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HRM Practices Effectiveness Model – example of COVID-19 oriented HRM practices implementation

Abstract

Research background and purpose: This study aims to develop and empirically validate the HRM Practices Effectiveness Model, based on the example of COVID-19-specific HRM practices. The research evaluates their impact on job and organizational performance, emphasizing the mediating role of job performance and the moderating effect of crisis severity. The COVID-19 pandemic, a Black Swan event, was used as the example, as it challenged traditional Human Resource Management (HRM) practices, necessitating innovative approaches to ensure organizational survival and performance.

Design/methodology/approach: A survey-based empirical study was conducted among 378 organizations operating in Poland using the CAWI method. The research employed statistical techniques, including mediation and moderated regression analysis, to test hypotheses.

Findings: The analysis confirmed the mediating role of job performance in the relationship between COVID-19-oriented HRM practices and organizational performance, allowing to indicate the HRM Practices Effectiveness Model based on COVID-19 example. Additionally, the severity of the COVID-19 pandemic significantly moderated this relationship, with stronger impacts observed under more severe crisis conditions.

Value added and limitations: This study advances HRM theory by integrating contingency theory in crisis contexts, emphasizing the alignment of HRM practices with situational demands. It provides empirical evidence for the effectiveness of tailored HRM strategies during crises, highlighting job performance as a critical mediator. Practical implications include guidance for designing flexible HRM practices adaptable to varying crisis intensities. Limitations include the focus on a single country, which may restrict generalizability, and the non-representative sample, warranting further research in diverse contexts and additional moderating variables.

Keywords: *HRM practices, effectiveness, job performance, organizational performance*

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1. Introduction

The essence of management science is its applicability (Osbert-Pociecha, 2015; Sudoł, 2016; Czakon, 2023; Sudoł, 2016a) and its main object of research is organization (Griffin, 2022). As an operating entity, it is changeable over time, which is caused especially due to dynamics of its environment (Griffin, 2022). In management sciences, the organization serves as a subject of both foundational theoretical analysis and practical research and development. The practical side of management science is particularly evident in research aimed at developing solutions and practices that are both universally applicable and adaptable to the organization's unique internal and external conditions, as suggested by situational theory (Delery & Gupta, 2016).

The verification of management practices implemented in the organization is a complicated issue (Delery & Gupta, 2016). It is necessary to consider the effects of their implementation, especially the fact that they translate into results obtained by the organisation as a whole. Therefore, it is important to take into account first and foremost the real and objective benefits for the organisation resulting from their implementation. The effectiveness of practices is a helpful category in this area. It is assumed that correct (high quality) practices will imply high effectiveness expressed in positive effects of the implementation, and incorrect practices will result in low effectiveness.

An area of particular relevance to the functioning of an organisation is the area of human resources (Delery & Gupta, 2016; Groenewald et al., 2024). In recent years, it has been recognised that the purpose of an organisation is achieved by the people it employs. Therefore, developing the correct practices in this area is critical for the organisation. In particular, the increased importance of human resources can be seen when an organisation is operating in times of difficulty or even crisis (Shahi & Neloy, 2020; Kutieshat & Farmanesh, 2022; Collings *et al.*, 2021). The situation when an organisation is operating during a crisis caused by a Black Swan event - which is considered as unpredictable, highly dynamic and uncertain event in the organisational environment - translates into dynamics and uncertainty in the functioning of the organisation. The COVID-19 pandemic, as the example of Black Swan event, had a particular impact on employees in the organisation, and they in turn had fundamental influence on the survival of the organization (Collings *et al.*, 2021; Adikaram *et al.*, 2021). It means that the effectiveness of the human resource management (HRM) practices applied at this time should determine the effectiveness of the organisation's as a whole (Collings *et al.*, 2021).

In this context, **the aim of this study is to develop and verify the model for the effectiveness of HRM practices.** This study will use the period of the COVID-19 pandemic as the example, which, as written earlier, is not only directly affected the functioning of employees in the organisation, but also required new, dedicated HRM practices: COVID-19 oriented HRM practices (cf. e.g. Hamouche, 2023; Bieńkowska

et al., 2021; Shahi & Neloy, 2020). The HRM area of organization management was identified as one of most impacted by COVID-19 pandemic conditions (Azizi *et al.*, 2021; Liang *et al.*, 2022; Collings *et al.*, 2021). This is because it refers to the work of employees in an organisation, and it was established that during COVID-19 pandemic, existing HRM practices proved to be insufficient in the first place from the point of view of the changing environment and the following changes in the needs of the organisation (see eg. Bieńkowska *et al.*, 2020). Therefore, the assumptions of situational conditioning theory should be taken into account while shaping HRM practices during COVID-19, adapting the proposed practices not only to the characteristics of the organisation and the requirements of the environment, but also to each other. It should be also assumed that organisations operating in crisis caused by a Black Swan-type event (such as the COVID-19 pandemic) had to develop a set of practices aimed at ensuring the continuity of these organisations in such a dynamic and unpredictable environment (Shahi & Neloy, 2020; Kutieshat & Farmanesh, 2022; Collings *et al.*, 2021). In order to fulfil such an aim, the extensive critical literature review was performed, as well as the empirical research in order to verify the proposed assumptions. The achievement of the described aim will help to fill in the identified research gap in the area of human resource management within the management sciences.

