



# Investment Areas to Enhance Public Employee Resilience during the Coronavirus Disease 2019 (COVID-19): Evidence from Iran

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## Abstract

This study aims to investigate the areas of investment that the human resources management of the Iranian public sector has invested in for improving employees' resilience in the COVID-19 pandemic period. This study is qualitative and the qualitative content analysis is used to analyze the data. The qualitative content analysis is used to analyze the data. According to findings, essential areas for investment to improve employee resilience are *hardware investments*, *software investments*, and *wetware investments*. While increasing the knowledge of employee resilience, this qualitative study provides valuable and practical implications for policymakers and managers in the public sector.

**Keywords** Employee resilience · Public organization · Human resource management · Investment areas · COVID-19

## Introduction

Crisismanship refers to "a systematic and dynamic process through which a proactive combination of governance, administrative or managerial, and operational capacities are used" (Farazmand & Danaeefard, 2021a, b). Public organizations have an essential and

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critical contribution in the process because of their roles in formulating public policy as a tool for governance (Koliba et al., 2011; Olowu & Sako, 2002; Roman, 2016) and in managing and leading crises (Farazmand, 2009; Kuye, 2007) and also in dealing with crises (Holzer & Newbold, 2020). However, they are critical players in implementing national governance in all areas (including national crises) (Iacovino et al., 2017; Jørgensen et al., 1998). But because crises have a significant impact on the societies functioning and many aspects of people's lives, including economic, social, cultural, etc., the irreplaceable role of these organizations in the crisis management process is very prominent. Generally, these organizations intermediary the political system and society by implementing public policies (Lemonakis & Zairis, 2020, Van der Wal, 2020). Accordingly, the importance of public organizations in maintaining the quality of national governance and public administration is not hidden from anyone.

Therefore, in an age of diversity of crises such as earthquakes, floods, droughts, terrorist attacks, and most recently, COVID-19 pandemic, public organizations have become the primary helpers of citizens in times of crisis. But many public organizations are grappling with the crisis caused by the COVID-19 pandemic; thus, the managers of these organizations face challenging and very vague conditions and are worried about the effects of this crisis on the organization's functioning. Facing these challenges, public organizations need to consider new ways to deal with the crisis and adapt to the COVID-19 pandemic crisis (Krishnamara & Ror, 2020). These organizations operate in a very turbulent environment (Agrawal, 2014). They face unexpected situations and threatening environments that make understanding and dealing with the crisis ahead more difficult (Lai, 2012). Therefore, in the face of these conditions, these organizations must have the strategic agility to respond quickly to the environment while being resilient to implement public policies effectively (Hamalainen et al., 2012). Strategic agility, along with resilience, is the outcome of the human resources deployed in these organizations. Therefore, public organizations should have a resilient workforce to maintain and continue to provide public services to the community to achieve the lofty goals of the public sector. The study of investment areas is necessary to improve employee resilience because employee resilience enhances organizational resilience and responds better to crises. Employee resilience refers to "a capacity in employees that, if the organization supports it, employees can, in the light of its development and prosperity, meet the demands of a challenging and dynamic environment and adapt to them and continue to improve their performance." (Kuntz et al., 2016; Nguyen et al., 2016; Prayag et al., 2018).

The question of this study is: what areas have government agencies invested in creating, maintaining, and improving employee resilience in the face of the COVID-19 pandemic crisis? Answering such a question can help to smarten the activities of government organizations' managers to strengthen the resilience of employees of these organizations. Therefore, the ultimate purpose of this study is to identify various areas of mechanisms that the organization should do to create, maintain and promote resilience among employees of Iranian government organizations. Also, the findings of this research can provide valuable guidelines for policymakers and managers of human resource management departments in government organizations while developing knowledge in this field and specify specific directions for future research.

## Theoretical Foundations in Employee Resilience

Two theoretical perspectives are the basis of study on employee resilience in the workplace: positivist psychology and resource conservation theory (Bardoel et al., 2014). According to these two underlying theories of resilience, there are different ways to create, maintain, and promote resilience in employees (Southwick et al., 2014). However, according to Shin et al. (2012), individuals' positive emotions turn such resources into favorable attitudes toward change and provide the basis for their resilience in the face of difficult circumstances. At the same time, numerous studies in different environments and countries have examined the antecedents and factors affecting employee resilience. Although a comprehensive model has been developed to promote resilience, Bardeol et al. (2014) and Britt et al. (2016), and Khan et al. (2019) are among the most common models in the field of employee resilience.

