

## The Relationship between Organizational Culture and Task Performance In Lean Hospitals: the Mediating Role of Organizational Culture

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**Abstract:** This study aims to determine the mediating role of organizational culture in the relationship between organizational change and task performance of lean hospitals. Also, the relationships among organizational change, organizational culture, and task performance variables were aimed to be determined in the research. Three main hypotheses were determined based on the research model. The structural equation model was performed to test hypotheses using the survey data received from 300 employees of two lean hospitals operating in Turkey. In terms of the relationship between organizational change and organizational culture, there is a positive relationship between adhocracy-clan culture and institutional policy in change, outcomes of change, and management style in change, while there is no significant relationship between resistance to change and adhocracy-clan culture. In terms of the relationship between organizational culture and task performance, there is a positive relationship between adhocracy-clan culture and task performance, while there is no significant relationship between market and hierarchy cultures and task performance. Adhocracy-clan culture has a mediating role in the significant relationship between institutional policy and outcomes of change and task performance, while market and hierarchy cultures not having a mediating role. As a result of the analysis, it has been revealed that organizational culture has a partial mediating role in the causality relationship between organizational change and job performance in lean hospitals.

**Keywords:** Lean Hospital, Organizational Change, Organizational Culture, Task Performance

### *Yalın Yönetim Araçlarını Uygulayan Sağlık Kurumlarında Örgütsel Değişim ve İş Performansı İlişkisi: Örgüt Kültürünün Aracılık Rolü*

**Öz:** Çalışma, yalın hastanelerde örgütsel değişim ile iş performansı arasındaki ilişkide örgüt kültürünün aracılık rolünü belirlemeyi amaçlamaktadır. Araştırmada ayrıca örgütsel değişim, örgüt kültürü ve iş performansı değişkenlerinin aralarındaki ilişkiler belirlenmeye çalışılmıştır. Araştırma modelinden hareketle üç ana hipotez belirlenmiştir. Hipotezler Türkiye’de faaliyet gösteren iki yalın hastanenin 300 personelinden anket yöntemi ile alınan veriler kullanılarak yapısal eşitlik modeli yardımıyla test edilmiştir. Örgütsel değişim ve örgüt kültürü

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*ilişkisinde, değişimde kurumsal politika, değişimin sonuçları ve değişimde yönetim tarzı ile adhokrasik-klan kültürü aralarında pozitif bir ilişki olduğu, değişimde direnç ile adhokrasik-klan kültürü arasında ise anlamlı bir ilişki olmadığı; örgüt kültürü ve iş performansı ilişkisinde, adhokrasik-klan kültürü ile iş performansı arasında pozitif yönlü bir ilişki olduğu, pazar ve hiyerarşi kültürleri ile iş performansı arasında anlamlı bir ilişki olmadığı; değişimde kurumsal politika ve değişimin sonuçları ile iş performansı arasındaki anlamlı ilişkide ise adhokrasik-klan kültürünün aracılık rolünün olduğu, pazar ve hiyerarşi kültürlerinin aracılık rolüne sahip olmadığı görülmektedir. Analizler sonucunda yalın hastanelerde örgütsel değişim ile iş performansı arasındaki nedensellik ilişkisinde örgüt kültürünün kısmi aracılık rolü olduğu ortaya çıkmıştır.*

**Anahtar Kelimeler:** Yalın Hastane, Örgütsel Değişim, Örgüt Kültürü, İş Performansı

## GENİŞLETİLMİŞ ÖZET

**Çalışmanın Amacı:** Çalışma yalın hastanelerde, örgütsel değişim ile iş performansı arasındaki ilişkide örgüt kültürünün aracılık rolünü belirlemeyi amaçlamaktadır. Araştırmada ayrıca örgütsel değişim, örgüt kültürü ve iş performansı değişkenlerinin aralarındaki ilişkiler belirlenmeye çalışılmıştır.

**Araştırma Soruları:** Yalın yönetim araçlarını kullanan sağlık kuruluşlarında örgütsel değişim ve iş performansı arasında ilişki bulunmakta mıdır?

Örgüt kültürünün yalın yönetim araçlarını kullanan sağlık kuruluşlarında örgütsel değişim ve iş performansı arasındaki ilişki üzerinde etkisi bulunmakta mıdır?

