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Organizational and Individual Antecedents of Resistance to Change: Organizational Climate and Technology Readiness

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Background and purpose: There is interest in barriers to change in organizations. This research discusses factors affecting resistance to change based on employees' technological competencies. This research aims to determine the mediating role of technology readiness in the effect of organizational climate in health institutions on resistance to change.
Methodology: Research data were collected from 389 employees working in the healthcare sector. SPSS Process 2.13 macro was used to analyze the model.
Results: According to the analysis results, organizational climate positively affected technology readiness. Additionally, organizational climate reduced resistance to change. In addition, employees' readiness for technology reduced resistance to change. Finally, the mediating role of technology readiness (motivating and blocking factors) in the effect of organizational climate on resistance to change was significant. Further, a positive organizational climate in healthcare institutions increased employees' readiness for new technologies and significantly reduced employees' resistance to change.
Conclusion: Creating a positive organizational climate can be vital in successfully implementing change processes in the healthcare sector. At the end of the research, theoretical and practical suggestions were presented. The research contributes to the literature by addressing the antecedents of resistance to change from organizational and individual perspectives.

Keywords: *Healthcare workers, Organizational climate, Resistance to change, Technology readiness*

1 Introduction

Change is mandatory for organizations in dynamic environments. Organizations that do not ensure change lose their competitive advantage, and their life cycles end. However, change may require extra effort. Sometimes, employees are against changes and resist them being implemented. Since a change includes uncertainty, it creates stress in individuals and is challenging for them (Burton et al., 2004; Çetinkaya et al., 2019; Goll et al., 2007).

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One of the prominent premises in the literature on preventing resistance to change is the organizational climate (Douglas et al., 2017). Organizational climate refers to the employee's perception of organizational structure, promotion of individual responsibility, solidarity, reward-punishment, risk-taking, and management support (Slimani et al., 2017). A positive organizational climate can reduce the resistance of employees or groups within the organization to change. Research in many sectors has found findings reporting that the positive structure of the organizational climate reduces resistance to change (Van Dam et al., 2008). Change is frequently seen in the healthcare sector, where it is integrated with the sector structure. Continuous developments, procedures, technologies, and treatment methods in the healthcare sector make change mandatory (Mareš, 2018). Change brings uncertainty, and mistakes of healthcare professionals significantly affect human health.

Serious consequences of problems that may occur due to the mistakes of healthcare professionals may cause them to resist change (Fournier et al., 2023). Therefore, organizations with the organizational climate can effectively overcome change barriers in healthcare institutions. The positive structure of the organizational climate may enable healthcare professionals to perceive change positively, participate in the change voluntarily, and take responsibility.

In addition to organizational factors that reduce resistance to change, there are also individual factors. In particular, factors such as adaptation to new technologies, openness to new technologies, and trust (Parasuraman & Colby, 2001) can reduce employees' resistance to change (Mini & Janetuis, 2012; Nov & Ye, 2008). The use of new technologies in the health sector is related to employees' readiness to use technologies. Employees ready to use new technologies or technological innovations (Lin et al., 2015) are less resistant to change (Hsieh, 2015; Kamal et al., 2020). However, employees with low technological competencies or fear of using technologies may resist change because they need to learn how to solve problems.

Previous studies provide evidence on how organizational climate and employees' technological competencies influence resistance to change separately. However, the relevant literature needs sufficient explanations about how organizational climate (organizational level) affects technology readiness (individual level) and how employees' technology readiness affects resistance to change. The lack of understanding of how organizational climate and technology readiness sequentially affect resistance to change limits our knowledge of overcoming resistance barriers in the healthcare sector. It is important to determine how the organizational climate affects the technological competencies of employees and how technological competencies overcome the obstacles to change, as it will increase the effectiveness of healthcare providers and the quality of life of healthcare recipients. Based on this deficiency, this research aims to determine the mediating role of the technology readiness level in the effect of organizational climate in health institutions on resistance to change.

The findings obtained are important in terms of showing how the organizational climate, an indicator of the organizational structure, and the positive and negative views on technologies, which are an indicator of individual competencies, play a role in overcoming the barriers to change. Thus, individual and organizational factors affecting the implementation of change decisions in the health sector can be determined. For example, motivations of healthcare professionals to use technologies and how factors that prevent the use of technologies hinder change can be determined. Knowing factors that prevent change contributes to the easy implementation of change decisions in the health sector, directly affecting human life.

One of the main points that the research aims to achieve is to clearly reveal the effect of organizational climate on technology readiness (H1). In addition, determining the negative effect of organizational climate on resistance to change (H2) was determined as another hypothesis. Examining the direct effect (H3) and mediating effect (H4) of the technology readiness level on resistance to change were expressed as other hypotheses of the study.

The research initially elucidates the concepts of organizational climate, technology readiness, and resistance to change. This study examines the level of technology readiness in two dimensions: as a motivating and a blocking factor. The subsequent section presents the relationships among these concepts and addresses the formulation of hypotheses. The following section provides detailed information about the methodologies employed in the research. Finally, the study concludes by presenting the findings, results, and discussions.

1.1 Conceptual Framework

Economic, social, and technological developments have accelerated organizational changes in structure and processes, especially in the last quarter century. While organizations regulate the organizational relations that come with social changes, they also try to compete in the industrial field by establishing extremely complex productivity relationship brought by technology. One of the most important ways to compete in the globalizing economic system is to produce innovations that meet customer demands and expectations and offer them to the market. Organizational climate is one of the most important catalysts in this environment. It helps organizational change and is a concept that creates the personality of the organization, distinguishes the organization from other organizations, dominates the organization, and can affect the behavior of employees (Bakan et al., 2004: 67).

Thakare at al. (2014) considers organizational climate as a concept based on social perceptions of the working environment to influence the motivation and behavior of working individuals. In this study, organizational climate was considered as the individual perception of the working environment and the characteristics of the business (Slimani et al., 2017: 216). According to the definition, organizational climate can be considered a concept that can affect many different organizational areas, from the quality of the product to innovation efforts, from trust in the individual and the organization to motivation (Burton et al., 2000).