2. Assumptions of the HRM Practices Effectiveness Model

The issue of organizational performance as a whole (and its individual elements) is currently gaining new importance. Decisions on the changes introduced in an organisation are made with increasing caution, and the decisive criterion is becoming the effectiveness relating to the benefits and costs of these changes and the final performance of the organisation as a whole (cf. Bieńkowska, 2021). One of the key areas of organisational performance is the area of HRM. Especially nowadays, it is not disputed that an organisation's goals are achieved through the people it employs. They determine the competitive advantage of an organisation and influence the goals it achieves (Delery & Gupta, 2016; Groenewald *et al.*, 2024). Given the crucial importance of people in an organisation, it is essential that HRM practices are designed in such a way that they contribute as much as possible to the job performance of employees, which then translates into organisational performance. In this way, a HRM Practices Effectiveness Model arises. What is important in this model is that correctly formed HRM practices should first contribute to the performance of employees and then (subsequently) to organisational effectiveness. Thus, an indirect (mediating) effect of the set of solutions on organisational effectiveness is assumed here. This means that correct (high quality) solutions will imply high effectiveness expressed in positive effects of this implementation, while incorrect solutions will result in low effectiveness.

In this context, the term HRM practice should be understood as the way in which substantive problems relating to a human resources area of the organisation's functioning are resolved, especially in the functional, organisational and instrumental sphere (cf. Bieńkowska, 2021). The selection and shape of the listed practices cannot be random. It is evident that, above all, the solutions must fit with each other. They should also correspond to the external conditions and characteristics of the specific organisation. They must also result from the objectives the organisation intends to achieve. It is widely known that 'successful HRM innovations (HRMIs) can be important determinants of organisational success' (Wolfe, 1995, p. 313). Thus, as the goals of implementing HRM practices are defined - synthetically - to increase the job performance of employees, and then the performance of the organisation as a whole.

An example used to exemplify the mechanism described in this study will be the practices developed for the necessity of functioning of an organisation during the COVID-19 pandemic, understood as a Black-Swan type event, which particularly affected the key resources of organisations, i.e. the people employed in them. The assumption here is that under the conditions of a threat to the health and life of employees, it was necessary to develop dedicated solutions in the field of HRM, which would, on the one hand, ensure the safety of employees (such as remote working), and on the other hand, ensure appropriate attitudes towards work, so that the quality of work was appropriate in relation to the goal of ensuring the continuity of operation, as well as the performance of the organisation as a whole (cf. Bieńkowska et. al, 2022; Hamouche, 2023). Clearly, the described situation should meet the above-described assumptions of effectiveness of HRM practices, i.e.

- HRM practices dedicated to a specific situation must be matched to each other, as well as to the situation to which they relate;
- the implementation of dedicated HRM practices has a direct impact on the job performance of employees;
- the implementation of dedicated HRM practices translates indirectly into organisational performance, with employee job performance as the mediating variable.

3. COVID-19 oriented HRM practices

Under the conditions of the COVID-19 pandemic, treated as an overly dynamic Black Swan-type crisis phenomenon (or even crisis) (Taleb, 2007; Morales & Andreosso-O'Callaghan, 2020; Murphy *et al.*, 2020), it became necessary to redefine the ways of functioning of the organization in the context of ensuring the continuity of its operations, i.e., in particular, ensuring the implementation of the goals set for the organization, even if these were also - as a result of the changing environment in which the organization operates - redefined. Hence, in many areas of the organization there was a need to develop

practices of action that significantly change the status quo of the previous functioning of these areas (see eg. Singh *et al.*, 2020; Li *et al.*, 2022; Azizi *et al.*, 2021). This applies both to those parts of the organization that are the core of its functioning (Kähkönen, 2021), as well as those that relate to the ancillary processes specified within it, including primarily IT support (see eg. Li *et al.*, 2022; Martins, 2022).

The effectiveness of modern management methods during the COVID-19 pandemic was largely dependent on human resource management (HRM), given that employees serve as the foundation of contemporary organizations (Gabčanová, 2011; Boudreau & Ramstad, 2007). In crises, organizations must adapt their approach to employees to ensure operational continuity and goal achievement (Azizi *et al.*, 2021; Liang *et al.*, 2022; Collings *et al.*, 2021). This led to the emergence of COVID-19-oriented HRM practices, aimed at addressing new working conditions and challenges. Key changes included job redesign (Aurelia & Momin, 2020), training and development (Yarberry & Sims, 2021), corporate social responsibility and wellbeing (Agarwal, 2021), communication and digitalization (Carnevale & Hatak, 2020), hiring, and compensation. Studies by Gonçalves *et al.* (2021) and Przytuła *et al.* (2020) highlight that the most significant HRM changes involved internal communication and workplace safety. However, the pandemic created a complex environment, demanding various other innovative solutions from HR managers to sustain organizations and support employees (Hamouche, 2023).

