

Public Hospital Resilience: The role of organizational-employee relationship

La résilience des hôpitaux publics : Le rôle de la relation organisation employés

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ABSTRACT

Introduction: Hospital resilience has become a strategic imperative, enabling recovery and growth in adversity. Employee resilience is equally critical for sustaining organizational functionality during and after crises.

Aim: The aim of this research is to study the impact of the "employee-organization" relationship on individual and organizational resilience.

Method: We conduct a quantitative study on a sample of Tunisian employees from on the healthcare sector. To test the nature of the relation between organizational resilience, individual resilience and employee-organizational relationship, the Partial Least Squares (PLS) regression was used to analyze data.

Results: We included 191employees: 64.9% paramedical staff, 24.08% medical staff, 6.8% senior managers and 4.22% administrative personnel. Women represented 70% of respondents compared to 30% men. Regarding age, we found that: 50% of respondents were between 18–34 years old, 31.1% were between 34–50 years old, and 18.9% were between 50–62 years old. All surveyed participants (100%) held a higher education diploma. We find that the employee-organization relationship has only a direct and positive impact on both organizational resilience and employee.

Conclusion: The study findings emphasize the symbiotic interrelation between relational dynamics and resilience at individual and organizational levels, offering actionable insights for fostering resilience in high-stress environments.

Keywords: Hospital resilience, employee resilience, employee-organization relationship, health crisis

RÉSUMÉ

Introduction: La résilience hospitalière est devenue un impératif stratégique, permettant de surmonter les crises et de se reconstruire. La résilience des employés est tout aussi cruciale pour maintenir la fonctionnalité organisationnelle pendant et après les perturbations et supporter la résilience hospitalière.

Objectif: Cette recherche vise à étudier l'impact de la relation «employé-organisation» sur la résilience individuelle et organisationnelle particulièrement les hôpitaux.

Méthode: Une étude quantitative a été menée sur un échantillon du staff médical et paramédical tunisien du secteur de la santé. Pour analyser la relation entre la résilience organisationnelle, la résilience individuelle et la relation employé-organisation, une régression par Partial Least Squares (PLS) a été utilisée.

Résultats: L'échantillon comprend 191 employés :64,9 % de personnel paramédical, 24,08 % de personnel médical, 6,8 % de cadres supérieurs, 4,22 % de personnel administratif. Les femmes représentaient 70 % des répondants contre 30 % d'hommes. Concernant l'âge, 50 % avaient entre 18 et 34 ans, 31,1 % entre 35 et 50 ans et 18,9 % entre 50 et 62 ans. Tous les participants (100 %) détenaient un diplôme d'études supérieures. Les résultats révèlent que la relation employé-organisation a un impact direct et positif sur la résilience organisationnelle et celle des employés.

Conclusion: L'étude souligne l'interdépendance entre les dynamiques relationnelles et la résilience aux niveaux individuel et organisationnel, offrant des pistes concrètes pour renforcer la résilience dans les environnements stressants.

Mots clés: résilience hospitalière, résilience des employés, relations "employee-organization", crise sanitaire

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INTRODUCTION

In highly complex and dynamic business environment, organizations have faced periods of turbulence, constant change, and crises in recent years. The COVID-19 pandemic serves as a best example that emphasizes the complexity of business environment. During the challenges caused by the pandemic, companies were compelled to meet ongoing socio-economic demands and adapt to continuous disruptions (1). Adjustments in workplace configurations, protocols, and the overall business environment, are profoundly impacted by the psychological well-being of employees. These troubles had high effects on the psychological state of employees (including the loss of colleagues and jobs) and the overall work climate. The multidimensional impact of this crisis, put under obligations organizations to overcome disruptions and adapt effectively, inducing companies to prioritize resilience in their immediate answers and long-term recovery efforts (2). Organizational resilience is regarded as the ability to overcome visible threats (3) and remains essential in both strategic reflexion and recommendations during crises (1). It enables organizations to develop the capacity to regain strength, recover from failure or trauma, and thrive in ambiguous situations (4). It's important to state that organizational resilience is highly reliant on employee resilience, which constitutes its most fundamental and critical component (5). Indeed, positive relationships can help employees to moderate the negative effects of crises pressure on work outcomes (6). In addition, a deep trusting relationship with employees can assist an organization in effectively navigating a crisis and reducing errors (7). During crisis times, it is crucial for an organization to first understand the dynamics between the organization and its employees (8). In fact, strong organization-employee relationships can not only facilitate information sharing, collaborative research, and problem-solving (9) but also better prepare employees to rebound swiftly after setbacks, thereby enhancing their resilience (10). However, it's significant to examine how organizations and their employees interact with one another and with their environment to better predict desired outcomes (11). Therefore, it is pertinent to ask: *What is the effect of the "organization-employee" relationship on employee resilience and organizational resilience?*