**Literatür Araştırması:** Örgütsel değişim ile ilgili çalışmalara yön veren Kurt Lewin(1947), değişimin başarılı olabilmesi için grup normları ve rutin davranışların tamamen değişmesi gerektiğini aksi halde değişimin sürdürülebilir bir nitelik kazanmayacağını vurgulamıştır. Galpin'in (1996) modelinde, değişim süreci örgüt içinde değişim ihtiyacının kabul edilmesiyle başlamakta, değişim vizyonunun oluşturulması ve yayılmasıyla devam etmektedir. Galpin, özellikle örgüt kültürünün anlaşılmasının önemini vurgulamış ve örgüt kültürün yansımalarını kurallar, politikalar, normlar, seramoniler, olaylar, ödüllendirme gibi birçok konuda görüldüğüne değinmiştir. Beer ve Nohria'm (2000) geliştirdikleri örgütsel yeterlilik teorisinde değişimin amacını öğrenmeyi ve yüksek performanslı bir çalışan kadrosunu destekleyen bir örgüt kültürü oluşturmak şeklinde açıklamışlardır. Bu yaklaşımı benimseyen örgütler, bireysel ve örgütsel öğrenme yoluyla kültürlerini ve yeteneklerini güçlendirmeye çalışmaktadırlar.

Örgüt kültürü, işletmenin çalışma biçiminden, ücret ve maaş yönetim biçimine kadar birçok olguyu içermektedir. Örgüt kültürünü "baskın ve paylaşılan değerlerden oluşan, çalışana sembolik anlamlarla yansıyan, örgüt içindeki hikâyeler, inançlar, sloganlar ve masallardan meydana gelmiş bir yapı" olarak tanımlayan Peters ve Waterman (1982), çalışanların iş ortamı ve işin özellikleriyle uyum içerisinde olmaları, onların bu ortama karşı olumlu duygular geliştirerek iş performanslarının artacağını vurgulamışlardır. Erkmen (2010) ise örgüt kültürünün güdüleme aracı olduğu ve özellikle güçlü kültürün olduğu

örgütlerde çalışan motivasyonunun yüksek olduğunu, işgücü devri, işten ayrılma ve işe devamsızlık gibi durumların yaşanmadığını ifade etmektedir.

Burke ve Litwin'e (1992) göre örgütsel değişim, iç ve dış çevresel faktörlerden fazlasıyla etkilenmektedir. Örgütsel değişime yönelik geliştirdikleri modelde, değişim sürecinde en çok etkilenen ve aynı zamanda değişim sürecini en çok etkileyen faktör olan insan kaynağının önemini vurgulamışlardır. Örgüt içi veya dışından gelen baskılar sonucu çalışanların performans ve motivasyon sonuçlarının izlenmesini sağlayacak psikolojik ve örgütsel değişkenlere odaklanmışlardır. Örgütsel değişim sürecinin başarısı ve çalışan performansının artırılmasında örgüt kültürün anahtar bir role sahip olduğunu öne süren Conner (1992) ise örgüt kültürünün değişimle olan ilgisini açıklamak amacıyla kültürün karakteristik özelliklerini tanımlamış ve örgütün amaç, strateji ve politikalarını etkilediğini vurgulamıştır. Kotter (1995) ise örgütsel değişimi tanımladığı sekiz aşamalı modelinde değişimlerin örgüt kültüründe kök salması gerektiğine değinmiştir.

Örgütsel değişim alanında geliştirilmiş olan yukarıdaki modellerin ortaya koyduğu üzere örgütsel değişim sürecinde örgüt kültürünün önemli bir role sahip olduğu ve iş performansını olumlu yönde etkilediği vurgulanmaktadır. Buradan hareketle araştırmanın sorunsalı; hastanelerde yalın yönetim araçlarının uygulanmasıyla gerçekleşen örgütsel değişiminin başarılı olması için öncelikle örgüt kültürünü yalın felsefeye uyarlayacak şekilde değiştirmek ve bu değişim süresinde çalışan performansını artırmak için sürecin her aşamasında çalışanların etkin katılımını sağlamak gerektiğidir.