The literature presents various arrangements of the elements that sum up into techniques structure of HRM, in which dedicated solutions should be sought, tailored to the environment and the characteristics of the organisation. Thus, the main sub-areas of HRM functions include: personnel strategy and policy, human resources planning, personnel selection, employee appraisal, employee remuneration, development of work potential (employee development), management of employee and personnel affairs, and shaping of working relations and conditions (Delery & Gupta, 2016)

HRM practices dedicated to COVID-19, used as the example in this study, are understood as a complete set of HRM practices tailored to the specific needs and the environment. In this study, such a set of dedicated HRM practices include:

Job design, a foundational HRM, concerns the structure, tasks, duties, and environment in which employees work (Brockner *et al.*, 2006). Rooted in the person-environment (P-E) fit theory, which posits that employees are drawn to organizations aligned with their values and beliefs (Carnevale & Hatak, 2020), effective job design promotes satisfaction, engagement, and overall wellbeing (Kristof-Brown *et al.*, 2005). However, the COVID-19 pandemic disrupted this alignment, especially as remote work became a necessity (Follmer *et al.*, 2017). Organizations needed to drastically redesign jobs to introduce remote and hybrid working environments and structures and adapt various policies to support this shift (Mun *et al.*, 2022). These adjustments were crucial to maintain employee morale and productivity, particularly as limitations on physical interaction created challenges in meeting social needs within P-E fit (Barrick *et al.*, 2013).

Consequently, HR had to closely monitor potential misfits to ensure job satisfaction and minimize work-home conflicts (Mun *et al.*, 2022).

Training and Development were also significantly reshaped, shifting from in-person sessions to virtual learning platforms (Aurelia & Momin, 2020). Typically, training involves need analysis, planning, implementation, and assessment, with programs aligned to HR and organizational strategies (Jawaad *et al.*, 2019; Ludwikowska, 2021). COVID-19 required organizations to either postpone or pivot existing training programs to online formats (Kshirsagar *et al.*, 2020). E-learning and virtual sessions, once supplementary, became central to training, with a particular emphasis on essential topics like stress management and ICT adaptation (Agarwal, 2021). These virtual modes not only made training more accessible but also opened new pathways for skill development to enhance organizational resilience in dynamic contexts (Mamba *et al.*, 2021).

Employee Wellbeing, encompassing mental health, life quality, and job satisfaction, was another HRM domain highly affected by COVID-19 (Keyes *et al.*, 2002). Remote work blurred work-life boundaries and increased stress, especially for parents balancing family responsibilities amid school closures (Carnevale & Hatak, 2020). To mitigate these impacts, organizations expanded supportive resources, including health guidelines, virtual wellness programs, and stress-relief tools such as meditation apps (Aurelia & Momin, 2020; Mamba *et al.*, 2021). Recognizing wellbeing as a driver of productivity, HRM focused on initiatives promoting a balanced work-life dynamic and fostered social support to reinforce workplace satisfaction (Mun *et al.*, 2022).

Hiring practices, which include recruitment, selection, and onboarding, also underwent a digital transformation due to COVID-19 pandemic restrictions (Phillips & Gully, 2015). With in-person interviews and assessments unavailable, organizations adopted virtual hiring tools, including video interviews, online tests, and chatbots for initial screenings (Potočník *et al.*, 2021). Chatbots, in particular, enhanced the hiring process by facilitating candidate communication and updates (Adam *et al.*, 2021). Additionally, digital platforms allowed recruiters to evaluate candidates' virtual engagement and non-verbal cues, essential for successful remote onboarding (Proost *et al.*, 2008). These changes represent a long-term shift towards more flexible, tech-driven hiring methods (Majumder & Mondal, 2021).

Compensation and Benefits were also altered by the pandemic, as organizations faced budgetary constraints and sought cost-saving measures (Agarwal, 2021). Non-essential benefits like gym memberships and company cars were suspended, reflecting a pragmatic shift to match reduced office occupancy and altered employee needs. Meanwhile, bonuses and other performance-based incentives were recalibrated according to revised goals and business outcomes. While these changes limited certain benefits, they underscored a shift in HR strategies towards health, wellness, and adaptable compensation packages better suited to employees' evolving roles and responsibilities during a crisis (Aurelia & Momin, 2020).

HRM practices affected by COVID-19 HRM have a greater focus on health and wellness, acceptance of workplace flexibility, a more significant role and adoption of technology, prioritization of continuous learning and upskilling, and more agile planning for dynamic situations (Aurelia & Momin, 2020).

