PLOS ONE

COVID-19 oriented HRM strategies influence on job and organizational performance through job-related attitudes

Agnieszka Bieńkowska, Anna Koszela, Anna Sałamacha, Katarzyna Tworek *

Faculty of Management, Wroclaw University of Science and Technology, Wroclaw, Poland

* katarzyna.tworek@pwr.edu.pl

Abstract

The COVID-19 crisis forced many changes to occur within organizations, which were necessary to keep the continuance of the organization's operations. Job performance seems to be an important factor determining such continuance, through its influence on the performance of entire organization. Shaping and keeping job performance in times of COVID-19 pandemic was a challenge for organizations, due to its negative impact on employees, causing their stress or lack of sense of security. There is a growing role of HRM specialists in appropriately shaping HRM strategies that can positively shape job-related attitudes, resulting in enhanced job performance during such difficult times. Therefore, this study aims to explain the role of COVID-19 oriented HRM strategies in shaping job performance through job-related attitudes such as work motivation, job satisfaction, and organizational commitment in a time of crisis occurring in the organization due to the COVID-19 pandemic. The study was conducted among 378 organizations operating in Poland during 2nd wave of COVID-19 pandemic. To verify the hypotheses, descriptive statistics were calculated using IBM SPSS and path analysis was performed using IBM AMOS. The result shows that combined set of "hard" HRM strategies related to the financial aspects and "soft" HRM strategies related to keeping employees' wellbeing during the crisis gives the best results in shaping job performance through job-related attitudes and consequently strengthening organizational performance. This study contributes to the knowledge concerning the development of COVID-19 oriented HRM strategies, which may also have practical application.

1. Introduction

There is no doubt that employees are a key resource of contemporary organizations [1]. Employees, by implementing the tasks entrusted to them, support the implementation of the organization's goals at the strategic, tactical and operational levels, which is translated into the performance of individual areas of the organization [2]. The global pandemic caused by SARS-CoV-2 virus (further called COVID-19 pandemic) had a profound impact on the management of employees [3, 4]. Spread of the COVID-19 disease meant that organizations were forced to change the way of work, as it became necessary to increase the social distance and

stop the mobility in order to reduce the odds of contamination [5]. Organizations had to rearrange their processes so that remote work was possible [6]. Employees faced the challenges related to working from home: necessity to prepare the workplace, adaptation of tools to those that are possible to work from a distance, transformation of business interactions to the Internet and finding themselves in virtual reality [7]. This completely changed the perception of the work as well as the approach to performance.

It is worth to underline that the changes caused by the COVID-19 pandemic are not entirely revealed. Previous studies do not clearly indicate the impact of changes that took place in the organization on the results of employees' work and, consequently, on the results of the organization as a whole. On the one hand, there is research that shows negative impact. Uncertainty of employment, increased level of stress, shortage of tools for work, technical problems, longing for the working environment, difficulties in building relationships with colleagues, disturbed work-life balance may adversely affect the results of employees [8–10]. Organizations also predict the negative effects of the pandemic—46% of surveyed Chinese companies expect a reduction in performance due to COVID-19 [11]. On the other hand, there has been much evidence of a positive impact. Graves & Karabayeva [9] have shown in their research that the effects of remote work such as flexibility of working time, no need to travel or the possibility of recruiting employees from anywhere in the world increase employee performance. Narayanamurthy & Tortorella [11] also agree with this claim, concluding that remote work contributes to increasing productivity, job satisfaction and output quality, and this translates into better job performance. Moreover, the authors noticed that those aspects easily translate into organizational performance. Bearing in mind the above suggestions and inconsistencies in the results of the research, the research gap emerged.

In this context, the aim of the article is to explain how COVID-19 oriented Human Resource Management (HRM) strategies influence organizational performance. In particular, the dependencies between the implementation of COVID-19 oriented HRM strategies, job performance and organizational performance will be examined. In addition, the mediating effects of job-related attitudes such as work motivation, job satisfaction and organizational commitment will be considered. The proposed and empirically verified model will allow the researchers to fill in the identified research gap.

2. Theoretical background

2.1 Job performance during COVID-19

The difficult conditions of the modern economy have placed organizational performance at the center of modern organizations' attention [2, 12], in particular as a vital part of monitoring organizations' progress [13]. It is also worth noting that in the field of management sciences, it has become a construct which is receiving a lot of attention [14–17]. Organizational performance is defined as the ability to acquire and transform various types of resources (including human, financial or technical) in order to carry out tasks and achieve the goals of the organization [18]. This construct covers diverse domains of organizational outcomes, such as: financial performance, product market performance and shareholder return, therefore requires synergistic involvement of entire organization. Consequently, individual areas of the organization (e.g. marketing, operations, strategy) are assessed by their contribution to organizational performance [12]. HRM seems to be considered as extremely important in shaping such performance [19]. Many authors emphasize the role of factors related to HRM in shaping organizational performance, in particular, the impact of job performance is considered [13, 20], usually as the crucial one [21].

Research performed by various authors, e.g. by Ramezan and colleagues [18] showed that there is a positive relation between job performance and organizational performance. The authors argue that various aspects of job performances can influence different aspects of an organization. Resource allocation decisions have a direct impact on employees' productivity and organizational performance through reduced turnover, employees' best behavior and the overall task performance of employees. All the above-mentioned aspects consequently influence organizational performance [18]. This is supported by Bieńkowska et al. [22], who emphasize that thanks to highly performing employees, an organization can carry out tasks and achieve goals much more efficiently [22]. Additionally, Teece [19] claims that the organization's ability to create, implement, protect and use intangible knowledge assets allows achieving superior organizational performance [23].

It is equally common knowledge that modern organizations face the challenges of operating in the changing environment on a daily basis. Masa'deh et al. [24] argue that the job performance of individuals should be placed at the center of every organization's interest, so they would be able to ensure business continuity and succeed in difficult conditions [24]. This was especially true during the COVID-19 pandemic. The crisis, that the whole world had to face, increased the uncertainty of the organization's operation, and thus the turbulence of the environment. Employees' behavior, manifested in job performance, supports organizations in resisting the negative consequences of the pandemic [25]. It is worth noting, however, that there are many reports that the COVID-19 pandemic decrease job performance.

One aspect caused by the spread of contamination is the need for social isolation. In quantitative research on salesperson Chaker et colleagues [26] found that there is indirect impact social isolation on job performance. They indicated that job-related knowledge, informal communications, and loyalty to the organization are mediators in this relation. In addition, the qualitative research confirmed the assumed impact, showing the significance of hindered development and learning, missed opportunities for informal conversations, and detached feelings from the organization [26].

Another negative consequence of the COVID-19 pandemic was layoffs in certain sectors of the economy, including the hospitality industry [27]. Tu et colleagues [10] found that layoffs due to the COVID-19 increase the level of stress among employees who remain in the organization, which translates into decrease their in—role and extra—role performance [10].

Also noteworthy are the results of the Shin et colleagues [28] study, who conducted a comparative analysis of the impact of customer incivility behavior on the service employees performance from the pre-pandemic and SARS-CoV-2 virus pandemic period. It was discovered that there is stronger, indirect effect of customer incivility on job performance through emotional exhaustion during pandemic [28].

On the other hand Vo-Thanh et colleagues [25] noted the important role of organization in improving job performance. Research results showed that there is a positive relation between satisfaction with organization COVID-19 responses and job perfomance. The authors explain that when employees are satisfied with the organization's anti-crisis activities, they are more confident about their wellbeing, health, and job, and this translates into better results [25]. That is why it is important to analyze and identify any ways, in which the organization can support the employees in maintaining the proper level of job performance, or even increase it– as it should be considered as a main factor enabling the organizational survival.

2.2 COVID-19 oriented HRM strategies

Unexpected events causing a global scale crisis can have a dramatic impact on the employees' wellbeing [29, 30]. The situation caused by the COVID-19 pandemic is guaranteed to take a

long-term effect on the psychological wellbeing of employees, causing cumulative stress for many of them, which will consequently affect performance, a key aspect for organizations.

Because employees are the most important resource of any organization, the organization needs to take care of their wellbeing as well [31, 32]. Therefore, a health disaster such as a pandemic will pose a huge challenge to the HRM department to mitigate the negative effects of the COVID-19 pandemic on employees [29, 33]. As early as the 2008 crisis, there were voices from researchers arguing that HR professionals should be part of the crisis management team.

During a COVID-19 pandemic, employees often face problems not only at work but also at home. Therefore, HR specialists should be ready to manage any problems and issues caused by the COVID-19 pandemic [29]. The HR department gains importance in the organization and its main task during a pandemic is to mitigate the negative effects of a global pandemic among employees [29]. Therefore, it is necessary to involve the HR department in the planning and implementation of crisis management as the main representative of the highest capital of any organization [31].

Researchers have noted that modern approaches to HRM are more effective in turbulent times than traditional approaches that are considered edgy and unprecedented [34]. Therefore, it is important to recognize which HRM practices will most effectively mitigate the negative effects of the COVID-19 pandemic, and also allow the use of emerging opportunities [29]. In turbulent times, two HRM approaches are distinguished from an organization's perspective " soft"—in which employees are considered a valuable resource for the organization [35] and "hard". When considering "soft" HRM practices, they mainly focus on taking care of the employee's wellbeing during the crisis to guarantee high performance.

Therefore, organizations focus on training employees to acquire new skills necessary to work in new conditions [36]. Additionally, they focus on appropriate communication processes, transfer and exchange of information [37, 38]. They also try to provide activities such as mentoring, coaching, which positively, even in crisis situations, raise the wellbeing of employees [39].

The most common „hard" HRM practices include those related to the financial aspect— pay cuts and freezes [40], downsizing [41, 42] or withholding recruitment, reducing training budgets, lowering individual performance goals and benefits [43, 44].

In the literature, mixing of "soft" HRM style with "hard" HRM style seems to be the most effective way to mitigate the negative impact of the COVID-19 pandemic on the organization's employees. The mixed model allows an organization to create maximum employee job performance and efficiency by taking care of employee motivation and engagement using "soft" HRM practices. On the other hand, it allows the organization to persevere in the difficult time of crisis by cutting operational costs related to recruitment or employees' development and promotions, thus ensuring its high efficiency [45].

Considering all that and the importance of job performance maintenance during COVID-19 pandemic (to ensure organizational performance), it seems that there is an apparent need to indicate what detailed HRM strategies will be beneficial for the organizations operating in such conditions in order to maintain and boost the job performance. The above-mentioned detailed HRM strategies should relate to three areas: securing qualified staff, adapting the organization to the new reality, and ensuring the wellbeing of stakeholders. Hiring and employee development must be taken into account as part of the provision of qualified personnel. In addition, it is necessary to discuss the strategy of adapting the work organization to changes that have occurred in the environment. It is necessary to take into account the need to move to virtual reality (digitalization), change the existing processes organizing work (job redesing), equipping employees with tools allowing to adapt to these changes (COVID-19 training). It seems obvious that the above issues will not be possible without ensuring a good flow of

information (communication). Moreover, in such difficult circumstances, the issues of providing support to entities within and outside the organization (employee wellbeing and corporate social responsibility) should be taken into account.

2.2.1 Hiring.   COVID-19 pandemic has significantly interrupted an organization's operations, and the need to create an action plan in response to a rapid and unexpected event is riddled with extreme uncertainty. Among other things, it is very difficult to predict the financial impact of the COVID-19 pandemic. Thus, it is difficult to assess the severity of the pandemic on the organization's finances. There are many strategies that an organization adopts to protect the financial aspects of the organization by choosing to freeze certain expenses, including freezing dedicated hiring expenses [46]. The employees' staffing includes two basic HRM activities: recruitment and selection [47]. All activities aimed at recruiting employees reflect the general mood of the business and the opportunities the organization will have once the pandemic is over [47].

Unfortunately, due to its high instability, future organizations are not able to predict their staffing needs enough even in the short term [47]. The dynamics of the staffing needs depend on a large number of factors, such as market demand or political regulations [47]. It is therefore the responsibility of the HR department to adapt to current trends.

Therefore, it is recommended to be very careful during analyzing not only future needs of resources but also current one [47]. Many sources demonstrate that the most commonly adopted strategy is that of freezing the recruitment of new employees, either partially or completely [46, 48]. Data obtained from the U.S. LinkUp portal in the shows that even with the onset of the spread of the coronavirus, there was an uncharacteristic drop in job advertisements for the period. More representative data will emerge in May 2020, where a 40% drop below the average level of ads for the same week in 2017–2019 was recorded [49]. That is due to the fact, that organizations as a result of the crisis predict a reduction in aggregate demand, and a reduction in employment or a complete freeze is a kind of response to the decline in demand [46, 50].