One of the areas directly affected by the organizational climate is organizational change. Organizational change is a structured approach to shift individuals, teams, and organizations from a current state to a desired future state. Therefore, the organizational climate will help employees accept and adopt changes in their current jobs (Slimani et al., 2017: 216). However, it may only sometimes be possible to ensure that organizational members fully embrace and support change activities. Even if the organizational climate creates an environment that supports change, employees may resist change for various reasons (Dinçer, 2008, p. 102).

Organizations are represented by the people within them and if these people do not change, there will be no organizational change. Changes in hierarchy, technology, communication networks, etc. become effective only to the extent that these structural changes are associated with those in the psychology of employees (Schneider, 1996, p. 7). Accordingly, constantly developing technologies can lead to structural changes or differences in business processes that directly affect the organizational climate of the organization.

One way to reduce the possible resistance of organizational employees to change is increasing the technology readiness levels of employees within the organizational climate. Parasuraman and Colby (2015) define technology readiness as individuals' tendency to use new technologies at home and work to achieve goals. In other words, technology readiness is the ability to understand and be prepared to use technology (Lai, 2008; Tsai et al., 2020). This concept can be seen as the individual's mental state resulting from the combination of motivational and blocking factors that determine their predisposition to use new technologies (Jacobs et al., 2019; Lin et al., 2015; Öngel et al., 2022).

Parasuraman (2000) developed a comprehensive framework for technology readiness, focusing on four key dimensions: optimism, innovation, discomfort, and insecurity. Optimism involves individuals' belief in technology's ability to enhance control, efficiency, and flexibility in their lives. Innovation reflects their natural inclination to adopt new technologies and take leadership roles. Both optimism and innovation serve as primary motivators for technology readiness. Conversely, discomfort arises from feelings of inadequate control and confidence in using technology, while insecurity stems from distrust in its reliability. These factors significantly block an individual's readiness to adopt technology (Meng et al., 2009; Öngel et al., 2022).

Improving employee's perception of technology readiness in the organizational climate can help change and minimize resistance. In this environment, instead of eliminating resistance, examining its causes, learning the expectations of employees, and making decisions together in team spirit, if necessary, will increase the chance of success.

1.2 Relationships Between Concepts, and Development of Hypotheses

Studies examining the factors that enable the adoption of technologies or readiness for technologies have found that the organizational structure and management structure affect the adoption of technologies (Chittipaka et al., 2023; Taherdoost, 2022). When organizations provide a learning climate, innovation climate, and top management support, the tendency of employees to adopt new technologies increases (Malik et al., 2021). Supportive structure of the organization accelerates the adoption of new technologies in the company (Hameed et al., 2012; Huang et al., 2011; Nystrom et al., 2002; Ofosu-Ampong & Acheampong, 2022). The negative climate of the organization may negatively affect employees' level of technology adoption and readiness for new technologies. When senior management in healthcare institutions takes actions that will make it easier for employees to adopt new technologies, it will be easier for employees to adopt technologies. The hypotheses created based on the inference are as follows:

H1: Organizational climate affects technology readiness (motivating and Blocking factors).

H1a: Organizational climate positively affects motivating factors.

H1b: Organizational climate negatively affects blocking factors.

Continuous changes in the healthcare sector increase the well-being of patients and make it necessary for healthcare professionals to adapt to change. The resistance of employees in the health sector, which makes great contributions to the country's development and is constantly exposed to technological change, can cause serious problems (Lin et al., 2012). As in various sectors, in the health sector (Aydın & Okar, 2020), the positive structure of the organizational climate reduces employees' resistance to change. The open communication and participatory structure of organizational structures (Schulz-Knappe et al., 2019) reduce employees' resistance. At the same time, senior management's development of supportive and positive relationships, creating a positive organizational climate,

reduces employees' resistance to change (Rehman et al., 2021; Srivastava & Agrawal, 2020). In fact, organizational climate in health institutions is seen as a concept that increases the positive behavior of employees (Berberoglu, 2018). The hypothesis created based on these inferences is as follows:

H2: Organizational climate negatively affects resistance to change.

Various technological changes may pave the way for the development of uncertainty and threat perception (Kuo et al., 2013). In this environment, employees may develop resistance to the change they experience (Lin et al., 2012). Resistance to change in the healthcare sector may be more prominent than other negative factors. Healthcare professionals often avoid changing business operations (Fournier et al., 2023). This strong resistance should generally lead senior management to act more carefully. Otherwise, it will be difficult to achieve the set goals (Poon et al., 2004; Rafferty & Jimmieson, 2017). Negative perceptions about technology increase employees' resistance to change (Özdemir-Güngör & Camgöz-Akdağ, 2018; Tsai et al., 2020).

On the other hand, technology readiness increases the relationship between employees' basic and soft skills and makes it easier for employees to adopt new processes (Caputo et al., 2019). It is expected that motivating factors and blocking factors affecting the technology readiness of employees in the healthcare sector will affect resistance to change. The hypothesis created based on these inferences is as follows:

H3: Technology readiness (motivating and blocking factors) affects resistance to change.

H3a: Motivational factors negatively affect resistance to change.

H3b: Blocking factors positively affect resistance to change.

Previous research results provide the inference that organizational climate and organizational structure (Taherdoost, 2022) positively affect the motivating factors that make employees ready for technology. In addition, employees approach technologies negatively when the organizational climate is negative. Employees' positive attitudes toward technology can reduce resistance to change. In addition, employees' negative thoughts about technologies may increase resistance to change (Lin et al., 2012; Özdemir-Güngör & Camgöz-Akdağ, 2018). The hypotheses created based on this inference are as follows:

H4: Technology readiness has a mediating role in the effect of organizational climate on resistance to change.

H4a: Motivational factors have a mediating role in the effect of organizational climate on resistance to change.

H4b: Blocking factors have a mediating role in the effect of organizational climate on resistance to change.