**Yöntem:** Çalışmada hastanelerde yalın yönetim sisteminin uygulanmasıyla gerçekleşen örgütsel değişimin iş performansı üzerine etkisi ve örgüt kültürünün aracılık rolüne sahip olup olmadığı belirlenmeye çalışılmıştır. Geniş bir literatür araştırması sonucu geliştirilen araştırma modelini test etmek için saha araştırması yapılmıştır. Araştırma kapsam itibarıyla Türkiye'de yalın yönetim sistemini uygulayan hastanelerde yürütülmüştür. Araştırmanın ana kütlelerini Bursa ilinde faaliyet gösteren bir özel hastanenin 350 çalışanı ve Bolu ilinde faaliyet gösteren bir kamu hastanesinin 790 çalışanı oluşturmaktadır. Söz konusu hastanelerde değişik pozisyonlarda görev yapan toplam 300 çalışan araştırmaya dahil edilmiştir. Veri toplama aracı olarak anket yöntemi kullanılmıştır. Anket dört bölümden oluşmaktadır. Birinci bölümde araştırmaya katılan bireylerin demografik bilgilerini içeren sorular bulunmaktadır. Anketin ikinci bölümünde Seren (2005) tarafından geliştirilen, 29 madde ve 4 faktörden (değişimde kurumsal politikalar, değişimde yönetim tarzı, değişime direnç, değişimin sonuçları) oluşan örgütsel değişim ölçeği kullanılmıştır. Anketin üçüncü bölümünde Cameron ve Quinn'in (1999) geliştirdikleri, 24 madde ve 4 faktörden (adhokrasi, klan, pazar, hiyerarşi) oluşan örgüt kültürü ölçeği kullanılmıştır. Anketin dördüncü bölümünde ise Goodman ve Svyantek (1999) tarafından geliştirilen, 9 madde ve tek faktörden oluşan performans ölçeği

kullanılmıştır. Verilerin analizinde SPSS (Statistical Package for the Social Sciences) ve AMOS (Analysis of Moment Structure) programları kullanılmıştır.

**Sonuç:** Örgütsel değişim ve örgüt kültürü ilişkisinde, değişimde kurumsal politika, değişimin sonuçları ve değişimde yönetim tarzı ile adhokrasik-klan kültürü aralarında pozitif bir ilişki olduğu, değişimde direnç ile adhokrasik-klan kültürü arasında ise anlamlı bir ilişki olmadığı; örgüt kültürü ve iş performansı ilişkisinde, adhokrasik-klan kültürü ile iş performansı arasında pozitif yönlü bir ilişki olduğu, pazar ve hiyerarşi kültürleri ile iş performansı arasında anlamlı bir ilişki olmadığı; değişimde kurumsal politika ve değişimin sonuçları ile iş performansı arasındaki anlamlı ilişkide ise adhokrasik-klan kültürünün aracılık rolünün olduğu, pazar ve hiyerarşi kültürlerinin aracılık rolüne sahip olmadığı görülmektedir. Analizler sonucunda yalnız hastanelerde örgütsel değişim ile iş performansı arasındaki nedensellik ilişkisinde örgüt kültürünün kısmi aracılık rolü olduğu ortaya çıkmıştır.

## 1. Introduction

In recent years of rapid change in every field, hospitals encounter an uncertain, complex, and rapid change process in the face of intense global competition. It is seen that hospitals, as in all sectors, have begun to implement changes in their structures and processes to stand out in changing trends and increasing competitive environment. Especially developments in science and technology result in changes in healthcare. In addition to technological changes, patient profile and expectations change with the changing demographic structure. The hospitals adapting to the new environment have started to adopt the lean management system to gain competitive advantage and increase efficiency. The basis of the lean management system is the elimination of operations, materials, and workforce that do not create added value to increase performance in production and service processes (Womack & Jones, 1996). This system, which aims at continuous development and eliminating waste, is applied in the service sector as well as the manufacturing sector. The introduction of a lean management system to the healthcare sector has made a change process necessary in hospitals and cultural change mandatory.

Researchs on lean healthcare has become an important chain of research since the early 2000s, and many researchers around the world have become more interested in this topic. (D'Andreanmatteo et al., 2015). Young et al. (2004) examined the use of industrial processes to improve patient care in their study to provide better quality healthcare at a lower cost. Three mixed industrial approaches consisting of lean thinking, constraints theory and six sigma are associated with the health sector and explained with detailed examples. As a result, in order for three approaches to be successful, strong leadership, adoption of algorithmic methods for problem solving based on continuous improvement, changing the corporate culture and involving employees in the process are recommended. (Young vd. 2004).