In a situation of constantly changing socio-economic conditions, such actions are primarily aimed at protecting current employees and reducing disruption to the organization [46].

2.2.2 Employee development.   Employees as a key component of any organization significantly affect its productivity, success, and future. This is the main reason why organizations decide to invest significant amounts in employee development [51]. In practice, employees' development means not only developing their skills but also the organization as a whole. More productive employees also mean that the organization will also prosper better [52]. Although employees' development and promotions are considered one of the most effective ways to support employees' performance. In times of crisis, when the need to survive in the market turns out to be crucial, organizations decide to take many radical steps that eliminate the flexibility of the organization [53]. The HR department also has a key role in dealing with the consequences of the crisis, which is responsible for reducing stress among the employees in the organization, still taking care to invest in human capital, but keeping in mind the minimization of strategic costs [54]. As it was mentioned, during a crisis, organizations very often decide to reduce many of the additional costs, which also result from the payment of additional benefits, promotions, and employees' development [54]. Therefore, a crisis away opportunities related to employees' development and promotions, despite rising employee expectations. Moreover, as has already been mentioned, organizations are also often forced to reduce or completely cut down on recruitment, therefore HR departments have to prepare tools that will smooth the situation and keep current employees in the organization, despite the growing risk of employee dissatisfaction associated with the need to reduce promotions and employees' development [54].

Among these tools are modern methods of offering alternative jobs, part-time positions, or flexible working hours [55]. This provides employees with a certain sense of security, which in times of global crisis will have a more effective impact on employees, their performance, and their intention to stay in the organization. Thus, issues related to development and promotion opportunities will come to the background, so that their reduction during the crisis will not have a significant impact on employees and their performance [56].

2.2.3 Digitalization.   Despite the many often drastic changes needed to be made in an organization under COVID-19, there are some forms of restructuring, which can help overcome the negative effects of the COVID-19 pandemic [57]. Indeed, recently there has been an increased digitalization in organizations, the application of which often overcomes or significantly reduces the negative effects of the pandemic.

Organizations in a very short time have been forced to move their products online or to implement more information systems necessary for the continued functioning of the organization [57]. Digitalization is characterized by the combination of certain advanced technologies and the integration of physical and digital systems [58]. Digitalization is a process of transformation occurring in an organization through the adoption of digital technology [59–61] manifested as digital artifacts or digital platforms [62–66], but also in the form of a digital business model and management, including human resources [67].

Digital technology is considered as a potential that implemented in an organization on a large scale, will gain competitive advantage by improving organizational flexibility and resilience [66], as well as increasing dynamic capabilities. Therefore, digitization will be beneficial for dynamic changes in the organization, also caused by the dynamic environmental changes, because can helps to recognize and sense changes in the environment [60, 68, 69]. During the pandemic, it was noted how important digitization is in an organization.

The implementation of digitalization has helped to create many new opportunities and thus allowed organizations to survive the difficult time of the pandemic and provided new opportunities for growth [70]. Digitalization has identified innovative opportunities to utilize new technologies like the reconfiguration of an organization's resources that effectively allows it to respond to crises [59]. Therefore, many organizations to maintain continuous growth and ensure the organization's sustainability have also reconfigured HRM processes such as recruiting or onboarding new employees to ensure the safety of new and existing employees while providing the organization with adequate resources.

2.2.4 Job redesign.   Job design plays an important role in HRM processes because it considers, not only all structural and social aspects but also the workplace's impact on the employees [71]. Furthermore, once a job design is made, it must be systematically reviewed and redesigned because many factors such as management style, working conditions, the technology used in the organization, and environmental dynamics influence how the job will look [71].

The COVID-19 pandemic has caused some changes in job design on organizations' global level [72]. HRM professionals in organizations must ensure that they align the organization's operations, and employees, with the changes. They also should support employees in adapting to these changes to ensure long-term benefits in improving job redesign [72].

Many organizations during the COVID-19, to avoid business downtime, quickly had to work under changed conditions: using new technologies, in entirely new spaces—most often at home or in hybrid mode, with reduced social and physical interaction, and with far less supervision and support from other colleagues [72]. Changes like work are not just about adapting to new technologies or automation, they often reflect changes in the way tasks are conceptualized and performed, such as treating patients online or providing customer service to restaurants online [73].

This is why job redesigning plays such a key role in the functioning of an organization. The current pandemic indicates that the changes implemented will persist for a long time and even remain in the organization even after the pandemic is over. Therefore, it is important for HRM professionals, to conduct a proactive review of job design, risk analysis, regulations, guidelines, and practices to protect the employees' health in the future [72].

2.2.5 COVID-19 Training. For many organizations, technical aspects, were not foreign even before the pandemic, due to the rapid development of automation and information technology. However, a much lower need for technology was observed before pandemic, especially among small organizations. The pandemic COVID-19 and the need to work from home has made pressure to implement technology at every organizational level. Therefore, a significant increase in the use of technology is being seen in all organizations, especially the small ones [74]. Such changes in the organization and working conditions, the increased need to use technology forced by the global COVID-19 pandemic causes stress, uncertainty and bitterness which can affect the employee's work negatively [47].

The additional training organizing by the organization, providing support for employees in shaping new skills to help during this new mode of work and dealing with the new situation, could be very helpful. It would reduce employees' stress and additionally give them a sense of development and acquisition of new knowledge and skills [75]. Accordingly, training that develops remote work skills will play an important role and organizations will need to quickly adapt their training policies to meet current requirements [74]. Moreover, for all organizations especially which operate in a global marketplace, seems to be useful to provide training about how to create a strong international culture and employees' relationships online to ensure high employee engagement and wellbeing.

The ability to work remotely is becoming an increasingly desirable skill in the labor market, not only among managers but also among technical workers [76]. Therefore, these skills should be supported by organizing additional training that covering not only technical aspects but also experiential aspects of virtual work [75, 77, 78].

2.2.6 Communication. An organization is considered a complex network of communication habits. However, the organization itself is only a structure, while the communication behaviors of employees build the organization as a whole [79, 80]. It is considered in this way because the employees exchange information about the organization, the work, and the goals being achieved [81, 82]. Communication in an organization takes different shapes depending on what type of messages employees are operating.

Communications can be vertical and horizontal, which means that communication will then be formal or informal [82, 83]. Communication itself can also be differentiated according to the function it is supposed to perform, namely: directive communication, aimed at influencing the receiver [81, 84, 85], supportive communication aimed at conveying relevant and reassuring information [83, 86, 87] cultural communication aimed at providing the internal rules of the organization [88, 89] and democratic communication involving employees in decision-making processes.

Indeed, communication is a crucial element in managing human resources by motivating them and keeping them engaged and committed to the organization [90]. Especially during the dynamic changes caused by the COVID-19 pandemic, appropriate communication will influence employees' emotional commitment to organizational change, enhance their trust in the organization, and stimulate their commitment to the organization [90–94]. Researchers indicate that informal communication can reduce employees' resistance to developing new skills and building new roles resulting from restructuring during COVID-19 [95, 96]. Moreover, keeping employees informed about important aspects of the pandemic or the future of the organization allows them to engage themselves in the continued development of the

organization, reduces feelings of discomfort, uncertainty, and other negative emotions that can disrupt feelings of job satisfaction or job performance [97–99].

2.2.7 Wellbeing.   The radical changes occurring during the COVID-19 pandemic and the need to fulfill the obligation of social isolation and also the financial uncertainty causing by the successive closure of other and other sectors by the states have a very strong impact on the physical as well as mental health of people [100]. All kinds of difficult situations affecting societies, cause a direct negative impact on people's mental and physical health, as proven by the research conducted in China during the COVID-19 pandemic, confirming high rates of stress and depression among people [101–104].

From the organizational point of view, stress, anxiety, or depression among employees, even if not directly related to their daily work, negatively affect their engagement, willingness to work, and consequently reduce their effectiveness [105, 106]. Organizations to help employees survive the difficult time of pandemics should especially focus on employee wellbeing.

The definition of wellbeing is not clear, as researchers view wellbeing as the ability to achieve goals [107]; happiness [108], and life satisfaction [109, 110]. On the other hand, Shin and Johnson [111] considered wellbeing in terms of a global assessment of a person's quality of life according to their chosen assessment criteria and this definition is also relevant today [112–114].

In essence, stable wellbeing is when an employee has the psychological, social, and physical resources necessary to meet specific psychological, social, and/or physical challenges [110]. The COVID-19 pandemic has significantly affected the psychological balance of workers, preventing them from at least realizing the need for social exchange, the reduction of which will affect the sense of isolation in the workplace, thus resulting in stress [115]. What employers in particular need to take care of is free, unrestricted access to technology, other workers, and more free communication with employees, imitating a sense of face-to-face communication. Those actions can help in avoiding the risks associated with remote working [116]. Therefore, the wellbeing of employees during a pandemic, especially those working remotely, will depend largely on interpersonal interactions and social aspects, which are particularly difficult to provide in this mode of work [115].

2.2.8 Corporate social responsibility.   Many definitions of Corporate Social Responsibility (CSR) and organizational sustainability have emerged over the years, and the diversity of these definitions has big consisted of a focus on other stakeholder groups [117, 118]. One of the oldest definition present CSR as the responsibility of organizations to pursue such strategies and make such decisions that are desired and valued by society [119, 120].

Today, CSR pays attention to the fact that business and society are related in ways that go across the critical relationship between employees, customers, suppliers, and the community [117, 121]. CSR is therefore considered a multidimensional construct. Its mechanisms, processes, and evolutions are driven by a set of complex external and internal, socio-cultural, and economic factors, making it a dynamic, constantly evolving practice [122].

Therefore, its contemporary definition presents CSR as a discretionary allocation of corporate resources to improve social wellbeing, serving as a way to strengthen relationships with key stakeholders [123]. This theory indicates how much alignment is needed between stakeholder expectations and social wellbeing [124].

In particular during a crisis, an organization has responsibilities and obligations to its stakeholders. Thus, there is a requirement for organizations to support society and their important stakeholders, namely employees and customers, by engaging in CSR activities. To meet these demands, many organizations have adopted CSR as a form of a completely new global governance that promotes the ability to make collective decisions on transnational issues [125].

In a way, some kind of an examination has been forced on CSR organizations by the COVID-19 pandemic, which verifies a commitment to ethical business conduct [125, 126].

Indeed, during the pandemic, organizations have taken special responsibility for the safety of their employees. They try to provide for employees working in the home office the conditions similar to the conditions in the office, but for those who cannot take advantage of remote work, they provide maximum security in the workplace and full security equipment.

Organizations somehow felt the need to take care of the community by promoting public health, providing medical assistance, financial support, or helping other sectors that were particularly affected by the negative effects of the pandemic. This is because such actions bring a sense of stability and strengthen the organization's community [127].

3. Hypotheses development

3.1 HRM strategies influence job and organizational performance through motivation

In the context of the theoretical background described above, there seems to be a need to clarify the mechanism of HRM strategies influence on job performance while analyzing the mediating role of work motivation.

The truth is that properly selected HRM strategies themselves strengthen employees' job performance [128]. However, given that work motivation, defined as the level of employee motivation to perform work effectively [129], can be stimulated by external factors such as the organization's environment and culture (including HRM practices) it is assumed that it is necessary is to include work motivation in the consideration.

HRM strategies are composed of many practices that help an organization effectively manage employees from selection to exit [130, 131]. HRM as a modern approach to personal management, characterized by a closer alignment with the business, involves line management to care of aspects such as organizational commitment and work motivation. Properly selected HRM practices are a kind of cure for motivating employees in terms of knowledge, attitudes, and way of acting.

Taking additional actions to give the employee a sense of security and satisfaction, such as: taking care of their comfort in the workplace or working from home, taking care of the wellbeing, their relationship with employees, appropriate use of new technologies, and properly adapted communication process will compensate anxiety caused by COVID-19 pandemic and contribute to increasing their work motivation [132, 133]. In turn, employees' positive work perceptions may motivate them to invest maximum effort in their work to achieve their personal goals, thereby maximizing their job performance [132, 134]. The researchers recognized that HRM strategies directly affect employee motivation, behavior, and skill enhancement to increase their performance and increase organizational performance [130]. Therefore, taking care of the employees' work motivation, as a result, provides a high level of employee performance with high-cost effectiveness through the full exploitation of employees' potential [128].