The aim objective of our research is to understand the impact of the employee-organization relationship on organizational resilience and employee resilience. To address the research question and achieve our objective, we selected the health sector for the empirical investigation. In fact, the post-COVID-19 employee-organization dynamic within hospital settings remains understudied in the extant literature, particularly regarding its implications for organizational resilience (12). This empirical choice reflects the fact that the Tunisian health sector demonstrated remarkable organizational resilience by managing multiple surges of COVID-19 cases and averting collapse on several occasions (13). Studies that investigate how a health system behaves during a shock can thus help to identify potential for strengthening

the system. Given that the COVID-19 pandemic resulted in an—in modern times—unprecedented shock to health systems worldwide, it provides a unique opportunity to study health system resilience (14). We propose here to study health system resilience by focusing on the ways in which the organization-employee relationship have an effect on the organizational and individual resilience.

METHODS

As part of this research, the literature review allowed us to formulate several hypotheses about the employee-organization relationship and its impact on organizational and employee resilience. To test this hypothesis empirically we have chosen a quantitative method, by distributing a questionnaire, which is a tool for collecting information and measuring data, and will allow us to provide an answer to the problem posed. Indeed, the elaboration of the questionnaire is the most critical and delicate phase of the research process, because it is the first materialization of the study, and its quality is crucial to the quality of the process as a whole.

Our questionnaire is divided into three key sections, each corresponding to the variables of our conceptual model: organizational resilience, employee resilience, and the organization-employee relationship.

The first section contains items measuring organizational resilience were adapted from the work of Lee, Vargo, and Seville (15). The second section to measure employee resilience, items were derived from the validated scale developed by Stephenson et al. (16). The last section contains items measuring the organization-employee relationship adapted from Kim (8). All items are measured on a 5-points Likert scale. We conducted a face-to-face pre-test with a manager (department head), which did not result in any modifications to the questionnaire. This manager has indicated that is understandable and clear. This test allowed us, to calculate the average time taken to complete the questionnaire, which did not exceed ten minutes. Indeed, we distributed the first version, as already mentioned, to ensure that the questionnaire was not considered long or incomprehensible. This pre-test with the manager in the hospital sector allowed us to confirm the quality of the questionnaire. We then proceeded to administer the questionnaire face-to-face to all medical and paramedical staff.

The research setting was carefully selected to ensure alignment with the study's conceptual model, maintaining methodological consistency with its theoretical foundations. This strategic alignment strengthens the validity of our analytical framework and enhances the reliability of our findings. In this regard, we conducted a survey with 190 employees working in various public hospitals. According to Wynne Chin et al. (2003) demonstrated that increasing the sample size beyond a certain threshold does not produce any significant effect on the results. In addition, the authors recommend that, for the examination of interaction effects, the sample size should include at least between 100 and 150 observations. Indeed, our choice of the public health sector is considered as original and stems from the real

hardship observed in various hospitals, which are the organizations most affected by the COVID-19 health crisis. Prior to starting the survey, participants were informed of the study's objectives and the right to refuse participation or withdraw from the study at any time. We confirm that this study adheres to the relevant ethical guidelines for human subjects, and that the anonymity and confidentiality of the participants were maintained throughout the study.

As mentioned before, this study investigates the effects of employee-organization relationships on organizational and employee resilience. Structural equation modeling (SEM) was employed to analyze these complex relationships among constructs, following established practices in management research for examining individual employee outcomes. To adequately capture the real organizational complexity, we developed a multivariate model incorporating multiple interacting variables (10). For model estimation, we implemented Partial Least Squares (PLS) SEM, a robust analytical approach particularly valuable for examining interdependent relationships in social science research (17). PLS regression is one of the most widely used modeling methods in the social sciences. It is considered a "method for modeling phenomena, capable of defining complex interacting systems" (8). Indeed, PLS allows for the introduction of "latent or unobservable variables, the specification of the nature of the relationships between these latent variables and their measurements, the specification of the type of relationships envisaged between the latent variables, or the analysis of causal inferences between several sets of explanatory and explained variables" (18). The PLS approach can be used to empirically confirm the theory, but also to test the presence or absence of relationships and propose proposals for future tests (19). It is therefore more of a method applied when the phenomenon studied is relatively new and the theoretical model or measurements are not very well established (20). The choice of the Partial Least Square method seems well-suited to addressing the issues encountered in management science research because, the PLS method works better in practice because the field data used in modeling are never perfect and are often highly correlated (21).

The structural equation model in our research will therefore be tested using the PLS method, using SmartPLS 3.0 software. The verification of the research hypotheses in our study involves estimating the structural model, through the Bootstrap. Then, we tested the relationships between the variables of the model and the hypotheses of the direct effects.