2 Method

2.1 Data collection tools

The Technology Readiness Index (TRI): Developed by Parasuraman and Colby (2015), the TRI is used to measure the technology readiness levels of healthcare professionals. The TRI includes four dimensions (optimism, innovativeness [motivating], discomfort, and insecurity [blocking]) and 16 items. This research us the scale with two main dimensions (motivating and blocking factors).

Resistance to Change Scale: This scale was developed by Brislin et al. (1973); Çalışkan (2019) conducted its Turkish adaptation study. The scale includes 15 items and three dimensions. In the research, the measurement tool was used as a single structure.

The Organizational Climate Scale: This scale was developed by Chen and Huang (2007) using the work of Jaw and Liu (2003). The scale includes five items.

The Survey Form: This form includes questions about the demographic information of healthcare professionals (i.e., age, gender, education, and tenure).

2.2 Sampling method

This research was conducted with a sample of 389 healthcare professionals from private healthcare institutions in Adana, Turkey. Data were collected using online survey forms distributed to participants via email. Reminders were sent until the desired number of responses was achieved. Participants were selected through a simple random sampling technique, ensuring equal opportunity for all healthcare professionals to participate. The sample's representativeness was considered sufficient, surpassing the required sample size of 360 as determined by Hair et al. (2014), who recommend a minimum of 10 respondents per scale item (36 items).

To determine the necessary sample size for regression analysis, a power analysis (Cohen, 1988) was conducted with an expected effect size (Cohen's f2) of 0.50 and a significance level (alpha) of 0.05. Given a population size of 25,000, the power analysis indicated a minimum of 166 participants would be required for regression analysis. Considering both the guidelines provided by Hair et al. (2014) and the results of the power analysis, the sample size of 389 participants was deemed adequate.

Participant demographics were as follows: 53.5% female, 46.5% male, with age distribution: 10.8% below 25, 27.3% aged 25–29, 20.1% aged 30–34, 16.8% aged 35–39, and 25% aged 40 and over. Educational levels included 23.7% with high school/associate degrees, 54% undergraduate graduates, and 22.4% with graduate degrees. Additionally, 56.8% were direct healthcare professionals

(nurses, physicians, and midwives), while 43.2% were support staff.

2.3 Analysis Techniques

The data were analyzed using SPSS 25 package program. Additionally, SPSS Process 2.13 macro was used to test the mediation model. Factor and reliability analyses were performed in the analysis process. In evaluating the results of these analyses, Hair et al.'s (2014) and frequently accepted limit values in the literature were taken as basis (Kaiser-Meyer-Olkin [KMO] = > .60/.70, Bartlett's Test = $p < .05$, Explained variance = > 60%, Cronbach's alpha = > .6/.7). Skewness and kurtosis values were taken as a basis to ensure normal distribution of the data. Skewness and kurtosis values in the range of -2.0 – 2.0 are considered appropriate to assume a normal distribution (George & Mallery, 2010; Tabachnick & Fidell, 2013).

Generally accepted criteria were used in the examination correlation values (0 = no relationship, .01–.19 = very low relationship, .2–.39 = low relationship, .4–.59= moderate relationship, .6–.79 = high relationship, .8–.99 = very high relationship, and 1 = complete relationship). Model 4, developed by Hayes (2018), was used to implement the mediation analysis. In evaluating the significance of the mediation model findings, $p < .05$ level was considered and confidence interval (CI) evaluation was performed. The fact that the confidence interval (ULCI-LLCI) does not contain a value of 0 shows that the results are significant. For the mediation findings to be meaningful, the confidence interval values of the indirect effect are checked. The bootstrapping method is used to determine the significance of the indirect effect value. The fact that the confidence interval (BootULCI-BootLLCI) values obtained by the resampling method do not contain 0 shows that the mediation role is realized (Gürbüz, 2019; Hayes, 2018).

The mediation model (4) used in this research is presented in Figure 1.