Taking into account the above consideration, it is necessary to formulate a hypothesis:

H1: *COVID-19 oriented HRM strategies influence job performance through work motivation.*

3.2 HRM strategies influence job and organizational performance through satisfaction

Similar to the case of work motivation considered as a construct that strengthens the effect of HRM strategies on job performance, it seems important to verify the mechanism of the effect of HRM strategies on job performance, while including the mediating role of job satisfaction.

Job satisfaction is the result of many work-related experiences, both positive and negative. For employees, it represents the level of satisfaction and positive emotions towards the job [135, 136].

Increasing stress among employees or a sense of uncertainty caused by the COVID-19 pandemic makes it significantly more difficult to positive strengthen job satisfaction [137]. Therefore, it seems to be especially important to choose the right HRM practices that will support the employee and provide a sense of fulfillment of their needs. HRM practices try to develop and locate human capital in such a way as to achieve long-term goals, providing them with multiple benefits, thus stimulating job satisfaction [138]. It is repeatedly indicated that job satisfaction consists of factors such as relationship with superiors pay, opportunities for advancement and development, and relationship with co-workers, all aspects that are somewhat shaped by HRM [139].

The fulfillment of the employees' needs, in turn, provides incentives that can motivate them to optimize their daily work and increase their job performance [135]. Many researchers confirm the influence of HRM practices on job satisfaction and the positive impact of these factors on employees' job performance [140, 141].

It has been proven several times that job-satisfied employees are also high-performing employees [135, 142]. Employees who have positive perceptions about the organization and their work tend to be more engaged in their tasks thereby exhibiting higher performance [143]. Therefore, maintaining a high level of job satisfaction among employees is critical to achieving employee quality and performance [137, 144, 145].

Taking into account the above consideration, it is necessary to formulate a hypothesis:

H2: *COVID-19 oriented HRM strategies influence job performance through job satisfaction.*

3.3 HRM strategies influence job and organizational performance through organizational commitment

It also seems important to verify the mechanism of influence of HRM strategies on job performance, while including the mediating role of organizational commitment.

Organizational commitment reflects employees' positive sense of belonging to the organization. According to Meyer and Allen [146], organizational commitment is considered in the context of an employees' emotional relationship with the organization, consisting of identification with it, a sense of responsibility for the organization's success, a sense of fulfilling responsibilities to the organization, and avoiding the costs of leaving the organization [146, 147].

This construct is most often considered in three categories: affective commitment, continuance commitment, and normative commitment. Affective commitment refers to an employee's involvement in social relationships inside the organization. Continuance commitment refers to an employee's commitment to their social roles and their social position within the organization. Normative commitment focuses on the moral sense of obligation to stay in the organization, so employees decide to stay in the organization because of their values [146].

Reviewing the literature, one can find studies that support an increase in organizational commitment of employees through the use of appropriate HRM practices [148, 149]. An increase in organizational commitment is expected primarily through the use of practices that increase employee trust in the organization and provide a sense of security, which is especially important in times of crisis [150].

Taking care to: effectively communicate, engaging in CSR activities, supporting the employees during difficult times, and caring for their wellbeing, gives the employees a sense that they are a key part of the organization [151]. Therefore, a positive perception of management's intentions by employees strengthens the employees' organizational commitment [152].

Organizational commitment is rooted in the desire to satisfy internal needs in the workplace, which significantly motivates employees to work [153]. The internal energy triggered by

high levels of organizational commitment results in positive employee behavior toward the organization focused on achieving organizational goals [154, 155].

Consequently, organizational commitment results in the quality of employees' work [156], which can be closely related to employees' job performance. Nevertheless, the direct positive effect of organizational commitment on job performance has also been repeatedly indicated by researchers [157–163].

Taking into account the above consideration, it is necessary to formulate a hypothesis:

H3: *COVID-19 oriented HRM strategies influence job performance through organizational commitment.*

3.4 Final model of hypotheses

Based on the above considerations, it seems important to validate a model that includes all the above considered job-related attitudes influencing the relationship between HRM strategies on the job and organizational performance. Therefore, this means that including into the model the three job-related attitudes that are relevant to the HRM strategies on the job and organizational performance relationship will be of significantly enhanced value in building job and organizational performance.

In the COVID-19 crisis, it seems that focusing on job-related attitudes such as work motivation, job satisfaction and organizational commitment at the same time will be very beneficial in building employees' job performance and thus organizational performance. There is no doubt that well-chosen HRM strategies will enhance job and organizational performance through particular job-related attitudes. Considering employees' comfort and relationships and supporting the employees in developing to the appropriate use of technology will enhance the employees' motivation to perform tasks effectively [132, 134]. Ensuring the employees' positive perception towards the organization and reducing stress at work will positively affect their job satisfaction [138, 143, 148]. On the other hand, the use of HRM strategies that will positively influence the employees' trust towards the organization and enhance the desire to belong to this work environment, will be de facto stimulate their organizational commitment [148, 149].

Thus, researchers confirm that, in general, there is a set of HRM strategies that support job and organizational performance through work motivation, job satisfaction, or organizational commitment. Therefore, it seems important to verify whether the same HRM strategies were properly chosen to be mitigating the negative impact of the COVID-19 crisis on organizations, enhance job and organizational performance through both work motivation, job satisfaction, and organizational commitment in parallel.

Based on the above considerations, it is necessary to formulate a hypothesis:

H4: *COVID-19 oriented HRM strategies influence job performance through job-related attitudes*: *work motivation*, *job satisfaction and organizational commitment.*

The overview of hypotheses is presented in Fig 1. The hypotheses will be verified using empirical research performed in a way, which allows to measure each variable and perform statistical reasoning allowing for identification of the relations between them.

4. Research methodology

4.1 The process of collecting data and the characteristics of the research sample

In order to achieve the goal of the article as well as to verify the hypotheses, a questionnaire study was conducted. The survey took place in the last quarter of 2020. There are two stages in
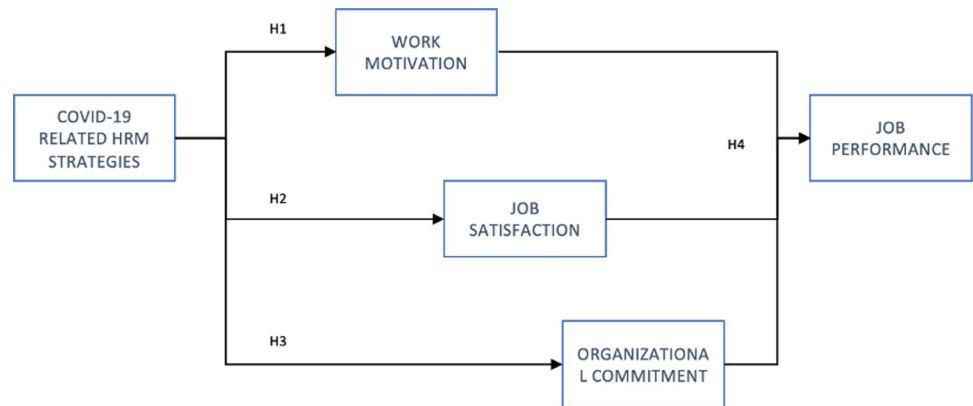
Fig 1. Hypotheses overview. Source: own work.

https://doi.org/10.1371/journal.pone.0266364.g001

which the research was carried out. The first stage is the pilot study aimed at determining the quality of the research tool. The pilot studies are treated as a prerequisite for using the questionnaire as a reliable research method [164]. They were conducted among 25 managers who played the role of competent judges. Their comments made it possible to improve the research tool used in the second stage of research and avoid any common method bias. The second, main stage of the research covered 378 organizations operating in Poland. The study was conducted using the CAWI (Computer-Assisted Web Interview) method. The selection of the elements for the sample was purposive, the only limitation was the geographical scope of the activity. The non-response bias was eliminated by the use of professional respondents' panel. Other characteristics of the organization—for example the size of the organization or the main source of income did not affect the decision to include it in the research sample, but they were also examined. Detailed information on the surveyed organizations are presented in Table 1. Despite the fact that the selection of elements for the sample is not representative, it seems possible to formulate conclusions due to the diversity of the organization.

4.2 Variables characteristic

To allow verification of hypotheses the following variables were used: Hiring, Employee Development, Digitalization, Job Redesign, COVID-19 Training, Communication, Wellbeing, Corporate Social Responsibility, Organizational Performance, Job Performance, Motivation, Satisfaction, Organizational Commitment (Table 2).

Hiring and Employee Development were described based on research of Aurelia and Momin [47]. The constructs contains 1 item, which is assessed based on a 5 points' Likert scale [47].

Table 1. Research sample characteristic.

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: own work.

https://doi.org/10.1371/journal.pone.0266364.t001

Table 2. Summary of the items and the corresponding variables.

Variable	Item
Hiring *HiringC	Due to COVID19 recruitment and hiring processes has been cancelled or limited for key/critical roles
Employee Development *EmpDevC	Due to COVID-19 development and promotion programs offered to employees have been suspended or limited to a minimum
Digitalization *DigitC	Organization applied virtual platforms for their recruitment and on boarding activities
Job Redesign *ReDesiC	Organization offered alternative work location (work-from-home, hybrid or rotation mode) and flexible work hour arrangements
	Organization created new skill demands, especially those related to the adoption of information and communication technology
COVID-19 training *TrainC	Organization provided support to shape new skills in connection with a new mode of work / situation by trainings and other forms
Communication *CommuC	Employees stayed informed of recent developments regarding health and safety, and self-development and training opportunities that can help employees adapt themselves to changing roles and requirements
Wellbeing *WellbeC	Organization developed new training topics included COVID-19 safety training, coping with stress and anxiety, and lifestyle-based training
	Organization had formally appointed a counselor to help people cope with mental health issues
	Organization provided work-from-home employees with laptops, printers and scanners etc.
Corporate Social Responsibility *CSRC	Organization has been extensively engaging in CSR activities to support underprivileged people during COVID-19
Organizational Performance *OrgPerf	Please share your opinion about the performance of the company comparing its aspects to your main competitors:
	1. Overall financial situation of the company
	2. Job performance
	3. Quality of products or services (reliability, diligence)
	4. Innovativeness of products or services
	5. Modernity of applied technological solutions
	6. Efficiency of the organization management
	7. Reliability of business processes
	8. Market share
	9. Customers satisfaction
	10. Employees' satisfaction
Job Performance *JobPerf	Employees always complete the duties specified in their job description
	Employees always meet all the formal performance requirements of their job
	Employees complete their tasks efficiently
	Employees are always able to overcome obstacles to complete their tasks
	Employees are rarely absent from my work
	Employees avoid absenteeism at work without a legitimate reason
	Employees make few mistakes at work
Motivation *Motiva	Employees feel motivated to work
	Employees are willing and ready to carry out the tasks entrusted to them at the level of a satisfying organization
	Employees are willing and ready to allocate extra effort allowing exceed the requirements posed in front of them
Satisfaction *Satisf	Generally speaking, employees are very happy with their work
	Employees do not often think about resigning from work

(*Continued*)

Table 2. (Continued)

Variable	Item
Organizational commitment *OrgCom	Employees would be very happy to spend the rest of their career with my organization
	Employees really feel as if organization's problems are their own
	Employees do feel a strong sense of belonging to organization

Source: own work.

Digitalization was taken from the results of Minbaeva [165]. The construct contains 1 item, which is assessed based on a 5 points' Likert scale [165].

Job Redesign was measured based on research of Aurelia and Momin [47] and Vardarlıer [54]. The construct contains 2 items, which are assessed based on a 5 points' Likert scale [47, 54].

COVID-19 Training measurement was build based on concept taken from Hackman and Oldham [166]. The construct contains 1 item, which is assessed based on a 5 points' Likert scale [166].

Communication was borrowed from Carnevale and Hatak [167]. The construct contains 1 item, which is assessed based on a 5 points' Likert scale [167].

Wellbeing was developed based on results of Agarwal [168] and Aurelia and Momin [47]. The construct contains 3 items, which are assessed based on a 5 points' Likert scale [47, 168].

Corporate Social Responsibility was measured based on research Agarwal [168]. The construct contains 1 item, which is assessed based on a 5 points' Likert scale [168].

Organizational Performance was build based on the Balanced Scorecard concept and the assessment was determined in comparison to the main competitors. The construct contains 10 items, which are assessed based on a 5 points' Likert scale (from "much worse than competitors" to "much better than competitors" with a middle point: "as competitors") [169].

Job Performance was described based on the task proficiency, task meticulousness and work discipline. The construct contains 7 items, which are assessed based on a 5 points' Likert scale [170–172].