The research questions of the study was determined as “is there a relationship between organizational change and job performance in healthcare institutions using lean management tools? “ and “does organizational culture have an impact on the relationship between organizational change and job performance in healthcare institutions that use lean management tools?”. Based on these questions, this study aims to determine the effect of organizational change in hospitals implementing the lean management system on task performance and the mediating role of organizational culture. The research differs from similar studies in the literature in terms of examining the role of organizational culture in the effect of change management’s task performance based on lean practices.

## **2. Theoretical Framework and Hypotheses**

In recent years, it has been observed that health institutions have entered a process of change through lean management practices in order to increase efficiency. The reasons why health institutions need change; as with the influence of the external environment consisting of technology, competition, economic conditions and socio-cultural-demographic conditions; It can also be explained by the influence of the internal environment, such as low productivity, motivation problems, internal conflicts, organizational culture, changes in employees' expectations. (Koçel, 2010).

When organizational change models are examined, it is seen that the effects of the internal environment on the organization bring the issue of change in organizational culture to the fore. Kurt Lewin (1947), who directed studies on organizational change, emphasized that for change to be successful, group norms and routine behavior must change completely, otherwise change will not become sustainable (Burnes, 2004). In Galpin's (1996) model, the change process begins with the acceptance of the need for change within the organization, and continues with the creation and spread of the vision for change. Galpin especially emphasized the importance of understanding organizational culture and mentioned that the reflections of organizational culture are seen in many forms such as rules, policies, norms, ceremonies, events, and rewards (Galpin, 1996). In the organizational competence theory developed by Beer and Nohria (2000), they explained the purpose of change as to learn and create an organizational culture that supports high-performing employees. Organizations adopting this approach try to strengthen their culture and skills through individual and organizational learning (Beer & Nohria, 2000). In the model developed by Andersen Consulting, organizational culture is taken as the center of organizational change and it is stated that the most important changes occur in organizational culture. In the Andersen model, it is predicted that the effect of the external environment on the organization will affect the vision and strategy of the organization, and the change in vision and strategy will affect the leadership within the organization as well as the organizational culture. (Kulvisaechana,

2001). Polat (2003) concluded that there is a significant relationship between employees' perceptions of organizational culture and their attitudes towards change. Gülgün (1999) evaluated organizational change in terms of the values, symbols and assumptions that make up the organizational culture and concluded that social, economic and technological changes significantly affect organizations and that the organizational culture was also changed. In light of this information, the first hypothesis of the research was created as follows:

Hypothesis 1. There is a positive and significant relationship between organizational change and organizational culture.

Organizational structure develops a certain culture within the life process. Culture, on the other hand, is the main factor that determines the success, effectiveness and efficiency of individuals within the organization, which Scott defines as "social organism", in gathering for a common purpose, in qualitative and quantitative interaction and in the works they carry out to achieve this goal (Barutçugil, 2004). As can be understood from these definitions, the relationship between human (employee) and culture, which are among the internal environmental elements of the organization, constitute the critical factors in the success of the organization's change goals.

Organizational culture includes many facts from the way the organization operates to wage and salary management. Peters and Waterman (1982), who defined the organizational culture as "a structure consisting of dominant and shared values, stories, beliefs, slogans and tales within the organization reflected to the employee in the symbolic meaning", emphasized that compliance of the employees with the work environment and characteristics of the work would increase their performance by developing positive emotions (Peters & Waterman, 1982). On the other hand, Erkmen (2010) stated that organizational culture is the motivation tool and especially in organizations with a strong culture, motivation is high with no conditions such as turnover, leaving work, and absenteeism (Erkmen, 2010). In light of this information, the second hypothesis of the research was created as follows:

Hypothesis 2. There is a positive and significant relationship between organizational culture and task performance.