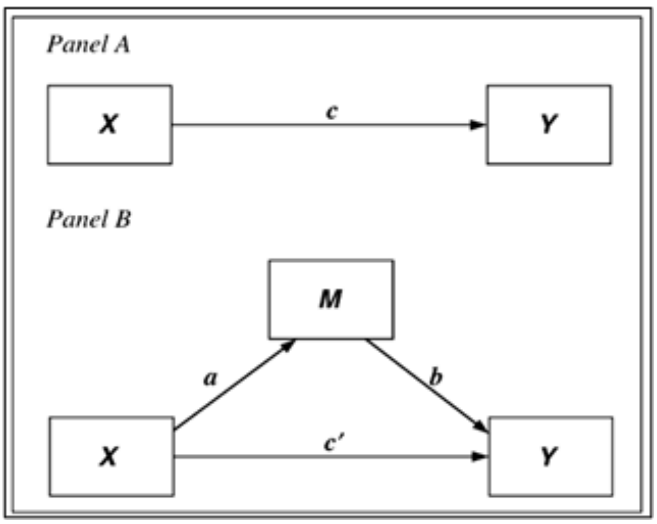

Figure 1: Simple Mediation Model

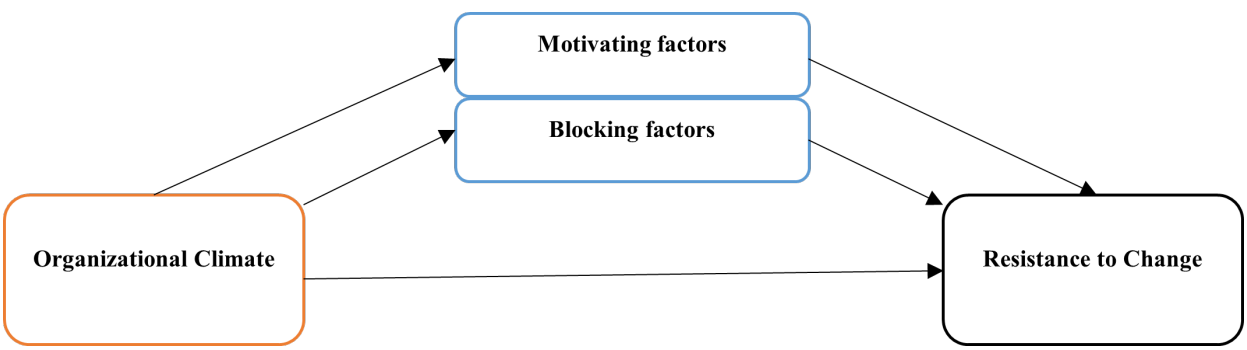

Figure 2: Conceptual Model of the Research

The path a in Figure (Panel B) expresses the direct effect (coefficient) of x on m. The effect of the mediator variable (m) on the dependent variable (y) (the coefficient obtained as a result of testing x, y and m in the same model) refers to the b path. The effect of the independent variable (x) on the dependent variable (y) (total effect; Panel A) is shown via c. Finally, path c' shows the direct effect of the independent variable (x) on the dependent variable (y) (when the coefficient/m obtained as a result of testing x, y and m in the same model is under control). In summary, It is expressed as c = total effect, a.b = indirect effect, c' direct effect, c = c'+ (a.b) (Gürbüz, 2019; Preacher & Hayes, 2004). Consistent with Hayes's (2018) model, the conceptual model created in this research is shown in Figure 2.

Factor and reliability analyses were used to evaluate the suitability of measurement tools. Analysis results are included in Table 1.

According to the factor analysis results, the KMO value of the resistance to change scale was .872, Bartlett's sphericity test was at $p < .05$ level, the explained variance was 68.45%, Cronbach's alpha coefficient was .890, and the number of items was 15. The KMO value of the measuring tool for the blocking factors of technology readiness was .871, Bartlett's test was at $p < .05$, the explained variance was 72.19%, Cronbach's alpha coefficient was .882, and the number of items was 8. The KMO value of the motivating factors of the technology readiness measurement tool was .902, Bartlett's sphericity test was at $p < .05$ level, the total variance explained was 81.30%, Cronbach's alpha coefficient was .926, and the number of items was 7. One item on the motivating factors of technology readiness was removed from the study due to inappropriate loading values. Finally, the KMO value of the organizational climate scale was .889, Bartlett's test was at $p < .05$ level, the total variance explained was 82.88%, Cronbach's Alpha coefficient was .947, and the number of items was 5. When the analysis findings are evaluated in general, it is possible to state that the resistance to change, technology readiness and organizational climate scales provide appropriate values.

Table 1: Search strategies to select articles

	Resistance to change	**Technology readiness (blocking)**	**Technology readiness (motivating)**	**Organizational climate**
KMO measure of sampling Adequacy.	.872	.871	.902	.889
Bartlett's test of sphericity (*p*)	.000	.000	.000	.000
Total variance explained (%)	68.445	72.189	81.30	82.88
Cronbach's alpha	.890	.882	.926	.947
N of item	15	8	7	5

Table 2: Correlation Analysis

	$\bar{x}$	σ	**Technology readiness (motive)**	**Technology readiness (blocking)**	**Organizational climate**	**Resistance to change**
Technology readiness (motiveting)	3.27	1.12	1			
Technology readiness (blocking)	2.26	.75	**-.622****	1		
Organizational climate	2.80	1.20	**.391****	**-.311****	1	
Resistance to change	3.44	.71	**-.428****	**.539****	**-.329****	1
**. Correlation is significance .01. *N*= 389						

Table 3: The Mediating Effect of Motivating Factors on the Effect of Organizational Climate on Resistance to Change

	R	R^2	*p*	B	*SD*	*p*	LLCI	ULCI	Hypothesis	
Motivating factors	.3910	.1529	.000	2.2476	.1333	.0000	1.9856	2.5097	H_{1a}	Supported
Organizational climate				.3650	.0437	**.000**	**.2790**	**.4509**		
Resistance to change	.3288	.1081	.000	3.9776	.0858	.000	3.8089	4.1464	H_2	Supported
Organizational climate				-.1927	.0282	**.000**	**-.2480**	**-.1373**		
Resistance to change	.4632	.2145	.000	4.4776	.1063	.000	4.2686	4.6866	H_{3a}	Supported
Motivating factors				-.2224	.0308	**.000**	**-.2830**	**-.1619**		
Organizational climate				-.1115	.0288	**.000**	**-.1680**	**-.0550**		
(m)		Effect	BootSE		BootLLCI		BootULCI		H_{4a}	Supported
Motivating factors		-.0812	.0207		**-.1246**		**-.0442**			

Correlation analysis results are presented in Table 2. The results showed a low and positive relationship between motivating factors and organizational climate, and a moderate and negative relationship between motivating factors and resistance to change. There was a low and negative significant relationship between blocking factors and organizational climate and a moderate and positive significant relationship between blocking factors and resistance to change. A low and negative relationship was found between resistance to change and organizational climate. According to descriptive statistics, employees' motivation to use technologies was at a medium level, and their perception of blocking factors was low. In addition, their perception of organizational climate was low, and their resistance to change was moderate.

The model results, which examine the mediating role of employees' positive approaches to technologies (motivating factors) in the effect of organizational climate on resistance to change, are shown in Table 3. According to the findings, organizational climate affected employees' positive approach to technologies at a level of 15.29% ($p = .000 < .05$). The regression coefficient was positive and significant (B = .3650, ULCI = .279, LLCI = .4509). Organizational climate affected employees' resistance to change at 10.81% ($p = .000 < .05$). The regression coefficient was negative and significant (B = -.1927, ULCI = -.2480, LLCI = -.1373). The level of effects of resistance to change by organizational climate and motivational factors was 21.45% ($p = .000 < .05$). The coefficient of affecting the resistance to change of organizational climate (B = -.1115, ULCI = -.1680, LLCI = -.0550) and the coefficient of affects the resistance of motivating factors to change (B = -.2224, ULCI = -.2830, LLCI = -.1619) was negative and significant. The mediating role of motivational factors in the effect of organizational climate on resistance to change was low (-.0812), negative and (BootLLCI= -.1246, BootULCI= -.0442) significant. Motivational factors had a mediating role in the effect of organizational climate on resistance to change. The mediating effect of motivating factors was low and negative.