Motivation measurement was build based on concept taken from Hackman and Oldham [173]. The construct contains 3 items, which are assessed based on a 5 points' Likert scale [173].

Satisfaction was determined based on results of Fields [174]. The construct contains 2 items, which are assessed based on a 5 points' Likert scale [174].

Organizational commitment was measured based on research of Meyer and colleagues [175]. The construct contains 3 items, which are assessed based on a 5 points' Likert scale [175].

All the above-mentioned 5 points' Likert scales are described from "strongly disagree" to "strongly agree" with a middle point "neither agree nor disagree". The exception is Organizational Performance, the measurement of which is included in the description of the construct.

4.3 Research results

In order to verify the proposed set of hypotheses, which are constructing a hypothetical model given in Fig 1, the path analysis was used–a statistical reasoning based on structural equation modelling. It should be noted that path analysis is an analytic technique, which "enables to specify the proposed network among factors and then test the adequacy of the proposed network to explain relations among data collected" [176], it is a statistical reasoning method well-suited for the purpose of this study [177].

Table 3. Reliability of scales.

Variable	Number of scales	Cronbach's α	Factor Analysis
Hiring	1	-	-
Employee Development	1	-	-
Digitalization	1	-	-
Job Redesign	2	0,552	69,102
COVID-19 training	1	-	-
Communication	1	-	-
Wellbeing	3	0,473	49,227
Corporate Social Responsibility	1	-	-
Organizational Performance	10	0,846	42,087
Job Performance	7	0,812	47,428
Motivation	3	0,639	58,112
Satisfaction	2	0,594	71,132
Organizational commitment	3	0,666	59,983

Source: own work.

The path analysis was executed using IBM SPSS AMOS, using bootstrapping technique in order to obtain larger sample for the analysis.

4.2.1 Variables scales analysis. In order to be able to assess whether the discussed scales can be used in the study, Cronbach's α and Factor Analysis were implemented (Table 3). This approach seems to be sufficient due to the fact that the scales used have been previously validated by the creators [178]. The calculations were not performed for Hiring, Employee Development, Digitalization, COVID-19 training, Communication Corporate Social Responsibility, as they are single—item constructs. The systematic method variance was controlled to ensure no common method bias. The obtained results allow to conclude that almost all measurement scales are well-fitted, reliable and coherent. Moreover, discriminant validity was tested to ensure that latent variables that represent different theoretical concepts are statistically different (all HTMT values were below 0,68, which allows to confirm that the chosen variables may be used for path analysis).

4.3.1 Latent variable analysis. As an initial step, the COVID-19 oriented HRM strategies latent variable was verified. Including set of those strategies as a latent variable in the model is fully justified, as any purposefully selected set of strategies will never explain in full the variability of entire strategy phenomenon and random factor should be always accounted for [179]. As shown in Table 4, all indicated strategies are included in the model as factors statistically significantly shaping the latent variable.

Table 4. Latent variable verification.

			Estimate	S.E.	C.R.	P
TrainC	<---	HRMS	1,000			
ReDesiC	<---	HRMS	,984	,080	12,296	***
CSRC	<---	HRMS	,862	,090	9,582	***
WellbeC	<---	HRMS	,859	,073	11,693	***
CommuC	<---	HRMS	,962	,092	10,408	***
DigitC	<---	HRMS	,990	,099	9,992	***
HiringC	<---	HRMS	,681	,092	7,411	***
EmpDevC	<---	HRMS	,736	,094	7,826	***

Source: own work.

Table 5. Regression Weights for the model.

			Estimate	S.E.	C.R.	P
Motiva	<---	HRMS	,939	,075	12,573	***
Satisf	<---	HRMS	,903	,080	11,251	***
OrgCom	<---	HRMS	,881	,072	12,224	***
JobPer	<---	Motiva	,254	,042	5,989	***
JobPer	<---	Satisf	,138	,037	3,760	***
JobPer	<---	OrgCom	,299	,043	6,914	***
OrgPerf	<---	JobPer	,611	,038	15,903	***

Source: own work.

4.3.2 Path analysis. Based on that, the path analysis was performed. The overview of the obtained model is presented in Table 5 (regression coefficients), Tables 6 and 7 (total and direct effects). The assessment of the model was performed. The fit of the model was measured at first and assessed with CFI (which should be above 0,8) and RMSEA (which should be below 0,2). The obtained model was statistically significant and well-fitted: Chi2 (63) = 173,420; p = 0,005; CFI = 0,942; RMSEA = 0,086. Hence, the conclusions can be formed based on the obtained results.

The results based on the well-fitted model obtained with path analysis show that all relations within the model are statistically significant (Table 5 showing p value less than 0,01 in all cases). Moreover, the results show that the influence of HR COVID-19 -related strategies is stronger in case of motivation and organizational commitment as mediators than in case of job satisfaction as a mediator in the model. It is confirmed by standardized indirect effects (calculated as total effect (Table 6)–direct effect (Table 7)), which are higher in case of organizational commitment and motivation, than in case of satisfaction. However, in all three cases the indirect effect occurs, confirming that HR COVID-19 -related strategies influence organizational performance through the entire set of variables included in the model.

Therefore, the obtained results of the path analysis confirmed that HR COVID-19 -related strategies influence organizational performance through job-related attitudes (work motivation, job satisfaction and organizational commitment) and job performance, which allows to accept H1-H4 hypotheses.

5. Discussion

The article examined the impact of COVID-19 oriented HRM strategies on the job and organizational performance through job-related attitudes. The proposed model of COVID-19—related HRM strategies influence organizational performance through job-related attitudes

Table 6. Standardized total effects among variables within the model.

	HRMS	OrgCom	Satisf	Motiva	JobPer
OrgCom	,881	,000	,000	,000	,000
Satisf	,903	,000	,000	,000	,000
Motiva	,939	,000	,000	,000	,000
JobPer	,626	,299	,138	,254	,000
OrgPerf	,382	,182	,084	,155	,611

Source: own work.

Table 7. Standardized direct effects among variables within the model.

	HRMS	OrgCom	Satisf	Motiva	JobPer
OrgCom	,881	,000	,000	,000	,000
Satisf	,903	,000	,000	,000	,000
Motiva	,939	,000	,000	,000	,000
JobPer	,000	,299	,138	,254	,000
OrgPerf	,000	,000	,000	,000	,611

Source: own work.

(work motivation, job satisfaction, and organizational commitment) and statistically significant job performance. As path analysis was used to validate the model, this means that the proposed network of connections between factors explains the relationship between the collected data [172]. The parameters for the constructed structural path model so the degree of fit of the model are in line with literature indications and they are as follow: Chi2 (63) = 173,420; p = 0,005; CFI = 0,942; RMSEA = 0,086, so it proves that the model is well-fitted.

In more detail, it means that a positive relation was established between proposed COVID-19 –related HRM strategies and job-related attitudes. All the HRM strategies identified in this research, forming one latent variable—HRM strategy (each of the HRM strategies maintaining statistical significance). The selected HRM strategies mitigate the negative effects of COVID-19 on job-related attitudes of employees and their job performance and organizational performance. It means that the theory that there is a combination of 'soft' and 'hard' COVID-19—related HRM strategies which maximally minimize the negative effects of COVID-19 pandemic in organizations is confirmed. Therefore, due to the changes in the mode of work, it is necessary to include in the HRM strategies taking care of the employees' satisfaction. Therefore, it seems that it is important is to include the HRM strategies such as job redesign focusing on the hybrid or remote work conditions, and thus also digitalization enabling remote work. Necessarily is also to improve the communication skills from employer to employees especially regular informing about the important aspects of the pandemic to prevent the disorganization feeling. Another aspect is to retain the employees' wellbeing focusing on keeping social relations between employees remotely, CSR to keep employees feeling safe about their health—called "soft" HR COVID-19—related strategies. Moreover, to ensure an appropriate level of employees' job performance, it is necessary to support them also in adapting to new working conditions by providing training and development focusing on the acquire the new skills necessary to effectively work in the new condition. On the other hand, from a financial point of view, the best approach during the crisis is to reduce costs, which can guarantee financial stabilization and freezing the money necessary to remain the organization in case of reducing or declining demand [46, 50]. Therefore, the identified COVID-19 –related HRM strategies should also include such practices as withholding hiring, reducing the training and development budget.

Analysis of the following model paths shows that there is a statistically significant effect of the latent COVID-19 –related HRM strategies variable on job-related attitudes, i.e.: work motivation, job satisfaction, and organizational commitment. This means that the HR strategy used in organizations during COVID-19 has a direct, statistically significant impact on employees' behavior by increasing their job motivation, job satisfaction, and their commitment to the organization. This, in turn, enhances their job performance, passing on to organizational performance. Indeed, there is no direct effect of HRM strategies on organizational performance, or a direct effect is weaker than the impact included the job-related attitudes.

HRM, as a modern approach to personnel management, sees the employee as the organization's greatest capital. The appropriate choice of HRM strategies and the proper combination of them into a single strategy can be a kind of panacea for motivating employees and influencing their work attitudes and the way they work [132, 133]. Taking actions to ensure the employees' comfortable at work, including working from home, has an appropriate standard of communication with colleagues, and socializes even at a remote site, will help to reduce the fears caused by the difficult situation such as the COVID-19 pandemic and the necessary changes that followed it. Such actions to care for the employee, their wellbeing, and safety, especially in a difficult situation, will positively affect their perception towards the organization thus increasing employees' job satisfaction [138]. Moreover, they will give a clear picture to the employees that they are a key resource for the organization. This will strengthen the employee's sense of trust and confidence towards the employer, which plays a particularly significant role in building employees' commitment to the organization [151, 152].

Each of these job-related attitudes appropriately stimulated by HRM strategies that aim at mitigating the negative impact of the COVID-19 pandemic will bring measurable benefits to the organization by supporting employees' job performance [130, 131]. The employees' positive perception of the job and the organization will have a motivating effect on the employees to put in maximum effort at work so that they can also achieve their personal goals [132, 134, 135]. In the aspiration to satisfy one's own needs through work, commitment to the organization is also rooted, which by releasing the employees' positive energy towards work, results in positive behavior of the employees in the workplace. Moreover, it also determines positive behavior regarding the organization by focusing on the realization and achievement of the organization's goals [155].

Organizational commitment also affects the quality of work, which is closely related to employees' job performance [156]. The results obtained provide a useful knowledge base for organizations on selecting personnel strategy in the context of the crisis caused by the COVID-19 pandemic. Therefore, it provides information on how, by stimulating job-related attitudes, to achieve an appropriate level of employees' job performance, which is necessary to achieve an optimum value of organizational performance and to keep the organization's position on the market. It is clear that during the crisis caused by the COVID-19 pandemic, which forced the numbers of changes inside the organizations, it was necessary also to adjust the HRM strategies. Unfortunately, the organizations focusing on keeping the market position in a difficult time very often forgot about the recognition of which HRM strategies and in which shape should be adapted to the organization to ensure the employees' safety and their job performance. Thanks to the conducted research, organizations not only get the ready-to-use set of the HRM strategies mitigating the negative impact of COVID-19 on employees. Organizations also obtain knowledge of how the specific HRM strategies should be shaping to keep the employees' job performance and organizational performance. From the organization's point of view, this is very important because both: job performance and organizational performance are the key value, which, in times of crisis and uncertainty on the market, could determine the organization's success.

6. Conclusions

The article explains the phenomenon of the COVID-19 oriented HRM strategies' role in shaping job performance and organizational performance through job-related attitudes in times of crisis. Consider the pandemic caused by a sudden event like COVID-19, this topic is very important and current for organizations. This is because it provides information on how to shape HRM strategy to maintain employees' job performance, positively influencing

organizational performance, thus determining the organization's continued existence on the market. In more detail, it has been shown that there is a set of HRM strategies that combination can ensure the strengthening of the employees' job performance and organizational performance through work motivation, job satisfaction, and organizational commitment. Thus, also could have a positive indirect impact on job performance and finally on organizational performance. This set of HRM strategies can be divided into two groups. The first group, called "soft" HRM strategies are focusing on keeping employees' satisfaction and wellbeing and also preparing employees for the new working conditions and taking care of their health and safety. The second group, called "hard" HRM strategies included such as strategies that have to save money in the organization by withholding hiring and reducing the budget for training and development. The combination of both groups causes that employee not only are comfortable with the new reality, feel that the organization cares about their health and safety. Moreover, due to the rational reduction of costs spent by the organization, they also feel the security of keeping their jobs despite difficult conditions. This sense of security increases the trust of the employer, which effectively maintains a satisfactory level of job performance, directly influencing organizational performance.