It should be noted here that the described HRM practices are called COVID-19 oriented, as a totality of tailor-made solutions for operating an organisation under the conditions of the COVID-19 pandemic (e.g. Shahi & Neloy, 2020). This means that they specifically affect job and organizational performance under the conditions of the crisis caused by the COVID-19 pandemic, used as an example in this paper.

4. Effectiveness of implementation COVID-19 oriented HRM practices in crisis caused by COVID-19

According to the assumptions of the model of effectiveness of HRM practices described earlier, the entirety of HRM practices proposed for the COVID-19 pandemic environment should directly affect the job performance of employees, which is acting as the mediator of the relation between COVID-19 oriented HRM practices and organisational performance.

4.1. The influence of COVID-19 oriented HRM practices on job performance and organizational performance

Contingency theory posits that the suitability of HRM practices depends on how well they align with the organization's internal characteristics (such as size and structure) and the external environment in which it operates, particularly in terms of its dynamism, thus addressing specific situational factors (cf. Bieńkowska, 2015). This means that optimal HRM practices should be understood as high-quality approaches that support achieving high organizational performance. Consequently, organizational performance is commonly used as a summary outcome measure to validate the appropriateness of these solutions, as argued by Jaki (2011), who asserts that "the efficiency imperative broadly defines the criteria for decision-making," and Czekaj and Ziębicki (2014), who directly describe organizational performance as a "category of evaluation."

Empirical studies within HRM focus on identifying practices aligned with an organization's internal and external contexts to drive high organizational performance (also due to job performance). A well-known research stream explores High-Performance Work Systems (HPWS), which are found to enhance not only organizational performance but also job performance and employee well-being (Barling *et al.*, 2003; Anwar & Abdullah, 2021). Researchers have identified 22 practices generally associated with HPWPs. However, due to varying opinions among scholars, only 13 practices commonly recognized in the field are emphasized: incentive compensation, training,

compensation level, participation, selectivity, internal promotion, HR planning, flexible work, performance appraisal, grievance procedures, teams, information sharing, and employment security (Combs *et al.*, 2006).

Thus, by analogy, given both the assumptions of contingency theory—where it is essential to seek HRM practices that match an organization's internal and external conditions, particularly in response to factors such as the COVID-19 pandemic—and the widely used decision-making parameters of job and organizational performance. Bieńkowska and colleagues (2022) analyzed COVID-19 oriented HRM strategies' and their role in influencing job performance through various job-related attitudes during the times of crisis. They proved that „there is a set of HRM strategies that combination can ensure the strengthening of the employees' job performance through work motivation, job satisfaction, and organizational commitment” (Bieńkowska *et al.*, 2022). Sapta and colleagues (2021) additionally confirmed that motivation (which has a positive influence on performance) is in turn influenced by organizational culture, technology, and job satisfaction. Similar work was presented by Ahmed *et al.* (2020), who addressed HR challenges during COVID-19 implying that employees engagement impacted not only job performance, but also organizational performance of organization.

Therefore, the following hypotheses may be proposed:

H1: There is positive influence of COVID-19 oriented HRM practices on organizational performance.

H2a: There is positive influence of COVID-19 oriented HRM practices on job performance of employees.

4.2. The relation between job performance of employees and organizational performance during crisis caused by COVID-19 pandemic

The relationship between job performance of employees and organisational performance is quite obvious due to the fact that employees are treated as a key resource of modern organisations (Pfeffer & Veiga, 1999; Combs *et al.*, 2006). The positive impact of job performance of employees on organisational performance is often considered theoretically (Combs *et al.*, 2006) and studied empirically (Shin & Hyun, 2019; Tworek *et al.*, 2023). Thus, in theoretical terms, due to the fact that job performance is understood not only as an employees' behaviour towards an organisation (Hung, 2018), which translates into their outcomes (Sonnentag & Frese, 2002), but also as “the aggregated value to an organisation of the set of behaviours that an employee contributes both directly and indirectly to organisational goals” (Rich *et al.*, 2010), the link between employees and organisation can be inferred in the form of a connection between job

performance of employees and organisational performance. Empirically, the influence of job performance of employees on organisational performance has been repeatedly proven (Jiang *et al.*, 2019; Shin and Hyun, 2019). In principle, the empirically explained direction of influence is unambiguous. For example, Farooqui and Nagendra (2014) stated that job performance is an important determinant of organisational performance and Judge and colleagues (2001), established that poor employee performance is detrimental to organisational outcomes.

As stated before, during the COVID-19 pandemic crisis, the influence of job performance of employees on organisational performance is critical. This is related to the immediate threat to the health and lives of employees, the decrease in their sense of security and the resulting demotivation and therefore - as a consequence - the lowered job performance of employees, which adversely affects organisational performance. "In organisations functioning during the crisis (especially in its initial phase) lowered values of job performance are observed, because the previous ways of functioning are not adjusted to the dynamically changing conditions and performing work in a routine way does not bring expected effects" (Tworek *et al.*, 2023). Hence, the following hypothesis can be put forward:

H2b: There is positive influence of job performance of employees on organizational performance during crisis caused by COVID-19 pandemic.