According to Burke and Litwin (1992), organizational change is strongly influenced by internal and external environmental factors. In the model they developed for organizational change, they emphasized the importance of human resources, which is the most affected and the most effective factor in the change process. They have focused on psychological and organizational variables that enable the monitoring of changes in performance and motivation of the employees as a result of internal and external pressures in the organization (Burke & Litwin, 1992). Conner (1992), who argued that organizational culture plays a key role in the success of organizational change process and increase employee

performance, defined the characteristics of organizational culture to explain the relationship between culture and change and emphasized its effects on the organization's goals, strategies, and policies. Kotter (1995), in his eight-stage model defining the organizational change, mentioned that changes should take root in organizational culture. Kotter emphasized that in the organizational change process, employees will develop new approaches, attitudes and behaviors and that the development that occurs with this cultural change will have a positive effect on their business performance.

As presented by the above models developed in the field of organizational change, the organizational culture plays an important role in the organizational change process and positively affects task performance. From this point **forth** the problem of the research is that for the organizational change via the implementation of lean management systems in hospitals to be successful, it is necessary to change the organizational culture to adapt lean philosophy and to ensure effective participation of employees at every stage of the process to increase employee performance during the change. In light of these ideas and thoughts, the third hypothesis of the research was determined as follows:

Hypothesis 3. Organizational culture has a positive mediating role in the relationship between organizational change and task performance.

### **3. Method**

#### *3.1. Sample and Data Collection*

In this study, the effect of organizational change in the hospitals through the implementation of the lean management system on task performance and whether the organizational culture has a mediating role will be tried to be determined. Field research was conducted to test the research model developed as a result of a thorough literature search. For the scope, the research was conducted in hospitals in Turkey implementing lean management systems. The main population of the research consisted of 350 employees of a private hospital in Bursa and 790 employees of a public hospital in Bolu. A total of 300 employees working in different positions were included in the study. The survey method was used as a data collection tool. The survey consists of four sections. In the first section, there are questions including demographic information of the individuals participating in the research. In the second section, the organizational change scale developed by Seren (2005) and consisting of 29 items and 4 factors (corporate policies in change, management style in change, resistance to change, results of change) was used (Seren, 2005). In the third section, the organizational culture scale developed by Cameron and Quinn (1999) and consisting of 24 items and 4 factors (adhocracy, clan, market, hierarchy) was used (Cameron & Quinn, 2006). In the fourth section, the performance scale developed by Goodman and Svyantek (1999) and consisting of 9 items and a single factor was used (Goodman & Svyantek, 1999). SPSS (Statistical Package for the Social Sciences) and AMOS (Analysis of Moment Structure) programs were used to analyze the data.

The model shown in Figure 1 was established to test the concepts subject to the research.



**Figure 1.** *Conceptual Model of the Research*

### 3.2. Measures

After collecting the data, scales were subjected to a screening process proposed by Fornell and Larcker (1981) to test their reliability and validity (Fornell & Larcker, 1981). Firstly, exploratory factor analysis (EFA) was performed on 62 questions using the varimax rotation method. Once the problematic questions were removed, KMO (Kaiser Mayer Olkin) value, which measures the sampling adequacy as recommended by Kaiser (1974), was 0.914, and the Barlett's test, which indicates that sufficient correlation exists between the variables for factor analysis, was also significant at the level of  $p < .001$  ( $\chi^2=12698,98$ ). As a result of the EFA, two factors (Adhocracy, Clan) of the four-factor organizational culture scale merged and formed a three-factor structure and all questions were divided into eight factors. Two items in the organizational change scale and one item in the organizational culture scale were excluded from the survey for factor values to remain below 0,500. Confirmatory factor analysis (CFA) was also performed to evaluate the scale obtained after EFA (N=300). The goodness of fit statistics obtained from CFA of the conceptual model scales is shown in Table 1.

**Table 1:** *The Goodness of Fit Measures and Standard Fit Criteria (N=300 participants)*

	Good Fit	Acceptable Fit	Fit Values of Our Data Set
$\chi^2$			2574,682
df (p)			1567(p<0,001)
$\chi^2/df$	$\leq 3$	$\leq 5$	1,643
RMR	$0 < RMR < 0,05$	$0,05 \leq RMR \leq 0,10$	0,071
NFI	$0,95 \leq NFI \leq 1$	$0,90 \leq NFI \leq 0,95$	0,960
GFI	$0,95 \leq GFI \leq 1$	$0,90 \leq GFI \leq 0,95$	0,966
AGFI	$0,90 \leq AGFI \leq 1$	$0,85 \leq AGFI \leq 0,90$	0,962
RMSEA	$0 \leq RMSEA \leq 0,05$	$0,05 \leq RMSEA \leq 0,08$	0,051

Note. RMR= Root Mean Square Residual; NFI= Normed Fit Index; GFI= Goodness of Fit Index; df= degree of freedom; AGFI= Adjustment Goodness of Fit Index; RMSEA= Root Mean Square Error Approximation

The table has been prepared by using reference values from Meydan and Sesen 2015 (Meydan & Şesen, 2015).