The obtained results allowed us to achieve the aim of this article–empirical verification of the indicated COVID-19 oriented HRM strategies in strengthening the job performance and organizational performance through job-related attitudes. Unfortunately, the topic of COVID-19 –related HRM strategies influence job and organizational performance through job-related attitudes is not fully exhausted in the article and has some limitations. First of all, the research was conducted in a limited group of organizations—378 entities were taken into account. Second of all, the chosen organizations were operating in Poland, where the impact of the COVID-19 pandemic on the organizations can be significantly different than in another countries. Third of all, the research was done during 2nd wave of pandemic, and the characteristics of environmental features during upcoming waves have the potential to change. Fourth of all, the method of selecting elements for the sample was purposive, which is related to the limitations of the conclusions. Fifth of all, only selected characteristics of the organization have been taken into account—the size of the organization and the main source of income. Finally, the use of descriptive statistics has some methodological limitations.

It seems that despite the above limitations, the presented research is a solid step, which may be a starting point for further research. Certainly it is worth considering which of the other HRM strategies could also be valid for shaping the job performance and organizational performance in times of COVID-19 crisis. In addition, as it was mentioned, it seems to be necessary to expand research by referring to certain organizations in another country, for which the set of HRM strategies could be different. Also, worth considering is the inclusion of additional job-related attitudes, such as turnover intention or organizational trust. Subsequently, the scope can also be extended to include the issues of leadership, significantly influencing the shape of the organization's activities, as well as the characteristics of employees. It seems advisable to use a qualitative approach to the studied phenomenon, to increase the number of examined entities and to select a different method of selecting elements for the sample.

Nevertheless, independently of scientific values, this article also has practical ones. It seems very important to define the set of COVID-19—related HRM strategies that have an impact on job performance, and consequently on organizational performance, which is crucial for the operation and survival of the organization. Entrepreneurs were provided with guidelines on how to manage these strategies. The necessity of shaping the employment assurance process was indicated, which should take into account the current and future demand for employees, with particular emphasis on turbulent environmental conditions. Methods of approaching employee development have been defined, especially when it may be necessary to reduce

financial outlays for training. As a consequence of the spread of contamination is the need for social isolation, solutions concerning the transfer to remote work were proposed. The issues of digitalization, which is inseparable from working from home, were discussed, and a change in work processes was proposed to adapt to the new reality (job redesign). The above changes could not be introduced without adjusting communication in the organization to the needs caused by the COVID-19 pandemic. Finally, in order to avoid negative consequences in the emotional sphere of employees, the importance of ensuring wellbeing of stakeholders in and outside of the organization was emphasized. Therefore, the issues of wellbeing of employees were discussed, as well as corporate social responsibility, which has a broader scope. All the above-mentioned issues are the starting point for practical actions aimed at improving the operation of the organization during the coronavirus threat. It is also worth emphasizing that specific HRM strategies, which have a significant impact on job performance and organizational performance through the job-related attitudes: work motivation, job satisfaction, and organizational commitment is valid besides the organization's size and main source of income.

In summary, the COVID-19 pandemic is a phenomenon that has broken the previously known and relatively stabilized order in the management of contemporary organizations. The observable effects of the coronavirus outbreak have significantly influenced the approach to management, including Human Resource Management. The long-term consequences of these changes are neither known nor foreseeable. However, it seems necessary to diagnose the current situation and take into account the possibility of using the experience so far. Due to the predictions it will not be an immediate end of the pandemic, and also the indicate a high probability of similar phenomena in the future.

Supporting information

S1 File.
(ZIP)

Author Contributions

Conceptualization: Agnieszka Bieńkowska, Katarzyna Tworek.

Data curation: Anna Sałamacha.

Formal analysis: Katarzyna Tworek.

Methodology: Agnieszka Bieńkowska, Katarzyna Tworek.

Writing – original draft: Agnieszka Bieńkowska, Anna Koszela, Anna Sałamacha, Katarzyna Tworek.

Writing – review & editing: Anna Koszela, Anna Sałamacha.

References

1. Efendi S. Implementation of Talent Management as an Effort to Improve Employee Performance. Proc 2nd Annu Conf blended Learn Educ Technol Innov (ACBLETI 2020). 2021; 560(Acbleti 2020):537–42.

2. Bieńkowska A, Sałamacha A, Tworek K. The role of employees in shaping brand performance. Forum Sci Oeconomia. 2020; 8(2):93–107.

3. Montani F, Staglianò R. Innovation in times of pandemic: The moderating effect of knowledge sharing on the relationship between COVID-19-induced job stress and employee innovation. In: R and D Management. 2021.

4. De-La-calle-durán MC, Rodríguez-Sánchez JL. Employee engagement and wellbeing in times of covid-19: A proposal of the 5cs model. Int J Environ Res Public Health [Internet]. 2021; 18(10). Available from: https://doi.org/10.3390/ijerph18105470 PMID: 34065338

5. Einwiller S, Ruppel C, Stranzl J. Achieving employee support during the COVID-19 pandemic–the role of relational and informational crisis communication in Austrian organizations. J Commun Manag. 2021; 25(3):233–55.

6. Nicola M, Alsafi Z, Sohrabi C, Kerwan A, Al-Jabir A, Iosifidis C, et al. The socio-economic implications of the coronavirus pandemic (COVID-19): A review [Internet]. Vol. 78, International Journal of Surgery. Elsevier Ltd; 2020 [cited 2021 May 7]. p. 185–93. Available from: /pmc/articles/PMC7162753/ https://doi.org/10.1016/j.ijsu.2020.04.018 PMID: 32305533

7. Bontrager M, Clinton MS, Tyner L. Flexible Work Arrangements: A Human Resource Development Tool to Reduce Turnover. Adv Dev Hum Resour [Internet]. 2021 May 1 [cited 2021 May 7]; 23(2):124–41. Available from: https://doi.org/10.1177/1523422320982930

8. Demirović Bajrami D, Terzić A, Petrović MD, Radovanović M, Tretiakova TN, Hadoud A. Will we have the same employees in hospitality after all? The impact of COVID-19 on employees' work attitudes and turnover intentions. Int J Hosp Manag. 2021 Apr 1; 94:102754. https://doi.org/10.1016/j.ijhm.2020.102754 PMID: 34785836

9. Graves LM, Karabayeva A. Managing Virtual Workers—Strategies for Success. IEEE Eng Manag Rev. 2020 Apr 1; 48(2):166–72.

10. Tu Y, Li D, Wang H-J. COVID-19-induced layoff, survivors' COVID-19-related stress and performance in hospitality industry: The moderating role of social support. Int J Hosp Manag. 2021;95.

11. Narayanamurthy G, Tortorella G. Impact of COVID-19 outbreak on employee performance–Moderating role of industry 4.0 base technologies. Int J Prod Econ. 2021 Apr 1; 234:108075.

12. Richard PJ, Devinney TM, Yip GS, Johnson G. Measuring organizational performance: Towards methodological best practice. J Manage. 2009; 35(3):718–804.

13. Muwardi D, Saide S, Eko Indrajit R, Iqbal M, Siti Astuti E, Herzavina H. Intangible resources and institution performance: The concern of intellectual capital, employee performance, job satisfaction, and its impact on organization performance. Int J Innov Manag. 2020; 24(5):1–21.

14. Singh SK, Gupta S, Busso D, Kamboj S. Top management knowledge value, knowledge sharing practices, open innovation and organizational performance. J Bus Res. 2021; 128:788–98.

15. Chatterjee S, Chaudhuri R, Thrassou A, Vrontis D. Antecedents and consequences of knowledge hiding: The moderating role of knowledge hiders and knowledge seekers in organizations. J Bus Res. 2021 May 1; 128:303–13.

16. Hamann PM, Schiemann F. Organizational performance as a set of four dimensions: An empirical analysis. J Bus Res. 2021 Apr 1; 127:45–65.

17. Tworek K, Sałamacha A. CRM influence on organisational performance—The moderating role of IT reliability. Eng Manag Prod Serv. 2019; 11(3):96–105.

18. Ramezan M, Sanjaghi ME, Rahimian Kalateh baly H. Organizational change capacity and organizational performance. J Knowledge-based Innov China. 2013 Sep 27; 5(3):188–212.

19. Guest DE. Human resource management and performance: still searching for some answers. Resour Manag J. 2011; 21(1):3–13.

20. Guest DE. Human resource management and employee well-being: towards a new analytic framework. Hum Resour Manag J. 2017; 27:22–38.

21. Farooqui MS, Nagendra A. The Impact of Person Organization Fit on Job Satisfaction and Performance of the Employees. Procedia Econ Financ. 2014 Jan 1; 11:122–9.

22. Bieńkowska A, Tworek K, Zabłocka-Kluczka A. Moderating role of user experience and it reliability in controlling influence on job performance and organizational performance. E a M Ekon a Manag. 2021; 24(1):66–83.

23. Teece DJ. Strategies for Managing Knowledge Assets: The Role of Firm Structure and Industrial Context. Long Range Plann. 2000 Feb 1; 33(1):35–54.

24. Masa'deh R, Obeidat BY, Tarhini A. A Jordanian empirical study of the associations among transformational leadership, transactional leadership, knowledge sharing, job performance, and firm performance: A structural equation modelling approach. J Manag Dev. 2016 Jun 13; 35(5):681–705.

25. Vo-Thanh T, Vu T Van, Nguyen NP, Nguyen D Van, Zaman M, Chi H. How does hotel employees' satisfaction with the organization's COVID-19 responses affect job insecurity and job performance? J Sustain Tour [Internet]. 2020 [cited 2021 Sep 18]; 29(6):907–25. Available from: https://www.tandfonline.com/action/journalInformation?journalCode = rsus20

26. Chaker NN, Nowlin EL, Walker D, Anaza NA. Alone on an island: A mixed-methods investigation of salesperson social isolation in general and in times of a pandemic. Ind Mark Manag. 2021 Jul 1; 96:268–86.

27. Wong AKF, Kim S (Sam), Kim J, Han H. How the COVID-19 pandemic affected hotel Employee stress: Employee perceptions of occupational stressors and their consequences. Int J Hosp Manag. 2021 Feb 1; 93:102798.

28. Shin Y, Hur W-M, Hwang H. Impacts of customer incivility and abusive supervision on employee performance: a comparative study of the pre- and post-COVID-19 periods. Serv Bus 2021 [Internet]. 2021 Aug 6 [cited 2021 Sep 18];1–22. Available from: https://link.springer.com/article/10.1007/s11628-021-00456-7

29. Ererdi C, Nurgabdeshov A, Kozhakhmet S, Rofcanin Y, Demirbag M. International HRM in the context of uncertainty and crisis: a systematic review of literature (2000–2018). https://doi.org/101080/0958519220201863247 [Internet]. 2021 [cited 2021 Sep 14]; Available from: https://www.tandfonline.com/doi/abs/10.1080/09585192.2020.1863247

30. Oh CH, Oetzel J. Multinationals' response to major disasters: how does subsidiary investment vary in response to the type of disaster and the quality of country governance? Strateg Manag J [Internet]. 2011 Jun 1 [cited 2021 Sep 14]; 32(6):658–81. Available from: https://onlinelibrary.wiley.com/doi/full/10.1002/smj.904

31. Vösa H. The Impact of economic crisis on HRM practices in Estonia. 2010 Oct 29 [cited 2021 Sep 14]; Available from: https://aaltodoc.aalto.fi:443/handle/123456789/540

32. Lockwood NR. Crisis Management in Today's Business Environment: HR's Strategic Role. SHRM®Research Q [Internet]. 2005 [cited 2021 Sep 14]; Available from: www.cmiatl.com.