4.3. The influence of COVID-19 oriented HRM practices on organizational performance through job performance of employees

In this context, it can be stated that job and organizational performance should be positively influenced by COVID-19 oriented HRM practices among organizations operating under the crisis conditions caused by the COVID-19 pandemic. „Problems with ensuring job performance of employees in the conditions of an organization crisis make it necessary to develop solutions that would effectively counteract this phenomenon, as it threatens to ensure the achievement of the goals of the organization as a whole” (Bieńkowska *et al.*, 2021). Hence, while discussing the effectiveness of implementation of COVID-19 oriented HRM practices, it needs to be understood as the strength of the influence of COVID-19 oriented HRM practices on the organisational performance through job performance of employees (cf. Bieńkowska, 2021). It should be underlined that organizational performance is one of the most important performance parameters of the organizations functioning. It is understood as a multidimensional construct (Richard *et al.*, 2009), related to the results of organization’s functioning as a whole. Job performance, in turn, is understood according to the theory by Kell & Motowidlo (2012) as a set of behaviours that an employee performs over time, which creates a certain value for organization. It is further important that COVID-19 oriented HRM practices affect

organizational performance in an indirect way, which was partially established based on various sets of practices by e.g. Kutieshat and Farmanesh (2022) or Alraja *et al.* (2022). With the improved job performance of employees (Collings *et al.*, 2021), it is possible to have a positive impact on the organization as a whole. In the above context, the following hypotheses can be put forward:

H3: COVID-19 oriented HRM practices are influencing organizational performance through job performance of employees.

In addition, the following hypothesis is proposed as a test of the extent to which the proposed HRM practices are suited to the organisational conditions of the COVID-19 pandemic. In essence, it will verify whether the impact of implementing dedicated HRM practices for these conditions on the organisational performance trough job performance of employees will increase with severity of the COVID-19 pandemic conditions:

H4: Strength of COVID-19 pandemic moderates the influence COVID-19 oriented HRM practices on organizational performance through job performance of employees.

The proposed model was presented in Figure 1.

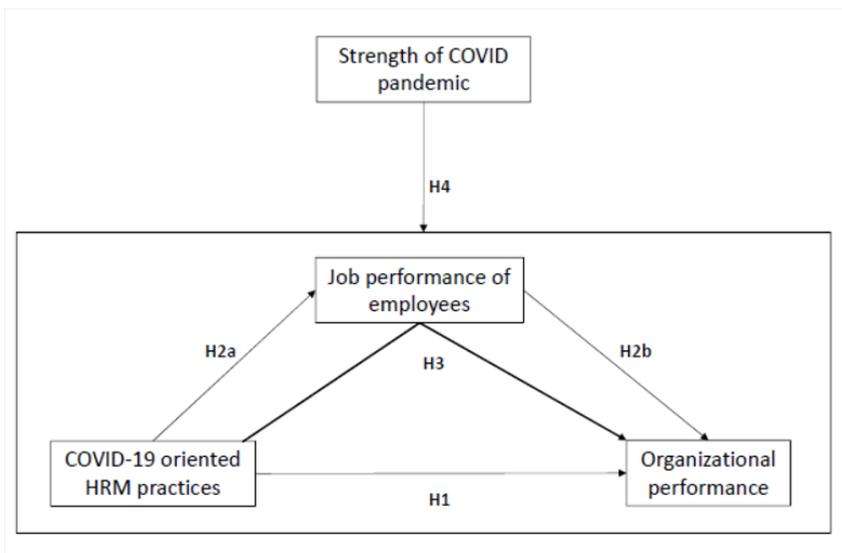


Figure 1. COVID-19 oriented HRM practices influence on organizational performance through job performance of employees

Source: own work

5. Methodology/Research methods

In order to achieve the aim of the article and verify the hypotheses (shown in Figure 1), an empirical study based on questionnaire was conducted. This the part of a larger empirical study that took place in the last quarter of 2020. The study was conducted in two phases. The first phase was devoted to a pilot study performed in order to assess the quality and reliability of the research questionnaire. Recognizing the importance of ensuring the questionnaire's robustness, this phase engaged a panel of 25 managers who served as competent judges. They were employed in organizations operating in Poland, and randomly selected. Their main aim was to verify whether the prepared research tool is easy to understand, free from ambiguity, and effectively capture the intended information. Their feedback helped identify potential issues, such as confusing phrasing or inappropriate wording, which might hinder participants' ability to respond accurately. This process enhanced the validity and reliability of the questionnaire, improving its overall quality before deployment, as their feedback provided valuable insights, enabling refinement and enhancement of the research tool used in the subsequent phase.