Most other researches rely on more detailed studies. However, in general, Bardeol et al. (2014) considered the following to be effective in creating employees resilience: development of social supports at work, work-life balance practices, employee assistance programs, employee development programs, such as resilience training, flexible work arrangements reward and benefits systems, occupational health and safety systems, risk and crisis management systems and diversity management. In their model of employee resilience, Britt et al. (2016, p.381) present the sources that affect employee resilience capacity as follows: individual resources (including genetic/biological, personalities, energy/ affect), unit resources (cohesion, support, and flexibility), family resources (including support, close relationships, low conflict) and community resources (resources, belonging, and connection). In his study, Khan et al. (2019) recommend that the human resources management of organizations influence the following resources on employee resilience: job design, information flow in the organization, flexible plans and employee benefits, employee development, supportive culture, feedback, peer-to-peer support, social interactions. In the model of Macky and Boxall (2007a, b, p.616), three factors, learning, culture, and structure, influence employee resilience.

However, there is no agreement on what combination of programs human resource management should adopt to improve employee resilience. Still, each researcher cites employee resilience factors based on their research findings. Accordingly, in various studies that have been conducted so far, the following factors have been mentioned as employee resilience precedents: positive psychological and behavioural capital (Avey et al., 2009; Youssef & Luthans, 2007) high performance systems (Cooke et al., 2019) supervisor, family and friends support (Fletcher & Sarkar, 2013), support from friends and family, support from supervisor, facilitating conditions and self-sufficiency (Ojo et al., 2021, p. 4), patterns of thinking and core beliefs (Iacoviello & Charney, 2014), wellbeing (Tonkin et al., 2018) reciprocal relationships (Connor & Davidson, 2003), work environment and social support (Rodrigo & Maghuyop, 2020), material and financial resources, support and psychological protection, activation of systems, protocols and structures (Teng-Calleja et al., 2020, b), leader culture, behaviour and abilities (Seville, 2018), paradoxical leadership (Franken et al., 2019), management of leader-follower emotion (Richard, 2020), humble leadership, personality traits and ethical values (Athota et al.,

2020), meta-role performance, leader–follower exchange, high employee participation (Gupta & Sharma, 2018), job resources (including interpersonal relation, job security, participation in decision-making) (Huang et al., 2016), proactive personality (Zhu & Li, 2021), leader–follower social and economic exchanges (Caniëls & Hatak, 2019), resilient leadership (Franken et al., 2019), professional career (Kossek & Perrigino, 2016) human resource management (Liu et al., 2019), democracy at Work (Edeh et al., 2018), Health and Safety, positive psychology, social capital, power distribution and accountability, extensive resource network, talent management, career rearrangement, performance management (Ngoc Su et al., 2021), personality traits and orientations of cultural value, personal resources, personal attitudes and patterns, personal emotions, job resources and demands (Hartmann et al., 2020), digitizing works (Katz et al., 2020; Anthony Jnr & Abbas Petersen, 2021; Appoloni et al., 2021; Härmand, 2021) organizational culture (Daum & Maraist, 2021; Zarnadze & Kasradze, 2020), change management (Hoopes & Kelly, 2004; Kovoov-Misra, 2020), mental health (Gillispie et al., 2016), positive attitudes in professional life (Kaplan et al., 2014), mindfulness (Kabat-Zinn, 2005).

Although the above studies have been done, a coherent framework of investment areas for employee resilience has not been done so far. This study aims to create a articulated picture of enablers of the employees' resilience in public organizations by using a qualitative study and relying on the method of qualitative content analysis.

## Research Method

### Research Design

This research is qualitative. The data source was semi-structured interviews and a review of published documents and articles on how public organizations deal with the COVID-19 pandemic crisis, which used qualitative content analysis to analyze the data.