33. Merlot ES, Cieri H De. The challenges of the 2004 Indian Ocean tsunami for strategic international human resource management in multinational nonprofit enterprises. http://dx.doi.org/101080/095851922011610337 [Internet]. 2012 Apr [cited 2021 Sep 14]; 23(7):1303–19. Available from: https://www.tandfonline.com/doi/abs/10.1080/09585192.2011.610337

34. Ramlall SJ. Continuing the HR Evolution: Building Resilience in Turbulent Economic Times. Int J Glob Manag Stud [Internet]. 2009 Jul; 1(3):19–28. Available from: https://search.ebscohost.com/login.aspx?direct=true&db=bsu&AN=50743743&lang=pl&site=ehost-live&scope=site

35. Psychogios A, Brewster C, Parry E. Western European HRM: Reactions and adjustment to crises. In: International Human Resource Management: Contemporary HR Issues in Europe [Internet]. 2016 [cited 2021 Sep 14]. p. 115–34. Available from: https://www.taylorfrancis.com/chapters/edit/10.4324/9781315773483-15/western-european-hrm-reactions-adjustment-crises-alexandros-psychogios-chris-brewster-emma-parry

36. Nijssen M, Paauwe J. HRM in turbulent times: how to achieve organizational agility? https://doi.org/101080/095851922012689160 [Internet]. 2012 Sep [cited 2021 Sep 14]; 23(16):3315–35. Available from: https://www.tandfonline.com/doi/abs/10.1080/09585192.2012.689160

37. Wood G, Dibben P, Stride C, Webster E. HRM in Mozambique: Homogenization, path dependence or segmented business system? J World Bus [Internet]. 2011 [cited 2021 Sep 14]; 46(1):31–41. Available from: https://ideas.repec.org/a/eee/worbus/v46y2011i1p31-41.html

38. Zhu Y. The Asian crisis and the implications for human resource management in Vietnam. http://dx.doi.org/101080/09585190500144210 [Internet]. 2007 Jul [cited 2021 Sep 14]; 16(7):1261–76. Available from: https://www.tandfonline.com/doi/abs/10.1080/09585190500144210

39. Ramlall I. The Impact of the Subprime Crisis on Global Financial Markets, Banks and International Trade: A Quest for Sustainable Policies. Cambridge Sch Publ. 2013;172.

40. Clibborn S. The politics of employment relations in a multinational corporation during crisis: https://doi.org/101177/0143831X17748198 [Internet]. 2018 Mar 7 [cited 2021 Sep 14]; 40(3):560–82. Available from: https://journals.sagepub.com/doi/full/10.1177/0143831X17748198

41. Roche WK, Teague P. Do Recessions Transform Work and Employment? Evidence from Ireland. Br J Ind Relations [Internet]. 2014 Jun 1 [cited 2021 Sep 14]; 52(2):261–85. Available from: https://onlinelibrary.wiley.com/doi/full/10.1111/bjir.12006

42. Zagelmeyer S, Heckmann M, Kettner A. Management responses to the global financial crisis in Germany: Adjustment mechanisms at establishment level. Int J Hum Resour Manag [Internet]. 2012 Sep [cited 2021 Sep 14]; 23(16):3355–74. Available from: /record/2012-18399-005

43. Wickramasinghe V, Perera G. HRM practices during the global recession (2008–2010): Evidence from globally distributed software development firms in Sri Lanka. Strateg Outsourcing An Int J. 2012 Nov 16; 5(3):188–212.

44. Shen J, D'Netto B. Impact of the 2007–09 global economic crisis on human resource management among Chinese export-oriented enterprises. http://dx.doi.org/101080/136023812011601163

[Internet]. 2011 Jan [cited 2021 Sep 14]; 18(1):45–64. Available from: https://www.tandfonline.com/doi/abs/10.1080/13602381.2011.601163

45. McDonnell A, Burgess J. The impact of the global financial crisis on managing employees. Int J Manpow. 2013 Jul 5; 34(3):184–97.

46. Maher CS, Hoang T, Hindery A. Fiscal Responses to COVID-19: Evidence from Local Governments and Nonprofits. Public Adm Rev [Internet]. 2020 Jul 1 [cited 2021 Sep 14]; 80(4):644–50. Available from: https://onlinelibrary.wiley.com/doi/full/10.1111/puar.13238 PMID: 32836444

47. Aurelia S, Momin MM. Global reverberation and prediction for HRM amid and after COVID-19: A technological viewpoint. Mater Today Proc. 2020 Nov;

48. Gibson EM, Bennett FC, Gillespie SM, Güler AD, Gutmann DH, Halpern CH, et al. How Support of Early Career Researchers Can Reset Science in the Post-COVID19 World. Cell [Internet]. 2020 Jun 25 [cited 2021 Sep 16]; 181(7):1445–9. Available from: https://profiles.wustl.edu/en/publications/how-support-of-early-career-researchers-can-reset-science-in-the- https://doi.org/10.1016/j.cell.2020.05.045 PMID: 32533917

49. Campello M, Kankanhalli G, Muthukrishnan P. Corporate Hiring under COVID-19: Labor Market Concentration, Downskilling, and Income Inequality. NBER Work Pap [Internet]. 2020 [cited 2021 Sep 16]; Available from: https://ideas.repec.org/p/nbr/nberwo/27208.html

50. Hensvik L, Le Barbanchon T, Rathelot R. Job search during the COVID-19 crisis. J Public Econ. 2021 Feb 1; 194:104349.

51. Hameed A, Waheed A. Employee Development and Its Affect on Employee Performance A Conceptual Framework. Int J Bus Soc Sci [Internet]. 2011 [cited 2021 Sep 16]; 2(13). Available from: www.ijbssnet.com

52. Antonacopoulou EP. Employee development through self-development in three retail banks. Pers Rev. 2000; 29(4):491–508.

53. Staw BM, Sandelands LE, Dutton JE. Threat Rigidity Effects in Organizational Behavior: A Multilevel Analysis. Adm Sci Q [Internet]. 1981 Dec [cited 2021 Sep 16]; 26(4):501. Available from: /record/1982-08650-001

54. Vardarlıer P. Strategic Approach to Human Resources Management During Crisis. Procedia—Soc Behav Sci. 2016 Nov 24; 235:463–72.

55. Zaidi SA. Issues in Pakistan's economy. 2005;530.

56. Wynen J, Op De Beeck S. The impact of the financial and economic crisis on turnover intention in the U.S. federal government. Public Pers Manage. 2014 Dec 26; 43(4):565–85.

57. Almeida F, Duarte Santos J, Augusto Monteiro J. The Challenges and Opportunities in the Digitalization of Companies in a Post-COVID-19 World. IEEE Eng Manag Rev. 2020 Jul 1; 48(3):97–103.

58. Verhoef PC, Broekhuizen T, Bart Y, Bhattacharya A, Qi Dong J, Fabian N, et al. Digital transformation: A multidisciplinary reflection and research agenda. J Bus Res. 2021 Jan 1; 122:889–901.

59. Guo H, Yang Z, Huang R, Guo A. The digitalization and public crisis responses of small and medium enterprises: Implications from a COVID-19 survey. Front Bus Res China 2020 141 [Internet]. 2020 Sep 15 [cited 2021 Sep 16]; 14(1):1–25. Available from: https://fbr.springeropen.com/articles/10.1186/s11782-020-00087-1

60. Vial G. Understanding digital transformation: A review and a research agenda. J Strateg Inf Syst. 2019 Jun 1; 28(2):118–44.

61. Sebastian IM, Moloney KG, Ross JW, Fonstad NO, Beath C, Mocker M. How big old companies navigate digital transformation. MIS Q Exec. 2017; 16(3):197–213.

62. Yi J, He J, Yang L. Platform heterogeneity, platform governance and complementors' product performance: an empirical study of the mobile application industry. Front Bus Res China 2019 131 [Internet]. 2019 Aug 15 [cited 2021 Sep 16]; 13(1):1–20. Available from: https://fbr.springeropen.com/articles/10.1186/s11782-019-0060-3

63. Nambisan S, Wright M, Feldman M. The digital transformation of innovation and entrepreneurship: Progress, challenges and key themes. Res Policy. 2019 Oct 1; 48(8).

64. Nambisan S. Digital Entrepreneurship: Toward a Digital Technology Perspective of Entrepreneurship: https://doi.org/101111/etap12254 [Internet]. 2017 Nov 1 [cited 2021 Sep 16]; 41(6):1029–55. Available from: https://journals.sagepub.com/doi/full/10.1111/etap.12254

65. Giones F;, Brem A. Digital Technology Entrepreneurship: A Definition and Research Agenda. Technol Innov Manag Rev [Internet]. 2017 [cited 2021 Sep 16];7(5):44–51. Available from: www.timreview.ca

66. Briel F von, Davidsson P, Recker. Digital Technologies as External Enablers of New Venture Creation in the IT Hardware Sector: https://doi.org/101177/1042258717732779 [Internet]. 2017 Oct 9 [cited

2021 Sep 16]; 42(1):47–69. Available from: https://journals.sagepub.com/doi/full/10.1177/1042258717732779

67. Srinivasan A, Venkatraman N. Entrepreneurship in digital platforms: A network-centric view. Strateg Entrep J [Internet]. 2018 Mar 1 [cited 2021 Sep 16]; 12(1):54–71. Available from: https://onlinelibrary.wiley.com/doi/full/10.1002/sej.1272

68. Yoo Y. Computing in everyday life: A call for research on experiential computing. MIS Q Manag Inf Syst. 2010; 34(SPEC. ISSUE 2):213–31.

69. Warner KSR, Wäger M. Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. Long Range Plann. 2019 Jun 1; 52(3):326–49.

70. Zeng J, Glaister KW. Value creation from big data: Looking inside the black box: https://doi.org/101177/1476127017697510 [Internet]. 2017 Mar 14 [cited 2021 Sep 16]; 16(2):105–40. Available from: https://journals.sagepub.com/doi/full/10.1177/1476127017697510

71. Slocum J. Job redesign: improving the quality of working life. J Exp Learn Simulation, 3(1). 1981;

72. Caponecchia C, Mayland EC. Transitioning to job redesign: improving workplace health and safety in the COVID-19 era. Occup Environ Med [Internet]. 2020 Dec 1 [cited 2021 Sep 16]; 77(12):868. Available from: https://pubmed.ncbi.nlm.nih.gov/32868376/ https://doi.org/10.1136/oemed-2020-106969 PMID: 32868376

73. Foss NJ. The Impact of the Covid-19 Pandemic on Firms' Organizational Designs. J Manag Stud [Internet]. 2021 Jan 1 [cited 2021 Sep 16]; 58(1):270–4. Available from: https://onlinelibrary.wiley.com/doi/full/10.1111/joms.12643

74. Dirani KM, Abadi M, Alizadeh A, Barhate B, Garza RC, Gunasekara N, et al. Leadership competencies and the essential role of human resource development in times of crisis: a response to Covid-19 pandemic. https://doi.org/101080/1367886820201780078 [Internet]. 2020 [cited 2021 Sep 16];380–94. Available from: https://www.tandfonline.com/doi/abs/10.1080/13678868.2020.1780078

75. Caligiuri P, De Cieri H, Minbaeva D, Verbeke A, Zimmermann A. International HRM insights for navigating the COVID-19 pandemic: Implications for future research and practice. J Int Bus Stud 2020 515 [Internet]. 2020 Jun 2 [cited 2021 Sep 16]; 51(5):697–713. Available from: https://link.springer.com/article/10.1057/s41267-020-00335-9 PMID: 32836500

76. Zimmermann A, Ravishankar MN. Collaborative IT offshoring relationships and professional role identities: Reflections from a field study. J Vocat Behav. 2011 Jun; 78(3):351–60.

77. Li M, Mobley WH, Kelly A. When do global leaders learn best to develop cultural intelligence? An investigation of the moderating role of experiential learning style. Acad Manag Learn Educ [Internet]. 2013 Mar 1 [cited 2021 Sep 16]; 12(1):32–50. Available from: /record/2013-13164-004

78. Sit A, Mak AS, Neill JT. Does cross-cultural training in tertiary education enhance cross-cultural adjustment? A systematic review. Int J Intercult Relations [Internet]. 2017 Mar 1 [cited 2021 Sep 16]; 57:1–18. Available from: /record/2017-12356-002

79. Zito M, Ingusci E, Cortese CG, Giancaspro ML, Manuti A, Molino M, et al. Does the End Justify the Means? The Role of Organizational Communication among Work-from-Home Employees during the COVID-19 Pandemic. Int J Environ Res Public Heal 2021, Vol 18, Page 3933 [Internet]. 2021 Apr 8 [cited 2021 Sep 16]; 18(8):3933. Available from: https://www.mdpi.com/1660-4601/18/8/3933/htm https://doi.org/10.3390/ijerph18083933 PMID: 33918095

80. Mumby DK, Kuhn TR. Organizational communication: a critical introduction. SAGE; 2019. 735 p.

81. Goldhaber GM. Organizational communication. 1993;461.

82. Samson D, Daft R. Management. 2008;

83. Dwyer J. The business communication handbook. 2009;598.

84. Scott WG, Mitchell TR. Organization theory: a structural and behavioral analysis. 1976;470.

85. Katz D, Kahn RL. The Taking of Organizational Roles BT—The social psychology of organizations. Soc Psychol Organ [Internet]. 1978 Jan 1 [cited 2021 Sep 16];(7):185–221. Available from: papers3://publication/uuid/7E6F87E2-FFC2-4854-B41A-EF9CAA01D910

86. Ramus CA. Organizational support for employees: Encouraging creative ideas for environmental sustainability. Calif Manage Rev. 2001;(3):85–105.