The second phase was devoted to primary research, for which the sample of 378 organizations operating in Poland was chosen. Data collection was facilitated through the CAWI (Computer-Assisted Web Interview) method. The questionnaire was filled in by managers, who have overall information about the organization as a whole. Due to the specificity of the study (based on COVID-19 influence on organization), decision has been made to base it on managers overall knowledge rather than particular view of a single employee. Organizations were selected using a purposive sampling approach, with geographical location (Poland as a place of operations) being the only criterion for inclusion. Poland as the location of organizations was chosen due to e specific expertise of authors concerning this business context and specific and visible impact of COVID-19 on Polish economy. Other organizational characteristics, such as size and primary income sources, were not selection criteria but were documented during the study. Table 1 shows description of the surveyed organizations. Indeed, the sample was not representative, however the diversity of the organizations included in the sample enables the validity of the conclusions drawn from the research.

Table 1. Research sample characteristics

Criterion of division	manufacturing organisations	trade organisations	service organisations	Total
micro (below 10 employees)	10	12	8	30
small (10-49 employees)	29	56	33	118

medium (50-249 employees)	45	27	43	115
large (above 249 employees)	46	14	55	115
Total	130	109	139	378

Source: Bieńkowska et al., 2022, p. 12

In order to examine the proposed hypotheses key variables were defined: *COVID-19 impact (CV)*, *COVID-19 oriented HRM practices (HRM CV)*, *Job performance (JobPer)*, *Organizational performance (OrgPer)*.

COVID-19 impact was measured by scale built from 3 items concerning the criticality of Covid-19 induced crisis phenomena for the long-term success of the organization, company's ability to get its work done despite of Covid-19 caused crisis and the level of difficulty in an adequate response by the organization to the crisis caused by the pandemic. The selection of the items for the constructs was based on the literature review (He & Harris 2020). They were rated on the 3-points scale, as it was not efficient to use a Likert scale – possible answers needed to give details concerning possible influence on organization. Next, based on the variable, the sample was divided into two groups, with low level and high level of COVID-19 strength.

Items (and individual scales):

1. Please specify the extent to which your organization has suffered from the impact of the COVID-19:
 - the organization's business continuity was disrupted but finally successfully restored
 - this event did not interrupt the business continuity, however the level of effectiveness has dropped significantly
 - this event did not interrupt the business continuity, the organization was meeting its goals as planned
2. Please specify the extent to which your organization has recovered from the impact of the COVID-19:
 - the organization survived but its activity is still significantly reduced
 - the organization has fully recovered, it returned to its previous equilibrium
 - we used situations to renew the organization: our organization emerged from those event strengthened and more resourceful, and has reached a new, higher level of development
3. Please specify how your organization has been impacted by the COVID-19:
 - COVID-19 disrupted organization's ability to get its work done.
 - COVID-19 caused organization to stop and think about how to respond.
 - COVID-19 was critical (in a positive way) for the long-term success of our organization.

COVID-19 oriented HRM practices (HRMDC) were built from 10 items basing on the list of practices possible and logical to implement specifically for the sake of COVID-19 counteraction (job design, training and development, employees well-being, hiring practices, compensation and benefits). Their implementation in the organization were rated on the 5-points' Likert scale.

Items (scale: *Much less than before COVID-19 – Much more than before COVID-19*):

1. Every step of the employee experience, from recruitment, onboarding to training and performance appraisals, is based on IT tools.
2. Decision-makers in organization are equipped with IT support tools for HR analytics containing critical information about the workforce at a desirable level of granularity.
3. Managers provide employees with the necessary support and avenues for expression (e.g., upward feedback mechanisms, participative decision making).
4. Managers are role models for employees, they put employees' needs above their own and respect the values and principles of the group.
5. Managers inspire and motivate employees by providing meaning and challenge to the task, and support them to develop desirable visions for the future.
6. Managers stimulate innovation and creativity by encouraging employees to question assumptions, reframe situations and approach from new perspective.
7. Managers foster employees' personal development tailored to the individual needs, they provide learning opportunities and climate for growth.
8. Employees have access to flexible work arrangements that help employees to cope with multiple work and non-work demands.
9. Organization adjusts compensation system to the situation taking into account the environment.
10. Organisation has flexible rewards and benefits to accommodate the diverse needs of employees.

Job performance (JobPer) was built from 7 items basing on three aspects of job performance: task proficiency, task meticulousness and work discipline. The selection of the items for the constructs was based on the literature review (Yuen *et al.* 2018). They were rated on the 5-points' Likert scale.

Items (scale: *I strongly disagree – I strongly agree*):

1. Employees always complete the duties specified in their job description.
2. Employees always meet all the formal performance requirements of their job.
3. Employees complete their tasks efficiently.
4. Employees are always able to overcome obstacles to complete their tasks.
5. Employees are rarely absent from my work.
6. Employees avoid absenteeism at work without a legitimate reason.
7. Employees make few mistakes at work.

Organizational performance (OrgPer) was measured based on 10 items covering all the aspects indicated in Balances Scorecard. The items were measured on a 5 points' Likert scale.