### Participants

This study conducted interviews with senior managers, middle managers, operational managers, and employees of the 15 Ministries in the Islamic Republic of Iran (except the Ministry of Intelligence, Ministry of Defence, and Armed Forces Support and Foreign Affairs). Most interviews were conducted by telephone, and a few numbers (approximately 12 interviews) were conducted face-to-face.

### Data Collection

Although interviews were the primary data source for this study, the researchers also reviewed the various reports from public organizations on their organizational plans for crisis management in the COVID-19 period. The guiding questions of this study

are: What is your understanding of employee resilience to the COVID-19 pandemic crisis? What measures has your organization taken to strengthen the employees to continue the organization's public services to citizens? Which of these programs do you think is most effective on employee resilience in the current context? Can you give some examples? What do you mean by...? Can you explain more?

With the permission of the interviewees, the interviews were recorded. 64 interviews after 70 interviews were the research saturation point in data collection. The duration of the telephone interview was 40 min and 60 min a face-to-face interview.

## Data Analysis

This study has used the qualitative content analysis method (Graneheim & Lundman, 2004) to analyze the data. After reviewing all the transcription obtained from the interviews, the units of meaning were first identified, and then a code was assigned to each of them. Then all the codes were reviewed, and the overlapping codes were removed. Then, after studying all the codes, the same codes were placed in a set (subcategories). Then, by carefully reviewing the subcategories and placing similar subcategories, the main categories were identified. Finally, the themes were counted and identified by carefully studying and examining the main categories and placing similar main categories in a group. All data has been done accurately and entirely scientifically and, according to the interest of researchers, has been done manually.

## Research Quality

The four criteria of Lincoln and Guba (1985) have been used to maintain the quality and rigor of the research under the headings of transferability, reliability, validity, and stability. Transferability refers to the ability to apply, transfer, and generalize the findings of a study to other similar situations (equivalent to external validity in quantitative research). Although qualitative research does not claim universal transferability, purposeful sampling of the maximum diversity type has been used to reinforce this criterion. Also, constant comparison and member-check methods have been used to investigate the subcategories, categories, and themes. Dependability refers to the stability of findings over time. Although qualitative research does not claim complete Dependability of the findings, researchers have carefully recorded and reported the research path to strengthen this criterion (equivalent to reliability in quantitative research). Credibility refers to the acceptance of the findings by the reader or other researchers, using the constant comparison of findings during the research process, the review of the findings by all authors, and, most importantly, mentioning direct quotes from participants in each of the subcategories can significantly contribute to the credibility of the findings. As Flick (1998) argues, credibility is essential in qualitative research. The consistency of the researchers' views on the findings refers to the agreement of two or more independent individuals on the accuracy, relevance, and meaning of the data.

After analyzing the initial data by the first researcher, the other two researchers reviewed all the codes, subcategories, and themes and reached a consensus. On the other hand, researchers deployed all the study phases, including data collection,

data analysis, comprehensibility, and data conceptualization and classification, so that readers, other researchers, or evaluators could evaluate all of the researchers' activities.

## Findings

The findings of this study show that Iranian public organizations have invested in three general areas (three themes: hardware, software, and wetware) to strengthen the resilience of their employees. In the first theme, there are two main categories and four sub-categories. In the second theme, four main categories and seven sub-categories. Three main categories and five sub-categories have been identified..

### Theme 1: Hardware Investments

All of the organizations under study have made hardware investments to varying degrees to create, maintain, and enhance the resilience of their employees (along with other organizational goals). In this regard, organizations have invested in two main categories (two main areas of investment): organizational technologies (internal digitalization, external digitalization), work environment (organizational workplace environment, job environment), which are described in detail below. The description and interpretation of the results using the interviewee's direct quotations were provided as follows:

**Category 1: Organizational Technology** Iranian public organizations have invested in their internal and external digitalization (along with promoting e-government and office automation in the public sector) to enhance their employee's resilience. This category includes "internal digitalization" and "external digitalization."

**Sub-category 1: Internal Organizational Digitalization** Public organizations have sought to digitize the scope of daily work affairs, work activities, organizational decision-making sessions, training and learning, employee-manager relationships, employee-supervisor relationships so that employees can continue to work more calmly and away from the fear of the COVID-19 pandemic.