When the findings are generally interpreted, it is seen that the positive climate of the organization reduced employees' resistance to change. In addition, the positive climate of the organization increased employees' positive attitudes toward technology. The employees' positive approach to technology was a factor that reduced resistance to change. When the organizational climate was positive, employees' approach to technologies was positive and resistance to change decreased.

The model results, which examine the mediating role of employees' negative approaches to technologies (blocking factors) in the effect of organizational climate on resistance to change, are presented in Table 4. According to the findings, the level of organizational climate explaining the blocking factors related to technology was 9.7% ($p = .000 < .05$). The regression coefficient was negative and significant (B = -.1951, ULCI = -.2547, LLCI = -.1354). The level of explanation of resistance to change by organizational

climate and blocking factors was 31.74% (p = .000 < .05). The effect coefficient of the organizational climate's resistance to change (B = -.1050, ULCI= -.1560, LLCI= -.0539) is negative and significant. The coefficient affecting the resistance of blocking factors to change (B = .4496, ULCI = .3682, LLCI = .5309) was positive and significant. The mediating role of blocking factors in the effect of organizational climate on resistance to change was low (-.0877), negative and significant (BootLLCI = -.1337, BootULCI = -.0514). The main findings of this study are presented visually in Figure 3.

Blocking factors had a mediating role in the effect of organizational climate on resistance to change. The mediating effect of blocking factors was low and negative. According to the findings, a positive organizational climate reduced employees' negative attitudes toward technology. When employees had a negative approach toward technology, resistance to change increased. A positive organizational climate reduced employees' negative attitudes toward technology and subsequently reduces resistance to change.

3 Discussion

Important results were obtained in this research, which was conducted to determine the mediating role of technology readiness level in the effect of organizational climate in health institutions on resistance to change. According to the findings, a positive organizational climate in healthcare

Table 4: The Mediating Effect of Blocking Factors on the Effect of Organizational Climate on Resistance to Change

	R	R^2	*p*	*B*	*SD*	*p*	LLCI	ULCI	Hypothesis	
Blocking factors	.3019	.097	.000	2.8092	.0925	.000	2.6272	2.9911	H_{1b}	Supported
Organizational climate				-.1951	.0303	**.000**	**-.2547**	**-.1354**		
Resistance to change	.5634	.3174	.000	2.7146	.1384	.000	2.4424	2.9869	H_{3b}	Supported
Blocking factors			.4496	.4496	.414	**.000**	**.3682**	**.5309**		
Organizational climate			-.1050	-.1050	.0260	**.001**	**-.1560**	**-.0539**		
(m)		Effect	BootSE		BootLLCI		BootULCI		H_{4b}	Supported
Blocking factors		-.0877	.0211		**-.1337**		**-.0514**			

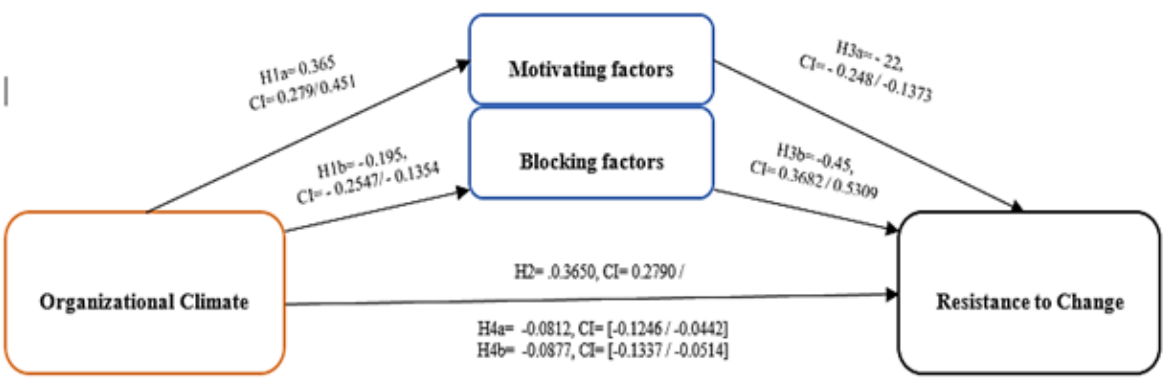

Figure 3: Resulting Model

institutions motivates employees to be ready for technology and reduces the factors that prevent them from being ready for technology. In addition, a positive organizational climate significantly reduces employees' resistance to change. Health workers' positive attitudes to technologies reduce their resistance to change. On the other hand, healthcare professionals' negative attitudes to technologies increase their resistance to change.

The important finding of the research is about the mediating role of technology readiness level. According to the results, while a positive organizational climate in healthcare institutions reduces resistance to change, technology readiness's motivating and blocking factors have mediating roles. In other words, the organizational climate in healthcare institutions motivates employees to be ready for technology and reduces employees' resistance to change. Additionally, organizational climate reduces employees' negative attitudes toward technology (blocking factors) and reduces resistance to change.

Based on all these findings, it may be beneficial for healthcare managers to take the following measures to make their institutions more successful:

Organizations are living organisms where more than one individual comes together to achieve certain goals. The more the goals and objectives in the organization are embraced, the more the sense of unity and solidarity, organizational ownership, commitment and solidarity will develop. It can play a more active role in improving the organizational climate, eliminating its deficiencies, and adopting and implementing goals and strategies. As resistance to change decreases, it can improve employees' readiness for technological changes.

Change is one of the fundamental elements that affects organizations in every field and shapes their future. It manifests itself in competition, innovation, customer expectations and demands, technology and many different areas. It is extremely important for organizations to be prepared for change and to take precautions by anticipating internal and external environmental differences. In this context, managers who can follow technology and allow their employees to assimilate the technology they obtain can achieve their goals faster. In addition, managers who evaluate and manage technological advances together with their employees may encounter less resistance to changes.