RESULTS

The survey sample is composed by 191 employee's working in various public hospitals. The results indicate the sample is a female predominant, with women representing 70% of respondents compared to 30% men. According to the Tunisian National Institute of Statistics (INS, 2024), the healthcare sector in Tunisia is

highly feminized. Women represent 65–70% of students in medicine, pharmacy, and dental faculties, while their proportion in the paramedical workforce, including nurses and senior technicians, frequently exceeds 75%. Regarding age, we found that: 50% of respondents were between 18–34 years old, 31.1% were between 34–50 years old, and 18.9% were between 50–62 years old. All surveyed participants (100%) held a higher education diploma. The analysis revealed that the sample consisted primarily of paramedical staff (64.9%), with fewer medical staff (24.08%), senior managers (6.8%), and administrative personnel (4.22%).

The reliability of the measures is assessed through the internal consistency of the constructs, which can be measured in PLS by composite reliability. The results indicate that the measures are satisfactory in terms of reliability (CR). The composite reliability of the various measures exceeds the recommended threshold value in the literature (0.707), ranging from 0.823099 to 0.916456, indicating that the constructs are reliable and acceptable. Convergent validity refers to the extent to which sets of items converge strongly in representing the underlying construct (22).

Convergent validity is considered sufficient when constructs have an Average Variance Extracted (AVE) of 0.5 or higher, signifying that the variance of the construct is better explained by its measures than by error. The convergent validity of a construct is estimated through another technique, which ensures that the student's t-test (T-value) is significant for each of the factor contributions ($t > 1.96$).

To ensure the overall validity of our structural model, it is essential to analyze the Goodness of Fit (GoF) index, in addition to the analysis of R^2 (23). This index is the only global fit index provided by estimation via PLS, and its value ranges from 0 to 1. In our case, the R^2 value for the dependent variable of our model, following a Bootstrap simulation, is 0.538, indicating that it exceeds the minimum requirement of 0.19 as specified by Chin (1998) (24). The GoF index of our model is 0.25, which is considered indicative of a moderate fit. As shown in the table below, three hypotheses were confirmed while one hypothesis was rejected.

In fact, the results indicate that employee resilience has a significant positive effect on organizational resilience ($\beta = 0.188$, $t = 2.016$, $p = 0.044$, 95% CI [0.012; 0.361]). Similarly, the relationship between organization–employee relationship and employee resilience is positive and statistically significant ($\beta = 0.280$, $t = 3.143$, $p = 0.002$, 95% CI [0.104; 0.453]). The strongest effect observed in the model concerns the positive influence of organization–employee relationship on organizational resilience ($\beta = 0.671$, $t = 9.992$, $p < 0.001$, 95% CI [0.541; 0.789]), indicating a high level of precision and robustness in the estimated relationship. Conversely, the moderating effect of organization–employee relationship between employee resilience and organizational resilience was not supported ($\beta = 0.045$, $t = 0.677$, $p = 0.499$, 95% CI [-0.081; 0.172]), confirming the absence of a statistically significant moderating effect."

Table 1. variables relationships test

Hypothesized Relationship	β (Original Sample)	T-value	P-value	95% Confidence Interval
Moderating effect → Organizational resilience	0.045	0.677	0.499	[-0.081 ; 0.172]
Employee resilience → Organizational resilience	0.188	2.016	0.044	[0.012 ; 0.361]
Organization– employee relationship → Employee resilience	0.280	3.143	0.002	[0.104 ; 0.453]
Organization– employee relationship → Organizational resilience	0.671	9.992	0.000	[0.541 ; 0.789]

DISCUSSION

Based on the results of our empirical research, it can be concluded that resilient employees can assist their organizations in overcoming challenges during a crisis and in returning to normal operations afterward, thereby reinforcing organizational resilience. Resilience framework categorises the ability of a health system to manage a shock according to three capacities: (i) the absorptive capacity ensures that the system can maintain health services using previously existing resources and capacities; (ii) the adaptive capacity refers to the system's ability to maintain health services with fewer or different resources by making organisational adaptations; and (iii) the transformative capacity describes the system's ability to transform its functions and structure to respond to changes (23). In line with the theory of affective dissonance, a team composed of resilient employees can attract individuals with similar characteristics to join the organization. Through the bidirectional interactive process of attraction-selection-friction, these individuals converge within the organization to form a more resilient entity (25). Regarding the organization-employee relationship, our empirical research findings revealed that it serves as a positive and direct antecedent to organizational resilience. Indeed, the results affirm that the organization-employee relationship is a significant precursor to organizational resilience, aligning with the notion that the relationship between the organization and its employees fosters organizational resilience (26). Through our empirical research, we notice that a hospital establishes trust and satisfaction with its staff while enhancing engagement and mutual control, is better equipped to manage vulnerabilities. Consequently, the hospital becomes more aware of the severity of situations and improves its adaptability. This relationship also enables public hospital staff to be better prepared for change and capable of adapting more readily in crisis situations, fostering a proactive stance. This relationship not only facilitates information sharing, collective research, and problem-solving but also better prepares staff to rebound quickly after crises. In other words, physicians, nurses, and all medical and paramedical staff