"Our organization has been saved from the risk of death by strengthening the digital field because we do many internal activities by resorting to various types of digital media. This prevented the presence of employees in the organization and, as a result, significantly prevented the spread of the virus." (Participant No.1: Jafar).

**Sub-category 2: External Organizational Digitalization** In this area, organizations have digitized their interactions and external communications to protect their employees from the effects of the COVID- 19 pandemic and specifically to prevent their employees from becoming infected. Accordingly, interactions with citizens or clients (providing services to citizens, submitting requests by citizens to the

organization) and intra organizational interactions (interactions with superior organizations, interactions with adjoining organizations, and interactions with the Corona policy-making center) are based on digital systems. Accordingly, the digitalization of outsourcing has played an essential role in employee resilience during the critical period of the COVID- 19 pandemic.

“As managers of the organization, we have tried to prevent citizens from contacting our employees by using various digital tools to prevent the provision of public services by preventing employees from becoming infected.” (Participant No.5: Ali, manager).

**Category 2: Work Environment** One of the Iranian public organizations’ critical investment areas to strengthen employee resilience has been investing in work environments. The two main focuses of investment in this area are: "organizational workplace environment" and "occupational environment."

**Sub-category 1: Organizational Workplace Environment** Undoubtedly, the workplace as a whole has an essential contribution to employee resilience during crises, including the COVID-19 pandemic crisis. In the public sector of Iran, organizations have taken the following measures to adapt the workplace environment to the conditions of the COVID-19 crisis: "redesigning the organization’s workplace environment," "providing a variety of antiseptic in the corridors of the organization," "creating an antiseptic tunnel for the organization’s vehicles and employees," and "closing the contamination centers (restaurants, cafes)," "Regularly antisepticise corridors, rooms and meeting rooms," "installation of air conditioners," "distribution of masks and gloves among employees," "take employee temperature upon arrival," "wearing mask upon arrival," "Leaving doors and windows, rooms and corridors open." The purpose of these measures is to protect their employees against the COVID-19 disease to not harm employees in the continuation of public services. Organizations, on the other hand, by creating economic facilitation and support tools, such as "financial aid," "additional payments commensurate with the conditions of the COVID- 19 pandemic", "addressing mortgage and housing issues of employees," "designing employee welfare programs by COVID-19 pandemic conditions", "designing administrative policies by the COVID-19 pandemic conditions", have sought to increase employee resilience in the COVID-19 crisis.

"Our organization tried to make us resilient to continue its services by relying on material and spiritual support. Workplace hygiene has played an important role in preventing the outbreak of COVID-19 disease and has enabled us to withstand harsh conditions." (Participant No.12: Farid: employee).

**Sub-category 2: Occupational Environment** Although the overall work environment of the organization can play an essential contribution to employee resilience, the occupational environment is a critical factor for creating resilience in employees. Based on the following measures, Iranian public organizations have tried to create a

suitable working environment for employees to improve their resilience: “Flexible employee attendance scheduling,” “adapting employee job expectations according to the condition of the COVID-19 pandemic”, “managing citizen relations in response to the COVID-19 crisis situations”, “providing employee protection equipment,” “arranging work tools and equipment under the conditions of COVID-19 crisis”, and “employee financial assistance program.”

“Our work is not interrupted because we have each other’s air and we work together regularly. If something happens to the family, we are also supportive, and there is no interruption in work.”(Participant No. 25: Mahshid: employee).

## Theme 2: Software Investment

Iranian public organizations have also directly and indirectly invested in leading employees’ resilience in the soft aspects. In general, the soft elements refer to matters that provide the necessary background for the ease of organizational work. In this regard, organizations have invested in two main categories (two main areas of investment): “The culture that creates resilience” (values, norms, behaviour), leadership and change management in the context of the COVID-19 pandemic”. In the following, we will detail these categories and continue with quotes from the interviewees.

**Category 1: Resilient Administrative Culture** One of the soft investment areas of public sector organizations to lead employees’ resilience is forming of resilient administrative culture. This category focuses on creating “resilience-promoting cultural values,” “resilience-enhancing norms,” and “resilience-enhancing cultural behaviors.”