It is seen that the index values examined in Table 1 have a good level of compliance except for the RMR and RMSEA. The obtained values support the structural validity of the model.

**Table 2: Correlation Analysis and Descriptive Statistics (N=300 participants)**

Variables	1	2	3	4	5	6	7	8
1 Institutional Policy in Change	1							
2 Outcomes of Change	0,66**	1						
3 Resistance to Change	0,57**	0,48**	1					
4 Change Management Style	0,64**	0,54**	0,42**	1				
5 Adhocracy-Clan	0,66**	0,66**	0,47**	0,58*	1			
6 Market	0,03	0,13*	-0,08	-0,06	0,02	1		
7 Hierarchy	0,35**	0,41**	0,22**	0,25**	0,43**	0,37**	1	
8 Task Performance	0,36**	0,35**	0,23**	0,21**	0,43**	0,03	0,24**	1
Mean	3,88	3,93	4,26	3,53	3,94	2,79	3,74	4,37
Standard Deviation	0,74	0,76	0,96	1,04	0,84	1,01	0,80	0,97
Cronbach Alfa	0,94	0,88	0,93	0,84	0,94	0,86	0,78	0,89
Composite Reliability	0,94	0,88	0,93	0,86	0,94	0,86	0,78	0,90
AVE	0,53	0,60	0,77	0,68	0,61	0,51	0,43	0,51

Note. AVE= Average Variance Extracted. \*p<0,05, \*\*p<0,01

The results of correlation analysis, reliability values, and descriptive statistics are presented in Table 2. It is seen that the reliability estimates of each variable are close to or far above the limits suggested by Fornell and Larcker (1981). Completing these tests, it can be said that the reliability and validity of the research scales are sufficient.

#### 4. Results

The findings for the demographic data of the research participants are given in Table 3.

**Table 3: Demographic Characteristics of the Research Participants (N=300 participants)**

Demographic Factors		Frequencies (f)	Percentages(%)	Cumulative Percentages(%)
Age	Age 21-30	103	34,3	34,3
	Age 31-40	123	41	75,3
	Age 41-50	61	20,3	95,6
	Age 51-60	13	4,4	100,0
	Total	300	100,0	
Gender	Male	80	26,7	26,7
	Female	220	73,3	100,0
	Total	300	100,0	
Occupation	Physician	33	11,0	11,0
	Nurse	129	43,0	54,0
	Health Technician	88	29,3	83,3
	Administrative Staff	50	16,7	100,0
	Total	300	100,0	

<b>Level of Education</b>	High School	46	15,3	15,3
	Associate Degree	64	21,3	36,7
	Graduate	113	37,7	74,3
	Post Graduate	49	16,3	90,7
	Doctorate	28	9,3	100,0
	Total	300	100,0	
<b>Department</b>	Clinic	202	67,3	67,3
	Administrative Affairs	69	23,0	90,3
	Management	29	9,7	100,0
	Total	300	100,0	

The Structural Equation Model (SEM) was used to test the hypotheses of the research. Table 4 shows the relationship between H<sub>1</sub> and H<sub>2</sub> hypothesis test results and organizational change variables and the relationship between organizational culture variables and task performance.