are better equipped for change and can adapt more readily during crises when their hospital establishes a positive relationship with its personnel. This relationship can operate on two levels: between the hospital and department heads, and between department heads and their staff. According to Carmeli, Friedman, and Tishler (27), high-quality relationships can not only facilitate information sharing, collective research, and problem-solving but also better prepare employees to rebound rapidly after setbacks, thereby enhancing their resilience (7).

Despite its direct and positive effect on both employee resilience and organizational resilience, the organization–employee relationship did not play a moderating role between these two constructs.

In other words, the organization–employee relationship neither strengthened nor weakened the association between employee resilience and organizational resilience within the context of this study. This finding may reflect the specific institutional and professional characteristics of public hospitals. Unlike private-sector organizations, where organizational support and HR practices strongly influence employee attitudes and adaptive capacities, public healthcare institutions are often characterized by stronger professional norms, ethical obligations, and public service values. This interpretation is consistent with the literature on Public Service Motivation developed by Perry and Wise (28), which suggests that employees in public institutions are driven by intrinsic motivations linked to service, social utility, and moral responsibility. Similarly, the work of Meyer and Allen (29) highlights that normative commitment may become more salient in professions characterized by strong ethical and social missions, such as healthcare.

Furthermore, the specificity of healthcare professions may also be explained by the nature of medical and paramedical education. In Tunisia, as in many healthcare systems, a substantial part of medical training is hospital-based and practice-oriented, fostering early professional socialization and reinforcing identification with the profession itself. Such socialization processes may strengthen professional belonging more than attachment to a specific organization. Consequently, the organization–employee relationship may have a direct influence on resilience outcomes without significantly altering the relationship between employee resilience and organizational resilience.

The study of resilience can be of practical value as it provides insights into the ways in which factors of organization enable effective shock absorption and facilitate system-wide adaptive responses. A thorough understanding of resilience determinants allows for proactive and concurrent support during disruptive events, as well as informed guidance for post-crises transformation. Organizational resilience is contingent on employee resilience, as resilient employees contribute through adaptive behaviors, problem-solving, and collaboration. This means that employees who possess continuous development capabilities, the ability to rebound, and to restore normal operations after a crisis

are a crucial source of organizational resilience. They contribute to this resilience through their skills, abilities, and cognition.

Furthermore, proactive employees who are prepared for change have a strong capacity to adapt to disruptive events and can collaborate effectively with their colleagues exhibit greater resilience and positively influence organizational resilience, thereby validating our first hypothesis. Indeed, a key aspect of organizational resilience is the effective utilization of available resources, which facilitates creative problem-solving by integrating structural and relational aspects to enhance the capacity for improvisation. Finally, it can be said that when an organization establishes a relationship of trust, by keeping its promises, allowing its employees to participate in decision-making and being attentive to their concerns, it promotes the development of a sense of loyalty and commitment among its employees. This has a positive impact not only on the resilience of employees, but also on the resilience of the organization.

Like any research, this study presents some limits that warrant consideration. The primary stems from its singular focus on the healthcare sector, despite the reason of this sample choice as mentioned in methodology section, which may affect the generalizability of findings. However, this delimitation creates opportunities for future research to extend resilience theory by examining these dynamics across diverse organizational contexts. Future research can incorporate additional variables into resilience frameworks, particularly leadership, human resource management factors and potentially study the critical role of managerial resilience in supporting organizational resilience.

CONCLUSION

This study offers both theoretical and empirical contributions. Theoretically, the proposed model advances current literature by examining the impact of the employee-organization relationship on employee and organizational resilience, a nexus underexplored in recent research. Empirically, the hospital sector serves as a critical context for investigation, given its pronounced exposure to pandemic-related disruptions. This setting strengthens the validity of our findings, as alternative sectors may not provide comparable opportunities to measure resilience variables under such acute crisis conditions.

The research underscores too, that resilient organizations are the backbone of a resilient society. By investing in positive employee-organization relationships, societies can enhance crisis response, improve well-being, and ensure sustainable development. The study's insights are particularly valuable for post-pandemic recovery and future preparedness, making it a cornerstone for building stronger, more adaptive communities.

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