**Sub-category 1: Cultural Values that Support Resilience** Essential values that have been the prominent supporters of employee resilience in public organizations are: “commitment to the continuity of services to citizens (to protect the country from external and internal threats, the process of service to citizens should not be interrupted),” “employee health” (To continue to provide services to citizens, employees must remain healthy, so the organization must take care of them, as employees themselves must take care of themselves and others), “trust and partnership” (We need to trust each other and to build cooperation in the organization to continue in the services and maintain the health of the employees).

“In order for the life of the country and the society to continue, the cycle of public services should not be disrupted.” (Participant No.59: Mina: employee).

**Sub-category 2: Resilience-enhancing Norms** Based on the employee’s adherence to the values discussed in sub-category 1, public sector organizations have tried to help strengthen employee resilience by establishing the following norms:

"positiveness in organizational conversations (avoiding negativity and creating fear in colleagues)," "avoiding the secrecy of news about COVID-19 disease in the organization (employees or their families get COVID-19)", "keeping a social distance (among employees and in interaction with the client)."

"All employees and managers of the organization are committed to preventing stress in employees by not creating undue fear. At the same time, news of staff or family involvement must be reported." (Participant No.52: Emir: Manager).

**Sub-category 3: Cultural Behaviours that Improve Resilience** Public organizations for managing employee resilience have programs to accommodate cultural behaviors that improve employee resilience. The following behaviors in public organizations have improved employee resilience: "Regular hand washing," "avoidance of handshake," "take care of themselves and others," assistance in all aspects of COVID-19 pandemic crisis", "Smiling and loving greetings," "problem-solving behavior."

"In our organization, some behaviors have become a culture. We all distance ourselves physically, but we are also socially supportive." (Participant No.28: Amirhossein: Manager).

**Category 2: Leadership and Change Management** Some public sector organizations have invested in "leading and managing change" to create, maintain, and improve employee resilience. In other words, one of the areas of soft investment for managing employee resilience has been performing and guiding the "conducting and leading the "process of leading and managing change in times of COVID-19 crisis in the organization"." In such organizations, managers believe that employees can continue to provide public services with more resilience if this transition period is led correctly and managed. This category includes "preparing employees for emergencies," "forming an internal coalition to implement change," building of the post-transition future, "providing the necessary investments to make a change," and "effective organizational change in response to conditions of COVID-19 pandemic crisis". In the following, we will explain these categories more.

**Sub-category 1: Employee Readiness** Managers must be prepared to adapt their working conditions to the COVID-19 crisis to maintain employee resilience during the COVID-19 crisis pandemic. Managers of public organizations have taken the following measures to prepare employees to work in a changing environment based on the COVID-19 pandemic crisis: " Explain the national and organizational urgency to create the need for change due to the COVID-19 pandemic crisis," Reality-oriented conversations with the employee to get ready for the COVID-19 pandemic crisis "and" determine the vision of the organization to continue services in the COVID-19 pandemic situation ".

"The organization's manager prepared all of us to enter life with the conditions of the COVID-19 pandemic by drawing the current situation and the possible possibilities of work." (Participant No.8: Naser: operational manager).

**Sub-category 2: Formation of Internal Coalition to Implement Changes** Understanding the conditions of organizational urgency to enter the world of change will not guarantee change implementation. Public sector executives have formed a powerful coalition of top, middle, operational and staff executives who have tried to persuade everyone to accept the changing circumstances of the COVID-19 pandemic crisis. This category includes: "agreement on the overall process of organizational change," "delineate existing capacities to accept change and work in the context of the COVID-19 pandemic crisis", "determining the appropriate communication strategy and changes in crisis," "working together and for each other to adapt to new conditions."

"The reality is that our organizational change teams were well-planned to adapt to the new conditions, and the team leaders were determined to make the changes." (Participant No.16: Adel: top manager).

**Sub-category 3: Building of the Post-transition Era** To guide change and align employees with it, government executives outlined a vision for change within the organization in the face of the COVID-19 pandemic crisis. They sought to communicate it to their employees throughout the organization to motivate change alignment managers. This category includes: "mapping the future after changes," "motivate all employees to successfully implement change," and "demonstrate the effective outlook of making changes to employees." (Participant No.19: Majid: top manager).

"Managers promised that if we align ourselves with the changes, we will be safe from the negative consequences of the COVID-19 pandemic crisis while continuing to serve our citizens." (Participant No.14: Reza: employee).