The findings obtained from this study are compatible with those of other studies in the literature discussing resistance to change. Previous studies show that organizational climate reduces resistance to change (Aydın & Okar, 2020; Burton et al., 2000; Hon et al., 2014), readiness for technology reduces resistance to change (Abdel-Ghany, 2014; Turan, 2020), and organizational climate reduces resistance to technology. Literature proves it increases the positive approach (Ashraf et al., 2020; Huang et al., 2011; Khasawneh, 2018; Yoo & Wen-Hao, 2012).

The findings obtained from this research are compatible with the previous studies; however, these results have different contributions. Previous studies do not sufficiently examine the technological context of the organizational climate in healthcare institutions and the resistance of healthcare professionals to change; however, this research examines the hindering and motivating factors of technology readiness affecting healthcare workers' resistance to change, which makes it unique. The research contributes to the literature as it is the first study examining the role of technology readiness in the effect of organizational climate on change resistance. In addition, this study constitutes a new agenda by showing the extent to which technological developments in today's health sector and other sectors create resistance in employees and how organizational and individual factors effectively overcome resistance to change.

4 Conclusion

This research has limitations in some aspects, the most important of which was that it examined general technologies. The study was based on no specific technological innovations in a specific health sector. Examining specific technological innovations can effectively show how resistance to change varies in organizations. Additionally, this research was conducted in the Turkish healthcare sector. The technology readiness level of healthcare personnel in developing countries may differ from that of healthcare professionals in developed countries, and different results may be obtained in renewed studies. Another limitation of the research was about the losses of employees in organizational changes. Changes may cause employees to lose their professional practices. These losses can increase stress levels (Fournier et al., 2023). Finally, the skills employees had to change were not addressed within the scope of this research.

It is recommended that future studies on resistance to change be conducted specifically on the technologies used in hospitals. Thus, it can be determined how technology's usefulness, difficulty, and satisfaction affect resistance to change. In addition, actions in the health sector directly affect patients' health. The fact that healthcare professionals' behavior has such a significant impact may cause their skills to come to the fore. For this reason, it is recommended that healthcare professionals' intellectual capital and self-efficacy be associated with resistance to change. Some of the research's recommendations are related to the health sector. Making employees competent in technology reduces resistance to change (Yoo & Wen-Hao, 2012; Kim, 2009;). Therefore, training, technical support and cognitive strengthening should be provided to healthcare professionals. Since the support of top management creates a positive organizational climate in healthcare institutions, it is recommended that senior management

create feedback, open communication and a supportive climate in healthcare institutions. In this way, healthcare professionals can easily solve problems and be ready for innovations.

In developed and developing countries, readiness for and resistance to innovations are unique. Numerous studies support this viewpoint (Jones et al., 2005; Rojas-Mendez et. Al., 2017; Alhammadi et al., 2023). The technological infrastructure in developed countries facilitates higher acceptance of technological innovations. Therefore, readiness for new technologies can vary depending on countries and cultures. Hence, future research should explore the impact of culture on technology readiness and resistance to change.

Literature

Abdel-Ghany, M. M. M. (2014). Readiness for change, change beliefs and resistance to change of extension personnel in the New Valley Governorate about mobile extension. *Annals of Agricultural Sciences*, *59*(2), 297-303. https://doi.org/10.1016/j.aoas.2014.11.019

Alhammadi, K., Marashdeh, H., & Hussain, M. (2023). Assessing the effect of innovation diffusion and technology readiness theories on attitude, behavioral intention and implementation of smart learning. *Cross Cultural & Strategic Management*, *30*(4), 657-675.

Ashraf, M. I., Jumani, N. B., & Mehmood, A. (2020). The relationship between organizational climate and technology acceptance at university level. *J Educ Sci Res*, *7*(2), 49-70.

Aydın, B., & Okar, M. (2020). The relationship between teachers' organizational climate percetions and attıtudes toward change resistance. *International Journal on Lifelong Education and Leadership*, *6*(1), 10-19.

Bakan, İ., Büyükbeşe, T. & Bedestenci, Ç. (2004). Örgüt *sırlarının* çözümünde örgüt *kültürü teorik ve ampirik yaklaşım*, İstanbul, Aktüel.

Berberoglu, A. (2018). Impact of organizational climate on organizational commitment and perceived organizational performance: Empirical evidence from public hospitals. *BMC Health Services Research*, *18*, 1-9. https://doi.org/10.1186/s12913-018-3149-z

Brislin, R. W., Lonner, W. J., & Thorndike, R. M. (1973). *Cross cultural research methods,* New York, John Wiley-SonsPub.

Burton, R. M., Lauridsen, J. & Obel, B. (2000). *Tension and resistance to change in organizational climate: Managerial implications for a fast paced world*. LOK Research Center.

Burton, R. M., Lauridsen, J., & Obel, B. (2004). The impact of organizational climate and strategic fit on firm performance. *Human Resource Management: Published in Cooperation with the School of Business Administration, The University of Michigan and in Alliance with the Society of Human Resources Management*, *43*(1), 67-82.

Çalışkan, A. (2019). Değişime direnç: Bir ölçek uyarlama çalışması. *Süleyman Demirel Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, *24*(2), 237-252.

Caputo, F., Papa, A., Cillo, V., & Del Giudice, M. (2019). Technology readiness for education 4.0: Barriers and opportunities in the digital world. In *Opening up education for inclusivity across digital economies and societies* (pp. 277-296).

Çetinkaya, A. Ş., Niavand, A., & Rashid, M. (2019). Organizational change and competitive advantage: Business size matters. *Business & Management Studies: An International Journal*, *7*(3), 40-67.

Chen, C. J., & Huang, J. W. (2007). How organizational climate and structure affect knowledge management—The social interaction perspective. *International Journal of Information Management*, *27*(2), 104-118.