Items (scale: much worse than competitor – much better than competitors):

1. Please share your opinion about the overall financial situation of the organization comparing to your main competitors.
2. Please share your opinion about the job performance of the organization comparing to your main competitors.
3. Please share your opinion about the quality of products or services (reliability, diligence) of the organization comparing to your main competitors.
4. Please share your opinion about the innovativeness of products or services of the organization comparing to your main competitors.
5. Please share your opinion about the modernity of applied technological solutions of the organization comparing to your main competitors.
6. Please share your opinion about efficiency of the organization management of the organization comparing to your main competitors.
7. Please share your opinion about reliability of business processes of the organization comparing to your main competitors.
8. Please share your opinion about market share of the organization comparing to your main competitors.
9. Please share your opinion about customers satisfaction of the organization comparing to your main competitors.
10. Please share your opinion about employees' satisfaction of the organization comparing to your main competitors.

The description of the variables is presented in Tab. 2. First of all, it was established that collected data are characterized by the normal distribution. Second of all, the scale analysis was performed in order to verify whether they can be used in the study and they coherently and correctly assess the phenomena, which they are aimed to asses. The scales' reliability and validity were tested using IBM SPSS software, as a first step needed for using the obtained data for further statistical reasoning. The analysis of alpha Cronbach and Confirmatory Factor Analysis was performed, and the results are given in Table 2. The results show that the scales may be used for further reasoning.

Table 2. Variables description

Variable		No. of scales	Likert retranslation into groups	CR	EFA (AVE)
COVID-19 impact	CV	3	-	0.696	62.232%
COVID-19 oriented HRM practices	HRM CV	10	-	0.806	63.264%
Job performance	JobPer	7	-	0.812	47.428%
Organizational performance	OrgPer	10	-	0.846	42.087%

*CR – Cronbach alpha, CFA – Average Variance Estimation of Exploratory Factor Analysis

Source: own research

6. Results

6.1. Mediation model

Saks (2006) proposed three criteria for the analysis of a mediation model. The first one calls for a need to establish significant relation between the independent variable and the mediator. The second one calls for a need to establish a significant relation between the mediator and the dependent variables. The third one calls for a need to establish that the relation between the independent and dependent variables weakens (partial mediation) or loses significance (full mediation) with inclusion of a mediator. To evaluate the first two criteria, which will allow to test hypotheses H1, H2a, and H2b, an r-Pearson correlation analysis was carried out.

Table 3. Correlation analysis between analyzed variables

		Job Performance	Organizational Performance
Covid-19 oriented HRM practices	r	0.596	0.571
	p	<0.001	<0.001
	N	378	378
Organizational Performance	r	0.673	1
	p	<0.001	-
	N	378	378

* r – r-Pearson coefficient, p – statistical significance, N – number of responses

Source: own research

The results, shown in Table 3, indicate a statistically significant and strong correlation among all analyzed variables, with the highest correlation observed between job performance and organizational performance. This supports acceptance of hypotheses H1, H2a, and H2b.

With these findings, the next step involves testing the mediating model for organizational performance. To achieve this, a mediation model was developed with COVID-19-oriented practices as the independent variable, organizational performance as the dependent variable, and job performance as the proposed mediator. For mediation to be confirmed in this model, the regression analysis must show statistical significance, and the total effect should be greater than the direct effect observed between the independent and dependent variables. The analysis results are presented in Table 4.

Table 4. Job performance as the mediator of the relation between Covid-19 oriented HRM practices and organizational performance

Mediator	Direct effect value	Indirect effect value	Boot LLCI	Boot ULCI	R2
Job performance	0.3251	0.3766	0.284	0.473	0.497

Source: own research

The regression model incorporating the mediator is statistically significant ($F(2,375) = 185.365$, adjusted $R^2 = 0.497$). Furthermore, job performance is confirmed as a significant mediator within the model ($p < 0.001$, coefficient = 0.573, SE = 0.026). As shown in Table 4, the mediating effect is statistically significant, with the indirect effect exceeding the direct effect and showing significance (BootLLCI = 0.284, BootULCI = 0.473, both above 0). These results indicate that job performance effectively mediates the relationship between Covid-19-oriented HRM practices and organizational performance, supporting the acceptance of hypothesis H3.

6.2. Moderators analysis for the Covid-19 strength

The mediation model proposed in hypothesis H2 was evaluated to determine whether Covid-19 strength serves as a statistically significant moderator of the relationship in the model. This hypothesis was tested using a regression analysis with a moderator variable.

Moderated regression analysis was conducted for each case, where the moderator was added as an interaction term, created by standardizing and multiplying the two independent variables. Three regression models were constructed using the Process macro in IBM SPSS Statistics. The first model, which was as a baseline, was based

only on the independent variable as predictor. The second model was based on the moderator (a second predictor) to determine its moderating effect across the sample. The third model was based on two predictors: the moderator and a single independent variable and aimed at confirming the moderating effect. Table 5 presents the results of these analyses.