**Sub-category 4: Providing the Necessary Investments to Make Changes** Public managers had to provide the necessary funds to realize their vision of change. Accordingly, the managers of organizational change in the public sector, after preparing the staff, forming a change leadership coalition, and mapping the future after the COVID-19 pandemic in the organization, provided the following investments as much as possible for the actual implementation of change: "policy and regulatory capital, "technological capital "and" financial capital. "

"Given the harsh conditions of the sanctions, our government executives have tried to provide the necessary facilities as much as possible to tailor the organization's work to the COVID-19 pandemic crisis.."(Participant No.3: Rasool: top manager).

**Sub-category 5: Effective Organizational Change in Response to the Conditions of COVID-19 Pandemic Crisis** After a lot of efforts, public managers provided some regulatory facilities, digital technologies, and financial resources to adapt the organization's operations and interactions inside and outside the organization. They thus succeeded in implementing the necessary changes for organizational life in times of pandemic crisis. This category includes the following: "changes in the physical condition of the organization," "changes in existing technologies in the organization," "changes in the current attitudes and values of the organization," and "changes in interactions and relationships."

"We work with each other in the organization and interact with the client, and even superiors are different. We use digital technologies under the conditions of COVID-19 pandemic." (Participant No.36: Mohsen: employee).

### **Theme 3: Wetware investments**

Some managers have made employees the focus of their enhancing-resilience programs. In this regard, public sector organizations have invested in the areas of "personal health of employees (physical and mental health)" and "employee capabilities (communication capabilities and resilience capabilities, work capabilities)." We will continue the discussion by elaborating on these categories and some quotes from the interviewees.

**Category 1: Personal Health of Employees** Some public managers seem to believe that the employees themselves are the focus in the enhancing-resilience process. Accordingly, public organizations have focused part of their investments on employee enhancing-resilience programs, called wetware investments. This main category includes "physical health of employees (personal hygiene of employees and enhancing-resilience knowledge, conditions of employees as a whole)," "mental health (employee's peace of mind and the establishment of sustainable and motivational communication systems)."

**Sub-category 1: Physical Health of Employees** Undoubtedly, maintaining the physical health of employees is the infrastructure of their mental health and is the central focus of all investments of public organizations to strengthen employee resilience. In this category, the main measures that create resilience in employees are: "personal hygiene of employees" (including the use of masks, gloves, installation of a barrier to protect the privacy of the client against the client and other colleagues, arrangement of chairs with space, tools and antiseptic, supply of hygienic materials and antiseptic to employees' families), "resilience enhancing knowledge" (continuous information on disease profiles in the organization, training in protocol compliance, training in adapting to new digital technologies, training in flexibility at work) and "conditions of employees as a whole (challenges of work, challenges of personal life, relationships with others, resources and equipment appropriate to the conditions of COVID-19 pandemic crisis, self or family experience of the COVID-19 disease,

transportation challenges, care, and health services, housing, mortgages, rent, economic challenges).

"Employees' resilience to other hardships associated with the COVID-19 disease will be more tolerable if employees' bodies are not damaged, and they do not develop COVID-19." (Participant No.30: Farzahneh: middle manager).

**Sub-category 2: Mental Health of Employees** In the process of the resilience of employees, protection of mental health can be the basis of the physical health of employees. To promote employee resilience during the COVID-19 pandemic, public organizations have developed programs to create, maintain, and improve employee mental health. This category includes employee's peace of mind (setting up an emotional well-being environment, hope for the future, injecting a sense of pride into an employee who is working in the context of the COVID-19 pandemic crisis, making work meaningful in the path of commitment to serving people, encouraging employees to mindfulness, cognitive agility in employees, Joking in the organization) and the establishment of communication and inspiring systems (online team activities, digital social networking, empathy with employees' families, collective greetings).

"Our organization was trying to maintain employee relationships during the COVID-19 pandemic crisis through the design of social networks and not to disrupt past employee social connections," (Participant No.20: Solmaz: employee).