Chittipaka, V., Kumar, S., Sivarajah, U., Bowden, J. L. H., & Baral, M. M. (2023). Blockchain technology for supply chains operating in emerging markets: An empirical examination of technology-organization-environment (TOE) framework. *Annals of Operations Research*, *327*(1), 465-492. https://doi.org/10.1007/s10479-022-04801-5

Dinçer, Ö. (2008). Örgüt *geliştirme teori, uygulama ve teknikler*. Alfa.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.

Douglas, J., Muturi, D., Douglas, A., & Ochieng, J. (2017). The role of organisational climate in readiness for change to lean six sigma. *The TQM Journal*, *29*(5), 666-676.

Fournier, P. L., Jobin, M. H., Lapointe, L., & Bahl, L. (2023). Lean implementation in healthcare: Offsetting physicians' resistance to change. *Production Planning & Control*, *34*(6), 493-505. https://doi.org/10.1080/09537287.2021.1938730

George, D. & Mallery, P. (2019). IBM SPSS statistics 25 step by step a simple guide and reference, (15th. Ed.), by Routledge

Goll, I., Brown Johnson, N., & Rasheed, A. A. (2007). Knowledge capability, strategic change, and firm performance: The moderating role of the environment. *Management Decision*, *45*(2), 161-179.

Gürbüz, S. (2019). *Sosyal bilimlerde aracı, düzenleyici ve durumsal etki analizi.* Ankara: Seçkin Yayıncılık.

Hair J. F. Jr., Anderson R. E., Tatham R. L. & Black W.C. (2014). *Multivariate Data Analysis*. Macmillan.

Hameed, M. A., Counsell, S., & Swift, S. (2012). A conceptual model for the process of IT innovation adoption in organizations. *Journal of Engineering and*

Technology Management, *29*(3), 358-390. https://doi.org/10.1016/j.jengtecman.2012.03.007

Hayes, A.F. (2013). *İntroduction to mediation, moderation and conditional process analysis: A regression-based.* New York: Guilford Press

Hon, A. H., Bloom, M., & Crant, J. M. (2014). Overcoming resistance to change and enhancing creative performance. *Journal of Management*, *40*(3), 919-941. https://doi.org/10.1177/0149206311415418

Hsieh, P. J. (2015). Healthcare professionals' use of health clouds: Integrating technology acceptance and status quo bias perspectives. *International Journal of Medical Informatics*, *84*(7), 512-523. https://doi.org/10.1016/j.ijmedinf.2015.03.004

Huang, R. T., Deggs, D. M., Jabor, M. K., & Machtmes, K. (2011). Faculty online technology adoption: The role of management support and organizational climate. *Online Journal of Distance Learning Administration*, *14*(2), 1-11.

Jacobs, R. J., Caballero, J., Parmar, J., & Kane, M. N. (2019). The role of self-efficacy, flexibility, and gender in pharmacy students' health information technology readiness. *Currents in Pharmacy Teaching and Learning*, *11*(11), 1103-1110. https://doi.org/10.1016/j.cptl.2019.07.016

Jaw, B. S., & Liu, W. (2003). Promoting organizational learning and self-renewal in Taiwanese companies: The role of HRM. *Human Resource Management: Published in Cooperation with the School of Business Administration, The University of Michigan and in Alliance with the Society of Human Resources Management*, *42*(3), 223-241.

Jones, R. A., Jimmieson, N. L., & Griffiths, A. (2005). The impact of organizational culture and reshaping capabilities on change implementation success: The mediating role of readiness for change. *Journal of Management Studies*, *42*(2), 361-386.

Kamal, S. A., Shafiq, M., & Kakria, P. (2020). Investigating acceptance of telemedicine services through an extended technology acceptance model (TAM). *Technology in Society*, *60*, 101212. https://doi.org/10.1016/j.techsoc.2019.101212

Khasawneh, O. Y. (2018). Technophobia without boarders: The influence of technophobia and emotional intelligence on technology acceptance and the moderating influence of organizational climate. *Computers in Human Behavior*, *88*, 210-218. https://doi.org/10.1016/j.chb.2018.07.007

Kim, D. Y. (2009). The moderating effect of individual and organizational factors on information technology acceptance: The case of US CVBS'internet marketing. *Journal of Travel & Tourism Marketing*, *26*(3), 329-343. https://doi.org/10.1080/10548400902925395

Kuo, K. M., Liu, C. F., & Ma, C. C. (2013). An investigation of the effect of nurses' technology readiness on the acceptance of mobile electronic medical record systems. *BMC Medical Informatics and Decision Making*, 13, 1-14. https://doi.org/10.1186/1472-6947-13-88

Lai, M. L. (2008). Technology readiness, internet self-efficacy and computing experience of professional accounting students. *Campus-Wide Information Systems*. https://doi.org/10.1108/10650740810849061

Lin, C., Lin, I. C., ve Roan, J. (2012). Barriers to physicians' adoption of healthcare information technology: An empirical study on multiple hospitals. *Journal of Medical Systems*, *36*, 1965-1977. https://doi.org/10.1007/s10916-011-9656-7

Lin, S. F., Lin, C. L., & Lee, D. C. (2015). The relationship between elementary school teachers' technology readiness and intention to use social media platforms for classroom management. *International Journal of Organizational Innovation*, *8*(1), 48-63.

Malik, S., Chadhar, M., Vatanasakdakul, S., & Chetty, M. (2021). Factors affecting the organizational adoption of blockchain technology: Extending the technology–organization–environment (TOE) framework in the Australian context. *Sustainability*, *13*(16), 9404. https://doi.org/10.3390/su13169404

Mareš, J. (2018). Resistance of health personnel to changes in healthcare. *Kontakt*, *20*(3), e262-e272.

Meng J.G., Elliott K.M., Hall M.C. (2009). Technology readiness index (TRI): Assessing cross-cultural validity. *Journal of International Consumer Marketing, 22*(1), 19–31. https://doi.org/10.1080/08961530902844915.

Mini, T. C., & Janetuis, S. T. (2012). Technology adaptation, ınnovation resistance and net banking behavior among middle aged adults. *Journal of Business and Management, 3(1), 1-5*.