**Table 4: Hypothesis Test Results (N=300 participants)**

Hypot he sis	Route	Route Value	Result	
H <sub>1</sub>	Organizational Change → Organizational Culture			
H <sub>1A</sub>	Institutional Policy in Change → Adhocracy-Clan	,273*	Partially supported	
H <sub>1B</sub>	Outcomes of Change → Adhocracy-Clan	,338*		
H <sub>1C</sub>	Resistance to Change → Adhocracy-Clan	,073		
H <sub>1D</sub>	Management Style in Change → Adhocracy-Clan	,197*		
H <sub>1E</sub>	Institutional Policy in Change → Market	,027		
H <sub>1F</sub>	Outcomes of Change → Market	,246*		
H <sub>1G</sub>	Resistance to Change → Market	-,188*		
H <sub>1H</sub>	Management Style in Change → Market	-,078		
H <sub>1I</sub>	Institutional Policy in Change → Hierarchy	,143		
H <sub>1J</sub>	Outcomes of Change → Hierarchy	,331*		
H <sub>1K</sub>	Resistance to Change → Hierarchy	-,009		
H <sub>1L</sub>	Management Style in Change → Hierarchy	-,012		
H <sub>2</sub>	Organizational Culture → Task Performance			
H <sub>2A</sub>	Adhocracy-Clan → Task Performance	,397*		Partially supported
H <sub>2B</sub>	Market → Task Performance	-,008		
H <sub>2C</sub>	Hierarchy → Task Performance	,077		
<b>Fit Values</b>	<b>χ<sup>2</sup>=8,936 CFI:0,996 IFI:0,996 χ<sup>2</sup>/df =1,787 RMSEA:0,051</b>			

Note. CFI= Comperative Fit Index; IFI= Incremental Fit Index; RMSEA= Root Mean Square Error Approximation; df= degree of freedom\* $p < 0,05$

When the relationship between organizational change and organizational culture is analyzed in Table 4, there is a positive relationship between institutional policy in change ( $\beta:0,273$ ), outcomes of change ( $\beta:0,338$ ), management style in change ( $\beta:0,197$ ) and adhocracy-clan culture. There is no significant relationship between resistance to change ( $\beta:0,073$ ) and adhocracy-clan culture. Also, there is a positive relationship between outcomes of change ( $\beta:0,246$ ) and market culture;

while there is no significant relationship between institutional policy in change ( $\beta:0.027$ ) and management style in change ( $\beta:-0.78$ ) and market culture. It is seen that there is a significant but negative relationship between resistance to change ( $\beta:-0.118$ ) and market culture. Also, there is a positive relationship between outcomes of change ( $\beta:0.331$ ) and hierarchy culture; while there is no significant relationship between institutional policy in change ( $\beta:0.143$ ), resistance to change ( $\beta:-0.009$ ) and management style in change ( $\beta:-0.012$ ) and hierarchy culture. Therefore, the H1 hypothesis has been partially supported. When the relationship between organizational culture and task performance is examined, there is a positive relationship between adhocracy-clan culture ( $\beta:0.397$ ) and task performance, while there is no significant relationship between market culture ( $\beta:-0.008$ ) and hierarchy culture ( $\beta:0.007$ ) and task performance. Therefore, the H2 hypothesis was partially supported.

The procedure of Baron and Kenny (1986) was followed to test the H<sub>3</sub> hypothesis of the study (Baron & Kenny, 1986). Intermediate variable hypothesis results are given in Table 5.

**Table 5: H3 Hypothesis Test Results**

Relationship	Model A	Model B	Model C
Institutional Policy in Change→Task Performance	,256*		,162
Outcomes of Change→Task Performance	,223*		,103
Resistance to Change→Task Performance	,012		-,014
Management Style in Change→Task Performance	-,072		-,135
Institutional Policy in Change→Adhocracy-Clan		,273*	,273*
Outcomes of Change→Adhocracy-Clan		,338*	,338*
Resistance to Change→Adhocracy-Clan		,073	,073
Management Style in Change→Adhocracy-Clan		,197*	,197*
Institutional Policy in Change→Market		,027	,027
Outcomes of Change→Market		,246*	,246*
Resistance to Change→Market		-,188*	-,188*
Management Style in Change→Market		-,078	-,078
Institutional Policy in Change→Hierarchy		,143	,143
Outcomes of Change→Hierarchy		,331*	,331*
Resistance to Change→Hierarchy		-,009	-,009
Management Style in Change→Hierarchy		-,012	-,012
Adhocracy-Clan→Task Performance			,318*
Market→Task Performance			-,018
Hierarchy→Task Performance			,054
Full Model: $\chi^2=0,364$ CFI:1,000 IFI:1,001 RMSEA:0,000 $\chi^2/df=0,364$			

Note. CFI= Comparative Fit Index; IFI= Incremental Fit Index; RMSEA= Root Mean Square Error Approximation; df= degree of freedom\* $p < 0,05$

As seen in Table 5, three different SEM models were applied to test the intermediate variable effect of organizational culture variables on the relationship between the organizational culture variables and task performance. Accordingly;

- a) According to “Model A”, the variables of institutional policy in change ( $\beta:0,256$ ) and outcomes of change ( $\beta:0,223$ ) are positively associated

with task performance ( $R^2=0,161$ ). It is seen that there is no significant relationship between resistance to change ( $\beta:0.012$ ) and management style in change ( $\beta:-0.072$ ) and task performance.