**Category 2: Employee Capabilities** Employees have capabilities that, if developed, can help them adapt to new situations. Recognizing these capabilities, Iranian public sector organizations have sought to prepare employees to work in the context of the COVID-19 pandemic through various training in different styles and ways. These categories include "developing the interactive capabilities of employees through training," "cultivating the resilient capabilities of employees through training and learning," and "Creating the ability to adapt to new working conditions in employees".

**Sub-category 1: Interactive Capabilities of Employees** Because human beings are social, human interaction can alleviate the pain of many crises. Organizational training has been able to affect the interactive capabilities of employees in the following dimensions: "integrity-based interactions," "humility-based interactions," "flexibility-based interactions," and "empathy-based interactions."

"The presence of psychologists in organizations strengthened the spirit of honesty, empathy at work in the face of the COVID-19 pandemic crisis in our organization." (Participant No.13: shabnam: employee).

**Sub-category 2: Resilience Capabilities** Most people can adapt to new conditions if they can be trained. Public sector organizations have set up a variety of workshops

and lectures to develop employee resilience in the following areas: "physical-mental resilience," "emotional-social resilience," and "financial-economic resilience."

"The fact is that some of the workshops were very uplifting and could calm us down mentally." (Participant No.51: Javad: employee).

**Sub-category 3: Ability to Adapt to New Working Conditions** Iranian public organizations with new investments that have made changes in organizational technologies and work environment by holding a variety of learning and training sessions have improved the ability of employees to adapt to new conditions. Among the capabilities of this sub-category are: "flexibility in doing organizational work," "work-life balance," "adaptation to new interactive styles inside and outside the organization," and "empower employees to work with new tools and work resources."

"The training that the organization held virtually was able to enable us to work in new conditions." (Participant No.48: Arash: employee).

## Discussion

The defensive shield of the people of every country is a public sector against major global, national, and local crises. COVID-19 had once again laid on the claim that "public administration is the only home and habitation of citizens in dealing with natural and unnatural disasters." Environmental turbulence and unexpected events such as pandemics (including the COVID-19) can disrupt the organization and affect the organization's functionality and performance. Agile and adaptive public administration is the main element of the crisis management (governance, administration, and operational activities during a crisis). Public organizations employees are unique servants of the public during emergencies. In other words, public workforces are the central infrastructure of effective and proactive responses of governments to natural disasters, including COVID-19. When organizations aim to respond to challenges successfully, employees' capabilities and especially resilience have been identified as critical success factors. Resilience is the capacity to adapt and respond positively to challenging events and situations. Employee resilience has been recognized as an organizational adaptation to uncertain and dynamic work environments in the last two years. Resilient employees make resilient organizations. There has been increasing interest in understanding the contributors to fostering employee resilience. Scholars have defined resilience as the ability to bounce back from crises and modify goals and behaviors to cope with changes in the environment, emphasizing the adaptive principles underlying a recovery repertory. In general, having a productive force is very important to increase organizational stability in providing public services during the COVID-19.

The ultimate purpose of this study was to investigate the investment areas of Iranian public organizations to create, maintain and improve employee resilience during the COVID-19 pandemic. Findings show that the Iranian public sector, relying on its existing

facilities and under the most severe sanctions in three general areas, has made suitable investments to make its employees resilient and continue public-serving citizens. The findings of this study provide a new scientific typology in the path of investment metaphor to the employee resilience literature and, on the other hand, provide a framework for practical guidance for managers to identify different areas affecting employee resilience capacity. Although various studies have repeatedly pointed to the factors affecting employee resilience, no comprehensive framework has been provided as a research guide to employee resilience and managers' investment practice guidance for managing employee resilience in times of crisis, such as the COVID-19 pandemic. On the other hand, many of the elements in this model have been confirmed in previous research.