87. Keyes MW, Hanley-Maxwell C, Capper CA. Spirituality? It's the core of my leadership: Empowering leadership in an inclusive elementary school. Educ Adm Q. 1999; 35(2):203–37.

88. Bantz CR, Pepper GL (Gerald L. Understanding organizations: interpreting organizational communication cultures. 1993;250.

89. Pol M, Hlouskova L, Novotny P, Vaclavikova E, Zounek J. School Culture as an Object of Research. Online Submiss. 2005; 5(1):147–65.

90. Dee J, Leisyte L. Knowledge sharing and organizational change in higher education. Learn Organ. 2017; 24(5):355–65.

91. Saunders MN, Dietz G, Thornhill A. Trust and distrust: Polar opposites, or independent but co-existing?: https://doi.org/101177/0018726713500831 [Internet]. 2014 May 20 [cited 2021 Sep 16]; 67 (6):639–65. Available from: https://journals.sagepub.com/doi/full/10.1177/0018726713500831

92. Giauque D. Attitudes Toward Organizational Change Among Public Middle Managers: http://dx.doi.org/101177/0091026014556512 [Internet]. 2014 Nov 11 [cited 2021 Sep 16]; 44(1):70–98. Available from: https://journals.sagepub.com/doi/10.1177/0091026014556512

93. Canning J, Found PA. The effect of resistance in organizational change programmes: A study of a lean transformation. Int J Qual Serv Sci. 2015 Jun 15; 7(2–3):274–95.

94. Rogiest S, Segers J, van Witteloostuijn A. Climate, communication and participation impacting commitment to change. J Organ Chang Manag. 2015 Oct 12; 28(6):1094–106.

95. Král P, Králová V. Approaches to changing organizational structure: The effect of drivers and communication. J Bus Res. 2016 Nov 1; 69(11):5169–74.

96. Appelbaum SH, Cameron A, Ensink F, Hazarika J, Attir R, Ezzedine R, et al. Factors that impact the success of an organizational change: a case study analysis. Ind Commer Train. 2017; 49(5):213–30.

97. Taylor H, Fieldman G, Altman Y. E-mail at work: A cause for concern? The implications of the new communication technologies for health, wellbeing and productivity at work. J Organ Transform Soc Chang. 2008 Jun 2; 5(2):159–73.

98. Eppler MJ, Mengis J. The Concept of Information Overload—A Review of Literature from Organization Science, Accounting, Marketing, MIS, and Related Disciplines (2004). Kommun im Wandel [Internet]. 2008 Aug 30 [cited 2021 Sep 16];271–305. Available from: https://link.springer.com/chapter/10.1007/978-3-8349-9772-2_15

99. Hargie O, Tourish D, Wilson N. Communication audits and the effects of increased information: a follow-up study. Int J Bus Commun [Internet]. 2002 Oct 1 [cited 2021 Sep 16]; 39(4):414–36. Available from: https://rgu-repository.worktribe.com/output/247688/communication-audits-and-the-effects-of-increased-information-a-follow-up-study

100. Sibley CG, Greaves LM, Satherley N, Wilson MS, Overall NC, J Lee CH, et al. Effects of the COVID-19 Pandemic and Nationwide Lockdown on Trust, Attitudes Toward Government, and Well-Being. Association [Internet]. 2020 [cited 2021 Sep 16]; 2020(999):0. Available from: http://dx.doi.org/10.1037/amp0000662

101. Wang C, Pan R, Wan X, Tan Y, Xu L, Ho CS, et al. Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. Int J Environ Res Public Health [Internet]. 2020 Mar 1 [cited 2021 Sep 16];17(5). Available from: https://pubmed.ncbi.nlm.nih.gov/32155789/ https://doi.org/10.3390/ijerph17051729 PMID: 32155789

102. Qiu J, Shen B, Zhao M, Wang Z, Xie B, Xu Y. A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: Implications and policy recommendations [Internet]. Vol. 33, General Psychiatry. BMJ Publishing Group Ltd; 2020 [cited 2021 Sep 16]. p. e100213. Available from: https://gpsych.bmj.com/content/33/2/e100213 https://doi.org/10.1136/gpsych-2020-100213 PMID: 32215365

103. Norris FH, Friedman MJ, Watson PJ. 60,000 Disaster victims speak: Part II. Summary and implications of the disaster mental health research. Psychiatry [Internet]. 2002 Sep [cited 2021 Sep 16]; 65 (3):240–60. Available from: /record/2002-18997-004 https://doi.org/10.1521/psyc.65.3.240.20169 PMID: 12405080

104. Bonanno GA, Brewin CR, Kaniasty K, La Greca AM. Weighing the costs of disaster: Consequences, risks, and resilience in individuals, families, and communities. Psychol Sci Public Interes Suppl [Internet]. 2010 Jan [cited 2021 Sep 16]; 11(1):1–49. Available from: https://pubmed.ncbi.nlm.nih.gov/26168411/

105. Sullivan SE, Bhagat RS. Organizational Stress, Job Satisfaction and Job Performance: Where Do We Go From Here? J Manage [Internet]. 1992 [cited 2021 Sep 16]; 18(2):353–74. Available from: /record/1992-41193-001

106. Pflanz SE, Ogle AD. Job stress, depression, work performance, and perceptions of supervisors in military personnel. Mil Med [Internet]. 2006 [cited 2021 Sep 16]; 171(9):861–5. Available from: https://pubmed.ncbi.nlm.nih.gov/17036607/

107. Cooper R, Boyko C, Codinhoto R. Mental Capital and Wellbeing: Making the most of ourselves in Mental Capital and Wellbeing: Making the most of ourselves in the 21st century [Internet]. Foresight. 2008 [cited 2021 Oct 22]. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/292450/mental-capital-wellbeing-report.pdf

108. Pollard EL, Lee PD. Child well-being: A systematic review of the literature. Soc Indic Res [Internet]. 2003 Jan [cited 2021 Sep 16]; 61(1):59–78. Available from: https://link.springer.com/article/10.1023/A:1021284215801

109. Seligman M. Positive psychology, positive prevention, and positive therapy. Handbook of positive psychology. undefined. 2002.

110. Dodge R, Daly A, Huyton J, Sanders L. The challenge of defining wellbeing. Int J Wellbeing. 2012 Aug 28; 2(3):222–35.

111. Shin DC, Johnson DM. Avowed happiness as an overall assessment of the quality of life. Soc Indic Res. 1978 Mar; 5(1–4):475–92.

112. Statham J, Chase E. Childhood Wellbeing: A brief overview. undefined. 2010;

113. Rees G, Goswami H, Bradshaw J. Developing an index of children's subjective well-being in England. Child Soc. 2010;1–16.

114. Zikmund V. Health, well-being, and the quality of life: Some psychosomatic reflections. Vol. 24, Neuroendocrinology Letters. 2003. p. 401–3. PMID: 15073564

115. Prasad KDV, Mangipudi MR, Vaidya RW, Muralidhar B. Organizational climate, opportunities, challenges and psychological wellbeing of the remote working employees during covid-19 pandemic: A general linear model approach with reference to information technology industry in Hyderabad. Int J Adv Res Eng Technol [Internet]. 2020 [cited 2021 Sep 16]; 11(4):372–89. Available from: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3599799

116. Greer TW, Payne SC. Overcoming telework challenges: Outcomes of successful telework strategies. Psychol J [Internet]. 2014 [cited 2021 Sep 16]; 17(2):87–111. Available from: /record/2014-20203-002

117. Mahmud A, Ding D, Hasan MM. Corporate Social Responsibility: Business Responses to Coronavirus (COVID-19) Pandemic: https://doi.org/101177/2158244020988710 [Internet]. 2021 Jan 22 [cited 2021 Sep 16]; 11(1). Available from: https://journals.sagepub.com/doi/full/10.1177/2158244020988710

118. Costa R, Menichini T. A multidimensional approach for CSR assessment: The importance of the stakeholder perception. Expert Syst Appl. 2013 Jan; 40(1):150–61.

119. Bowen HR, Bowen PG, Gond JP. Social responsibilities of the businessman [Internet]. Social Responsibilities of the Businessman. University of Iowa Press; 2013 [cited 2021 Sep 16]. 1–248 p. Available from: https://www.jstor.org/stable/10.2307/j.ctt20q1w8f

120. Navickas V, Kontautiene R, Stravinskiene J, Bilan Y, Navickas V, Kontautiene R, et al. Paradigm shift in the concept of corporate social responsibility: COVID-19. Green Financ 2021 2138 [Internet]. 2021 [cited 2021 Sep 16]; 3(2):138–52. Available from: http://www.aimspress.com/article/doi/10.3934/GF.2021008

121. McLennan S, Banks G. Reversing the lens: Why corporate social responsibility is not community development. Corp Soc Responsib Environ Manag [Internet]. 2019 Jan 1 [cited 2021 Sep 16]; 26(1):117–26. Available from: https://onlinelibrary.wiley.com/doi/full/10.1002/csr.1664

122. Antwi HA, Zhou L, Xu X, Mustafa T. Beyond COVID-19 pandemic: An integrative review of global health crisis influencing the evolution and practice of corporate social responsibility [Internet]. Vol. 9, Healthcare (Switzerland). Healthcare (Basel); 2021 [cited 2021 Sep 16]. Available from: https://pubmed.ncbi.nlm.nih.gov/33921512/

123. Barnett ML. Stakeholder influence capacity and the variability of financial returns to corporate social responsibility [Internet]. Vol. 32, Academy of Management Review. Academy of Management Briarcliff Manor, NY 10510; 2007 [cited 2021 Sep 16]. p. 794–816. Available from: https://journals.aom.org/doi/abs/10.5465/amr.2007.25275520

124. Brulhart F, Gherra S, Quelin B V. Do Stakeholder Orientation and Environmental Proactivity Impact Firm Profitability? J Bus Ethics. 2019 Aug 15; 158(1):25–46.

125. Teng X, Teng YM, Wu KS, Chang BG. Corporate Social Responsibility in Public Health During the COVID-19 Pandemic: Quarantine Hotel in China. Front Public Heal. 2021 Feb 2; 9:30. https://doi.org/10.3389/fpubh.2021.620930 PMID: 33634068

126. He H, Harris L. The impact of Covid-19 pandemic on corporate social responsibility and marketing philosophy. J Bus Res [Internet]. 2020 Aug 1 [cited 2021 Sep 16]; 116:176–82. Available from: /pmc/articles/PMC7241379/ https://doi.org/10.1016/j.jbusres.2020.05.030 PMID: 32457556

127. Navickas V, Kontautiene R, Stravinskiene J, Bilan Y. Paradigm shift in the concept of corporate social responsibility: COVID-19. Green Financ [Internet]. 2021 [cited 2021 Oct 22]; 3(2):138–52. Available from: http://www.aimspress.com/article/doi/10.3934/GF.2021008

128. Paauwe J. HRM and performance: Achievements, methodological issues and prospects. J Manag Stud [Internet]. 2009 Jan 1 [cited 2021 Sep 17]; 46(1):129–42. Available from: https://onlinelibrary.wiley.com/doi/full/10.1111/j.1467-6486.2008.00809.x

129. Hackman JR, Oldham GR. Motivation through the design of work: test of a theory. Organ Behav Hum Perform. 1976 Aug 1; 16(2):250–79.

130. Manzoor F, Wei L, Bányai T, Nurunnabi M, Subhan QA. An examination of sustainable HRM practices on job performance: An application of training as a moderator. Sustain. 2019 Apr 1; 11(8).

131. Abdi S, Azizpour M. Surveying the Relationship between Human Resource Strategies and Employees Work Ethic in Iran's Media. Oman Chapter Arab J Bus Manag Rev. 2013; 2(10):129–37.

132. Tovmasyan G, Minasyan D. The Impact of Motivation on Work Efficiency for Both Employers and Employees also During COVID-19 Pandemic: Case Study from Armenia. Bus Ethics Leadersh. 2020; 4(3):25–35.

133. Wolor CW, Solikhah S, Fidhyallah NF, Lestari DP. Effectiveness of E-Training, E-Leadership, and Work Life Balance on Employee Performance during COVID-19. J Asian Financ Econ Bus. 2020 Oct 1; 7(10):443–50.

