employee's performance with the mediating mechanism of employee's motivation. *Frontiers in psychology*, 12, 563070. <https://doi.org/10.3389/fpsyg.2021.563070>
- Miao, R., & Cao, Y. (2019). High-performance work system, work well-being, and employee creativity: Cross-level moderating role of transformational leadership. *International Journal of Environmental Research and Public Health*, 16(9), 1640. <https://www.mdpi.com/1660-4601/16/9/1640>
- Prayag, G., Muskat, B., & Dassanayake, C. (2023). Leading for resilience: Fostering employee and organizational resilience in tourism firms. *Journal of Travel Research*, 00472875231164984.

**Publisher's note** Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.