No research has been done on hardware investments, especially organizational technologies, and in particular the digitalization of the organization during the COVID-19 pandemic, but indirectly refers to the link between digitalizing the organization and employee resilience (e.g., Anthony & Abbas, 2020; Härmand., 2021). Accordingly, Iranian public organizations have mainly focused on internal digitalization and external. This trend has also grown significantly with the advent of the COVID-19 worldwide pandemic. Digital technologies affect employee resilience by reducing the presence of employees in the organization and by accelerating the provision of services and information, as well as reducing direct contact of citizens and customers with employees and thus reducing employee stress (Appolloni et al., 2021; Katz et al., 2020). In addition to organizational technologies, in hardware, public organizations have strongly invested in the workplace (including the organizational and occupational environments) to enhance employee resilience. Our findings indicate that a suitable workplace environment can play an essential role in creating, maintaining, and promoting employee resilience is consistent with several studies (e.g., Macky & Boxall, 2007a, b; Fletcher & Sarkar, 2013; Bardoel et al., 2014; Britt et al., 2016; Kossek & Perrigino, 2016; Shaw et al., 2016; Malik & Garg, 2017; Tonkin et al., 2018; Khan et al., 2019; Teng-Calleja et al., 2020a, b; Ngoc Su et al., 2021; Ojo et al., 2021).

Accordingly, public managers, by intervening in the organizational workplace environment and the occupational environment of employees, have tried to withstand the crisis by providing special conditions appropriate to the COVID-19 pandemic. The effect of intervention in the workplace has been confirmed explicitly in strengthening the resilience capacity of employees in some studies. (Cooper, 2014, Franken et al., 2019; Ojo et al., 2021)

Public organizations in the area of software have also made various investments to affect the resilience capacity of employees. Investing in administrative culture (by creating values, norms, and resilient behaviors of employees) to improve the resilience capacity of employees is one of the findings of this study. Numerous scientific works have emphasized the role of culture in resilience (e.g., Waite & Richardson, 2004; Daum & Maraist, 2021). In the area of software investment, investing in interactions and communications as a productive repertory affecting the resilience capacity of employees is another finding of this research, which in many scientific studies has referred to it (e.g., Connor & Davidson, 2003; Bardoel et al., 2014, Britt et al., 2016, Khan et al., 2019, Spicer, 2020, Zarnadze & Kasradze, 2020, Daum & Maraist, 2021, Ojo et al., 2021).

Some public managers argued that public managers should lead "organizational change management" in a way that paves the path for employee resilience,

given that crises create emergencies and there is no opportunity for long-term investment. This present study's finding is consistent with some scientific works in employee resilience (e.g., Britt et al., 2016; Hoopes & Kelly, 2004; Kovoormisra., 2020). Accordingly, Iranian public sector managers tried to influence employee resilience by investing in the change management process. Studies of numerous scientific works in the field of employee resilience(e.g., Macky & Boxall, 2007a, b, Youssef & Luthans, 2007, Avey et al., 2009, Iacoviello & Charney, 2014, Britt et al., 2016, Kuntz et al., 2017, Khan et al., 2019, Liu et al., 2019, Ngoc Su et al., 2021, Ojo et al., 2021, Zhu & li, 2021) show that investing in the inherent capabilities of employees, personal health of the employees is justifiable. Accordingly, this type of investment, called wetware investment, has been one of the most important areas for public managers to invest for promoting employee resilience. Thus, the findings of this study in the area of physical and mental health of employees as essential factors in improving the resilience of employees are confirmed by some studies (e.g., Kabat-Zinn, 2005, Bardeol et al., 2014, Britt et al., 2016, Tonkin et al., 2018, Rodrigo & Maghuyop, 2020). Also, the findings of this study on interactions and relationships in the organization as an essential factor in improving the resilience capacity of employees are consistent with some studies (e.g., Britt et al., 2016; Connor & Davidson, 2003; Fletcher & Sarkar, 2013; Ojo et al., 2021; Rodrigo & Maghuyop, 2020; Seville, 2018).

In short, under the most severe sanctions, Iranian public organizations have tried to invest as much as their financial capital and managerial capacity in three areas: "Hardware, Software and Wetware" to keep their employees committed to the continuation of public services to the citizens. The findings of this study, while improving the theoretical capacity of employee resilience, provide helpful, practical guidelines for public managers in other countries to have a valuable framework for investing in employee resilience.

The emerged framework of this research shows a coherent picture of essential areas of investment of organizations in times of crisis. Researchers can use this framework to research, and managers can use this framework to plan for employee resilience. This research fills the gap in the literature and offers a new perspective on resilience.

## Declarations

**Ethical Approval** There is an ethical approval.

**Informed Consent** There is the informed consent of the participants.

**Conflict of Interest** No potential conflict of interest.

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