- b) According to “Model B”, there is a positive relationship between institutional policy in change ( $\beta:0,273$ ), outcomes of change ( $\beta:0,338$ ), management style in change ( $\beta:0,197$ ) and adhocracy-clan culture ( $R^2=0.555$ ); There is a positive relationship between outcomes of change ( $\beta:0,246$ ) and market culture ( $R^2=0,050$ ) and hierarchy culture ( $R^2=0,182$ ), while there is a significant but negative relationship between resistance to change and market culture.
- c) As seen in “Model C”, after organizational change variables are taken under control, adhocracy-clan culture ( $\beta:0,318$ ) is positively related to task performance. Besides, organizational culture variables reduce the effects of organizational change variables on task performance. At the same time, the inclusion of the intermediate variable in the model increases the determination coefficient of task performance to a certain extent ( $R^2=0.212$ ).

According to the above results, adhocracy-clan culture, which is one of the organizational culture variables, has an intermediate variable effect on the relationship of institutional policy in change and outcomes of change with task performance. However, when evaluated based on all variables, it is observed to have a partial intermediate variable effect. Therefore, the  $H_3$  hypothesis is partially supported.

### **Conclusion**

Findings of the research show that hypothesis testing the relationship between organizational change and organizational culture in lean hospitals are partially supported. This result is considered as an indicator of the significant relationship between change and prominent qualities of adhocracy-clan culture such as interconnectedness, sharing, teamwork, risk-taking, producing rapid solutions, and adaptation. Also, it is considered as an indication that the competitive and result-oriented market culture is partly related to change because the service provider (physician), not the service receiver (the patient), determines the size and scope of the service in the hospitals, and the output is not convertible to money. Besides, it is considered that the hierarchy culture has a significant relationship only with the results of change dimension due to the structure of lean hospitals that require collaboration and teamwork among employees.

Findings show that hypothesis testing the relationship between organizational culture and task performance in lean hospitals are partially supported. Considering the hospitals within the scope of our study, the reason for the significant relationship between the adhocracy-clan culture and the task performance can be explained as the integration of the employees with the organization through teamwork, a sense of unity and strong ties; establishing an

entrepreneurial, innovative and creative structure that follows technological and scientific innovations for the improvement of human health and at the same time, the ability to take risks and producing rapid solutions. On the other hand, the reason for the insignificant relationship between market culture and task performance may be that since the output of the hospitals is human health, market-or result-oriented competitive activities are not in question. Besides, the hospitals in the scope of our study having a lean management approach is considered as an indication that the relationship between hierarchy culture and task performance is not significant in our study.

The findings show that the hypotheses testing the mediating role of organizational culture in the relationship between organizational change and task performance in lean hospitals are partially supported. The success of change implementation depends on the adoption and acceptance of these practices by employees. In the organizational change process, it is necessary to explain the new goals and strategies of the organization, shape the job descriptions, and explain how the employees will be affected. Also, change implementation in organizations requires planning for cultural change. Organizational culture is related to the way the organization operates. Since the change implementation plan in the organization will affect the way things are done, it will also affect the staff's core values and beliefs in the context of organizational culture.

In this study, it has been concluded that organizational culture has a mediating role in the effect of organizational change implemented via lean management tools on task performance. At this point, it may be a wrong approach to think of the change process to be initiated in healthcare institutions separately from the organizational culture which will make it impossible to achieve the desired outcomes with the change. Also, it can be said that organizational culture in lean hospitals is the most effective factor in employee performance in the change process. Values, beliefs, norms in the organizational culture should be directly analyzed with change for the change process to produce desired outcomes. The research differs from similar studies in the literature in terms of examining the role of organizational culture in the effect of change management's task performance based on lean practices.

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