Nov, O., & Ye, C. (2008). Personality and technology acceptance: Personal innovativeness in IT, openness and resistance to change. In *Proceedings of the 41st annual Hawaii international conference on system sciences (HICSS 2008)* (448-448). IEEE.

Nystrom, P. C., Ramamurthy, K., & Wilson, A. L. (2002). Organizational context, climate and innovativeness: Adoption of imaging technology. *Journal of engineering and technology management*, *19*(3-4), 221-247. https://doi.org/10.1016/S0923-4748(02)00019-X

Ofosu-Ampong, K., & Acheampong, B. (2022). Adoption of contactless technologies for remote work in Ghana post-Covid-19: Insights from technology-organisation-environment framework. *Digital Business*, *2*(2), 100023. https://doi.org/10.1016/j.digbus.2022.100023

Öngel, V., Yavuz, M. S. & Tatlı, H. S. (2022). Factors affecting digital literacy of human resources. *(The Manager)Управленец*, *13*(1), 68-83.

Özdemir-Güngör, D., & Camgöz-Akdağ, H. (2018). Examining the effects of technology anxiety and resistance to change on the acceptance of breast tumor registry system: Evidence from Turkey. *Technology*

in Society, *54*, 66-73. https://doi.org/10.1016/j.techsoc.2018.03.00

Parasuraman A. (2000). Technology Readiness Index (TRI): A multiple-item scale to measure readiness to embrace new technologies. *Journal of Service Research, 2*(4), 307–320. https://doi.org/10.1177/109467050024001.

Parasuraman, A., & Colby, C.L. (2001). *Techno-ready marketing: How and why your customers adopt technology.* The Free Press.

Parasuraman, A., ve Colby, C. L. (2015). An updated and streamlined technology readiness index: TRI 2.0. *Journal of Service Research*, *18*(1), 59–74 https://doi.org/10.1177/1094670514539730

Poon, E. G., Blumenthal, D., Jaggi, T., Honour, M. M., Bates, D. W., & Kaushal, R. (2004). Overcoming barriers to adopting and implementing computerized physician order entry systems in US hospitals. *Health Affairs*, *23*(4), 184-190. https://doi.org/10.1377/hlthaff.23.4.184

Preacher, K. & Hayes, A.. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior research methods, instruments, & computers : a journal of the Psychonomic Society*, *Inc. 36(4)*. 717-31. doi:10.3758/BF03206553.

Rafferty, A. E., & Jimmieson, N. L. (2017). Subjective perceptions of organizational change and employee resistance to change: Direct and mediated relationships with employee well-being. *British Journal of Management,* 28(2), 248-264. https://doi.org/10.1111/1467-8551.12200

Rehman, N., Mahmood, A., Ibtasam, M., Murtaza, S. A., Iqbal, N., & Molnár, E. (2021). The psychology of resistance to change: The antidotal effect of organizational justice, support and leader-member exchange. *Frontiers in Psychology*, *12*, 678952. https://doi.org/10.3389/fpsyg.2021.678952

Rojas-Mendez, J. I., Parasuraman, A., & Papadopoulos, N. (2017). Demographics, attitudes, and technology readiness: A cross-cultural analysis and model validation. *Marketing Intelligence & Planning*, *35*(1), 18-39.

Schneider, B., Brief, A. P., & Guzzo, R. A. (1996). Creating a climate and culture for sustainable organizational change. *Organizational Dynamics*, *24*(4), 7-19. https://doi.org/10.1016/S0090-2616(96)90010-8

Schulz-Knappe, C., Koch, T., & Beckert, J. (2019). The importance of communicating change: Identifying predictors for support and resistance toward organizational change processes. *Corporate Communications: An International Journal*, *24*(4), 670-685. https://doi.org/10.1108/CCIJ-04-2019-0039

Slimani, I., Douli, S., & Belhadj, F. (2017) The relationship between organizational climate and organizational change in corporation Sonelgaz Rustic Distribution Bechar Algeria, *International Journal of Academic Research in Economics and Management Sciences*, *6*(2), 216-229. https://doi.org/10.6007/IJAREMS/v6-i2/2858

Srivastava, S., & Agrawal, S. (2020). Resistance to change and turnover intention: A moderated mediation model of burnout and perceived organizational support. *Journal of Organizational Change Management*, *33*(7), 1431-1447. https://doi.org/10.1108/JOCM-02-2020-0063

Tabachnick B. G. & Fidell, L. S. (2013). *Using multivariate statistics* (6th Ed.), Pearson.

Taherdoost, H. (2022). A critical review of blockchain acceptance models—blockchain technology adoption frameworks and applications. *Computers*, *11*(2), 24. https://doi.org/10.3390/computers11020024

Thakare, V., Prakash, G., & Upadhyay, Y. (2014). Organizational Climate for Technological Innovation–A Case Study". *International Journal of Advanced Manufacturing Systems (IJAMS) in print*.

Tsai, T. H., Lin, W. Y., Chang, Y. S., Chang, P. C., & Lee, M. Y. (2020). Technology anxiety and resistance to change behavioral study of a wearable cardiac warming system using an extended TAM for older adults. *PloS one*, *15*(1), e0227270. https://doi.org/10.1371/journal.pone.0227270

Turan, A.D. (2020). Does unified theory of acceptance and use of technology (UTAUT) reduce resistance and anxiety of individuals towards a new system?.*Kybernetes*, *49*(5), 1381-1405. https://doi.org/10.1108/K-08-2018-0450

Van Dam, K., Oreg, S., & Schyns, B. (2008). Daily work contexts and resistance to organisational change: The role of leader–member exchange, development climate, and change process characteristics. *Applied Psychology*, *57*(2), 313-334.

Yoo, S. J., & Wen-Hao, H. (2012). The impact of employee's perception of organizational climate on their technology acceptance toward e-learning in South Korea. *Knowledge Management & E-Learning, 4*(3), 359-378.

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