134. Pancasila I, Haryono S, Sulistyo BA. Effects of work motivation and leadership toward work satisfaction and employee performance: Evidence from Indonesia. J Asian Financ Econ Bus [Internet]. 2020 Jun 1 [cited 2021 Sep 17]; 7(6):387–97. Available from: http://creativecommons.org/licenses/by-nc/4. 0/

135. Sapta IKS, Muafi M, Setini NM. The Role of Technology, Organizational Culture, and Job Satisfaction in Improving Employee Performance during the Covid-19 Pandemic. J Asian Financ Econ Bus. 2021; 8(1):495–505.

136. Pushpakumari MD. The Impact of Job Satisfaction on Job Performance: An Empirical Analysis. City Forum [Internet]. 2008 [cited 2021 Sep 17]; 9(1):89–105. Available from: http://202.11.2.113/SEBM/ ronso/no9_1/08_PUSHPAKUMARI.pdf

137. Said RM, El-Shafei DA. Occupational stress, job satisfaction, and intent to leave: nurses working on front lines during COVID-19 pandemic in Zagazig City, Egypt. Environ Sci Pollut Res [Internet]. 2021 Feb 1 [cited 2021 Sep 17]; 28(7):8791–801. Available from: https://pubmed.ncbi.nlm.nih.gov/ 33067794/

138. Jeet V, Sayeeduzzafar D. A study of HRM practices and its impact on employees job satisfaction in private sector banks: A case study of HDFC bank. Int J Adv Res Comput Sci Manag Stud [Internet]. 2014 [cited 2021 Sep 17]; 2(1):62–8. Available from: www.ijarcsms.com

139. Granziera H, Perera H. Relations Among Teachers' Self-Efficacy Beliefs, Engagement, and Work Satisfaction: A Social Cognitive View. Educ Psychol [Internet]. 2019 Feb 19 [cited 2021 Sep 17]; 58:75. Available from: https://digitalscholarship.unlv.edu/edpsych_fac_articles/206

140. Judge TA, Thoresen CJ, Bono JE, Patton GK. The job satisfaction–job performance relationship: A qualitative and quantitative review. Psychol Bull [Internet]. 2001 [cited 2021 Oct 22]; 127(3):376–407. Available from: /record/2001-17499-005 https://doi.org/10.1037/0033-2909.127.3.376 PMID: 11393302

141. Wright TA, Cropanzano R, Bonett DG. The moderating role of employee positive well being on the relation between job satisfaction and job performance. J Occup Health Psychol [Internet]. 2007 Apr [cited 2021 Oct 22]; 12(2):93–104. Available from: https://pubmed.ncbi.nlm.nih.gov/17469992/ https:// doi.org/10.1037/1076-8998.12.2.93 PMID: 17469992

142. Bangun R, Theresia L, Lahuddin AH, Ranti G. The Influence of Culture, Job Satisfaction and Motivation on the Performance Lecturer / Employees.

143. Judge TA, Thoresen CJ, Bono JE, Patton GK. The job satisfaction–job performance relationship: A qualitative and quantitative review. Psychol Bull [Internet]. 2001 [cited 2021 Sep 17]; 127(3):376–407. Available from: /record/2001-17499-005 https://doi.org/10.1037/0033-2909.127.3.376 PMID: 11393302

144. Semachew A, Belachew T, Tesfaye T, Adinew YM. Predictors of job satisfaction among nurses working in Ethiopian public hospitals, 2014: Institution-based cross-sectional study. Hum Resour Health [Internet]. 2017 Apr 24 [cited 2021 Sep 17]; 15(1). Available from: https://pubmed.ncbi.nlm.nih.gov/ 28438214/ https://doi.org/10.1186/s12960-017-0204-5 PMID: 28438214

145. Kabbash IA, El-Sallamy RM, Abdo SAEF, Atalla AO. Job satisfaction among physicians in secondary and tertiary medical care levels. Environ Sci Pollut Res [Internet]. 2020 Oct 1 [cited 2021 Sep 17]; 27 (30):37565–71. Available from: https://pubmed.ncbi.nlm.nih.gov/32232753/ https://doi.org/10.1007/ s11356-020-08506-9 PMID: 32232753

146. Meyer JP, Allen NJ. Commitment in the workplace: theory, research, and application. 1997;150.

147. Bańka A, Bazińska R, Wołoska A. Polska wersja Meyera i Allen Skali Przywiązania do Organizacji. Czas Psychol. 2002; 8(1):65–74.

148. Wright TA, Cropanzano R, Bonett DG. The moderating role of employee positive well being on the relation between job satisfaction and job performance. J Occup Health Psychol [Internet]. 2007 Apr

[cited 2021 Sep 17]; 12(2):93–104. Available from: /record/2007-05780-001 https://doi.org/10.1037/1076-8998.12.2.93 PMID: 17469992

149. Hassan S, Mahmood B. Relationship between HRM Practices and Organizational Commitment of Employees: An Empirical Study of Textile Sector in Pakistan. Int J Acad Res Accounting, Financ Manag Sci [Internet]. 2016 [cited 2021 Sep 17]; 6(1):23–8. Available from: https://ideas.repec.org/a/hur/ijaraf/v6y2016i1p23-28.html

150. Meyer JP, Becker TE, Vandenberghe C. Employee commitment and motivation: A conceptual analysis and integrative model. J Appl Psychol [Internet]. 2004 Dec [cited 2021 Sep 17]; 89(6):991–1007. Available from: /record/2004-21169-007 https://doi.org/10.1037/0021-9010.89.6.991 PMID: 15584837

151. Sanders K, Nguyen PT, Bouckenooghe D, Rafferty A, Schwarz G. Unraveling the What and How of Organizational Communication to Employees During COVID-19 Pandemic: Adopting an Attributional Lens: https://doi.org/101177/0021886320937026 [Internet]. 2020 Jun 26 [cited 2021 Sep 17]; 56(3):289–93. Available from: https://journals.sagepub.com/doi/full/10.1177/0021886320937026

152. Hewett R, Shantz A, Mundy J, Alfes K. Attribution theories in Human Resource Management research: a review and research agenda. https://doi.org/101080/0958519220171380062 [Internet]. 2017 Jan 2 [cited 2021 Sep 17]; 29(1):87–126. Available from: https://www.tandfonline.com/doi/abs/10.1080/09585192.2017.1380062

153. Lewicka D. Zarządzanie kapitałem ludzkim a zaangażowanie pracowników. 2019;

154. Armstrong M (1928-)., Taylor S (1965-). Zarządzanie zasobami ludzkimi. Wolters Kluwer; 2016. 948 p.

155. Zeinabadi H, Salehi K. Role of procedural justice, trust, job satisfaction, and organizational commitment in Organizational Citizenship Behavior (OCB) of teachers: Proposing a modified social exchange model. Procedia—Soc Behav Sci. 2011 Jan 1; 29:1472–81.

156. Chu C. Evaluating the Relationship between Transformational Leadership and Employee Organizational Commitment in the Taiwanese Banking Industry. Grad Student Theses, Diss Portfolios [Internet]. 2006 Apr 1 [cited 2021 Oct 22]; Available from: https://spiral.lynn.edu/etds/79

157. Masihabadi A, Rajaei A, Shams Koloukhi A, Parsian H. Effects of stress on auditors organizational commitment, job satisfaction, and job performance. Int J Organ Leadersh. 2015 Jul 1; 4(3):303–14.

158. Rose RC, Kumar N, Pak OG. The Effect Of Organizational Learning On Organizational Commitment, Job Satisfaction And Work Performance. J Appl Bus Res [Internet]. 2009 Nov 1 [cited 2021 Sep 17]; 25(6):55–66. Available from: https://clutejournals.com/index.php/JABR/article/view/995

159. McNeese-Smith DK. The influence of manager behavior on nurses' job satisfaction, productivity, and commitment. J Nurs Adm [Internet]. 1997 Sep [cited 2021 Sep 17]; 27(9):47–55. Available from: https://pubmed.ncbi.nlm.nih.gov/9300015/

160. Suliman A, Iles P. Is continuance commitment beneficial to organizations? Commitment-performance relationship: A new look. J Manag Psychol. 2000 Aug 1; 15(5):407–22.

161. Arnett DB, Laverie DA, McLane C. Using job satisfaction and pride as internal-marketing tools. Cornell Hotel Restaur Adm Q. 2002 Apr 1; 43(2):87–96.

162. Colquitt J, LePine JA, Wesson MJ. Organizational behavior: essentials for improving performance and commitment. 2010;316.

163. McDermott K, LASCHINGER HKS, Shamian J. Work Empowerment and Organizational Commitment. Nurs Manag [Internet]. 1996 May [cited 2021 Sep 17]; 27(5):44–47. Available from: https://pubmed.ncbi.nlm.nih.gov/8710344/ https://doi.org/10.1097/00006247-199605000-00010 PMID: 8710344

164. Czakon W [SAP14018264], Wojciech. Walidacja narzędzia pomiarowego w naukach o zarządzaniu. Przegląd Organ [Internet]. 2019 Apr 30 [cited 2021 Sep 13];(4 (951)):3–10. Available from: https://ruj.uj.edu.pl/xmlui/handle/item/148926

165. Minbaeva D. Disrupted HR? Hum Resour Manag Rev. 2020;

166. Hackman JR, Oldham GR. Development of the Job Diagnostic Survey. J Appl Psychol [Internet]. 1975 Apr [cited 2021 Sep 13]; 60(2):159–70. Available from: /record/1975-22031-001

167. Carnevale JB, Hatak I. Employee adjustment and well-being in the era of COVID-19: Implications for human resource management. J Bus Res. 2020 Aug 1; 116:183–7. https://doi.org/10.1016/j.jbusres.2020.05.037 PMID: 32501303

168. Agarwal P. Shattered but smiling: Human resource management and the wellbeing of hotel employees during COVID-19. Int J Hosp Manag. 2021 Feb 1; 93:102765.

169. Kaplan RS, Norton DP. strategic learning & the balanced scorecard. Strateg & Leadersh. 1996 Mar 1; 24(5):18–24.

170. Yuen KF, Loh HS, Zhou Q, Wong YD. Determinants of job satisfaction and performance of seafarers. Transp Res Part A Policy Pract. 2018 Apr 1; 110:1–12.

171. Kwahk KY, Park DH. Leveraging your knowledge to my performance: The impact of transactive memory capability on job performance in a social media environment. Comput Human Behav. 2018 Mar 1; 80:314–30.

172. Ali-Hassan H, Nevo D, Wade M. Linking dimensions of social media use to job performance: The role of social capital. J Strateg Inf Syst [Internet]. 2015 Jun 1 [cited 2021 Sep 13]; 24(2):65–89. Available from: /record/2015-25732-007

173. Hackman JR, Oldham GR. The Job Diagnostic Survey: An Instrument for the Diagnosis of Jobs and the Evaluation of Job Redesign Projects. 1974.

174. Fields D. Taking the Measure of Work: A Guide to Validated Scales for Organizational Research and Diagnosis. Tak Meas Work A Guid to Validated Scales Organ Res Diagnosis. 2012 Apr 30;

175. Meyer JP, Allen NJ, Gellatly IR. Affective and Continuance Commitment to the Organization: Evaluation of Measures and Analysis of Concurrent and Time-Lagged Relations. J Appl Psychol [Internet]. 1990 [cited 2021 Sep 13]; 75(6):710–20. Available from: /record/1991-08816-001

176. Hagger MS, Gucciardi DF, Chatzisarantis NLD. On nomological validity and auxiliary assumptions: The importance of simultaneously testing effects in social cognitive theories applied to health behavior and some guidelines. Front Psychol. 2017 Nov 3; 8(NOV). https://doi.org/10.3389/fpsyg.2017.01933 PMID: 29163307

177. Peter JP, Churchill GA. Relationships among Research Design Choices and Psychometric Properties of Rating Scales: A Meta-Analysis. J Mark Res [Internet]. 1986 Dec 20 [cited 2021 Oct 25]; 23(1):1–10. Available from: https://journals.sagepub.com/doi/abs/10.1177/002224378602300101

178. Bieńkowska A, Tworek K. Job performance model based on Employees' Dynamic Capabilities (EDC). Sustain. 2020; 12(6).

179. Garcia-Santillan A. Measuring set latent variables that explain attitude toward statistic through exploratory factor analysis with principal components extraction and confirmatory analysis. Eur J Pure Appl Math. 2017; 10(2 PG-167–198):167–98.