Table 5. Regression models' statistics

Model description	R ²	Delta R ²	Moderator coeff.	Standard error	t	p
Covid-19 oriented HRM practices, Job performance Moderator dependent v.: organizational performance	0.405	0.054	0.076	0.041	1.849	0.045

* t – results of t-student test; p – statistical significance

Source: own research

The moderated regression analysis supports two key conclusions. First, the R² values indicate a causal relationship between Covid-19-oriented HRM practices, job performance, and organizational performance, further validating the proposed model. Second, the results show that Covid-19 strength is a statistically significant moderator for both relationships, including the link between Covid-19-oriented HRM practices and job performance ($F(3,374) = 85.199, p < 0.001$). As shown in Table 6, these findings support the acceptance of hypothesis H4, confirming that the intensity of the Covid-19 pandemic moderates the effect of Covid-19-oriented HRM practices on organizational performance through employee job performance.

7. Discussion

The obtained results contribute to the literature by advancing the understanding of HRM practices during unprecedented crises, which was established based on the COVID-19 pandemic example. The results confirmed the mediating role of job performance within the relation between HRM practices with organizational performance. This study builds on the contingency theory by highlighting the need for HRM practices that are both contextually adaptable and aligned with internal and external conditions, as emphasized by Donaldson (2001) in order to achieve their effectiveness. By applying contingency theory to a crisis setting, the importance of HRM adaptability in sustaining organizational performance during periods of extreme uncertainty and change was underlined.

The results are consistent with other studies (e.g., Shahi & Neloy, 2020; Collings *et al.*, 2021) suggesting that the effectiveness of HRM practices significantly impacts job and organizational performance during crises and establishing the **Model of HRM Practices Effectiveness** based on COVID-19 oriented HRM practices. Building on these studies, our research confirms that COVID-19 oriented HRM practices were essential for supporting job performance, which in turn boosted overall organizational performance. It allowed us to highlight job performance as a critical intermediary in realizing the benefits of crisis-oriented HRM strategies, an area previously underexplored in the HRM literature.

Additionally, the research aligns with the work of Hamouche (2023) and Kutieshat & Farmanesh (2022), who, also based on COVID-19 as the example of a Black Swan event, established that crisis calls for a rapid, tailored HRM responses. The current study expands on their conclusions by empirically verifying the model of HRM effectiveness, with COVID-19-specific practices directly influencing job and organizational performance. This study's findings underscore the necessity of HRM flexibility and its responsiveness to employees' needs during crises. Moreover, by identifying COVID-19's severity as a moderator, the model addresses a gap in the literature regarding the influence of crisis intensity on HRM practices' effectiveness. This moderating effect provides empirical support for the hypothesis that under more severe crisis conditions (based on COVID-19 severity example), COVID-19-oriented HRM practices had an amplified impact on job performance and, consequently, organizational performance. **This adds to the literature by highlighting the interaction between situational severity and HRM effectiveness**, further validating contingency theory's application in crisis contexts.

8. Conclusions

Flexible, situation-specific HRM practices are vital for organizational survival and success (Saks, 2022; Bieńkowska *et al.*, 2022). This study develops and verifies the HRM Practices Effectiveness Model in the context of the COVID-19 pandemic as the example of Black Swan event, demonstrating a significant direct and indirect relationship between COVID-19-oriented HRM practices and organizational performance, mediated by employee job performance and moderated by crisis severity. Organizations that quickly adapted practices like remote work, technological and psychological support, and health-focused policies maintained operational efficiency and business continuity. Employees who felt cared for in terms of well-being and safety showed greater loyalty and commitment, boosting individual and organizational performance -especially in severe crises.

Summarising, this study contributes to literature from the field of HRM by establishing the job performance as the mediator between HRM practices and organizational performance during crises and establishing the HRM Practices Effectiveness Model. It is also based on the contingency theory's application to Black Swan events, emphasizing the alignment of HRM practices with crisis-specific demands. It provides empirical evidence on the moderating role of COVID-19 severity, thus offering insights for designing responsive HRM practices under varying crisis intensities, according to the assumptions of the HRM Practices Effectiveness Model.

The present study is burdened with certain limitations. Firstly, the research was confined to Poland, so the findings might differ in countries with varying cultural context and work-related attitudes. Secondly, the study was not conducted in a representative manner; it involved 378 companies chosen through purposive sampling. Moreover, proposed HRM Practices Effectiveness Model demonstrates only basic relationships and should be further developed in a search of other factors that could influence the strength of the demonstrated relationships. In particular, it seems interesting to identify the determinants of COVID-19 oriented HRM practices implementation effectiveness. The above area opens up new research perspectives.

Authors' contribution

A.B; K.T: article conception, theoretical content of the article, research methods applied, conducting the research, data collection, analysis and interpretation of results, draft manuscript preparation; **A.Z-K.:** theoretical content of the article, draft manuscript preparation

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