# ORIGINAL PAPER EPEYNHTIKH EPΓAΣIA

# Organizational culture of physicians on the island of Crete

OBJECTIVE To identify the organizational culture profile, as experienced by physicians, overall and in the various levels of health care facilities in Crete. METHOD A cross-sectional study was conducted with a sample of 75 doctors at 7 of the 14 public primary health centers (HCs), four general hospitals (GHs) and one tertiary university hospital (UH) on the island of Crete, Greece. A multistage random sampling method was applied. The Greek edition of the questionnaire Organizational Culture Inventory® (OCI®) was used to measure organizational culture. This questionnaire is based on the theoretical framework of Cooke, Rousseau and Lafferty concerning the shared behavioral expectations and normative beliefs that operate within an organization and represent its culture. Analysis of the physicians' responses results in percentage scores of primary culture styles grouped in clusters. RESULTS The operating organizational culture that best characterizes the physicians working in the health care facilities in Crete, overall and at the various levels of health care is the Aggressive/Defensive cluster (overall: 92nd centile; physicians in primary, secondary and tertiary health care level facilities, respectively; centiles 91.75, 84.75 and 90.75). In the primary health care HCs, of the 12 culture styles the most frequently occurring behaviors (primary styles) reported by the physicians were the Oppositional, Power and Avoidance styles (98 centile). The Power culture style (95 centile) was revealed as the primary style also in the secondary health care GHs. Physicians in the tertiary UH reported that the most frequently occurring behavior (primary style) was Avoidance (98 centile). The Constructive cluster of culture styles featured low in the responses of the physicians both overall and at the level of health care facility, with the lowest scores among those employed in the primary health care HCs, and specifically for the Humanistic (5 centile) and Affiliative (10 centile) culture styles. CONCLUSIONS Physicians face challenges both at organizational level and with regard to their professional status. A shift to more constructive organizational behaviors will lead physicians, together with the other health care professionals, towards greater adaptability, enabling them to achieve more effective, qualitative performance in a rapidly changing and demanding health care environment.

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Οργανωσιακή κουλτούρα του ιατρικού προσωπικού της Κρήτης

Περίληψη στο τέλος του άρθρου

# **Key words**

Crete Health care services Organizational culture Physicians Quality of health care

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Organizational culture is a multidimensional concept that has emerged independently in several disciplines ranging from social anthropology to organizational psychology. It can be defined as the set of beliefs, values, behavioral patterns and assumptions shared by the members of an organization.<sup>1–4</sup>

Organizational culture has captured the attention of academics and professionals in varying disciplines, including health care services because of its potentially profound influence on organizational performance, <sup>5,6</sup> and its association with leadership and employee effectiveness, productivity and work satisfaction. <sup>7-9</sup>

In the health care environment, organizational culture has been associated with specific elements of organizational performance that contribute to quality, such as nursing care, job satisfaction, patient and personnel safety, personnel turnover rate and the change management process.<sup>10–13</sup>

Studies have mainly been focused on the measurement of organizational culture in relation to various parameters, the types of culture that facilitate or hinder the functionality, and the performance and quality of services that an organization provides.<sup>14–17</sup>

The exact nature of the relationship between performance, the type of culture that governs an organization,

and success or failure in achieving its objectives is not a simple research process.<sup>8</sup> In addition, many researchers suggest that in complex organizations many values and beliefs that are widespread, deeply ingrained and shared across an organization give rise to subcultures.<sup>2,18,19</sup>

Subgroups within organizations develop their own culture types with positive or negative impact on the performance of an organization.<sup>2</sup> Such subgroups are particularly noticeable in health care organizations, in which many different categories of professional group are working, especially in the hospital setting, where the subdivision into different wards or clinics provides a perfect background for the emergence and development of subcultures.<sup>18</sup>

Organizational culture can be studied by either approaching an organization as a whole or approaching the culture by hierarchical level or by occupational group within the organization.<sup>28</sup>

The multidimensional nature of organizational culture provides a choice, in both the theoretical framework to be adopted by each researcher and the method of assessment to be followed.

The present study examined an organizational culture as a set of specific behaviors, rules or norms (i.e. behavioral norms), which members believe they should adopt in order to survive and work within the organization.<sup>2</sup>

These behavioral patterns can be productive or nonproductive, and they may lead to behaviors and attitudes which determine how the members approach their work and interact with each other.

The aim of the study was to identify the organizational operating culture overall and in the various different levels of health care facilities (organizations) in Crete as experienced by physicians.

#### **MATERIAL AND METHOD**

The cross-sectional study was conducted on the island of Crete (Greece), which has 14 primary care health centers (HC), 4 general hospitals (GH) and one tertiary university hospital (UH), all operating within the Greek National Health System (NHS). The study was conducted with physicians working at 5 of the HCs, which were randomly selected (Agia Varvara, Viannos, Spili, Anogia, Charakas), and at the 4 GHs (Chania, Rethymno, Agios Nikolaos, Venizelio) and the UH (University Hospital of Heraklion).

All participants provided oral informed consent after being given a complete description of the study. The Greek edition of the Organizational Culture Inventory® (OCI®) was administered in the workplace for anonymous completion. Of the 120 question-

naires which were distributed to the physicians, 75 were returned completed, resulting in a satisfactory response rate (63%).

#### The instrument

The OCI® is an integral component of the Human Synergistics multi-level diagnostic system for individual, group, and organizational development. The OCI® measures "what is expected" of members of an organization – or, more technically, behavioral norms and expectations which may reflect to the more abstract aspects of culture, such as shared values and beliefs. The OCI® instrument has been shown to have satisfactory levels of internal consistency and convergent and discriminant validity. In the current study, a Greek modified version of the organizational culture inventory adapted with the permission of Human Synergistics International was administered. The Greek modified version has also been found to have satisfactory internal consistency, with Cronbach's  $\alpha$  of the 12 culture styles of OCI® ranging from 0.665 to 0.914, while the overall OCI rated  $\alpha$ =0.900.

The OCI® measures 12 types of culture style (behavioral norms) which are organized into three general clusters (Constructive, Passive/Defensive and Aggressive/Defensive).<sup>21</sup>

The Constructive cluster includes the Achievement culture style, in which members of organizations are expected to set challenging but realistic goals, the Self Actualizing, in which members are expected to enjoy their work, develop themselves and undertake new and interesting activities, the Humanistic, in which members are expected to be supportive and constructive, and the Affiliative culture style, in which members are expected to be friendly, cooperative and sensitive to the satisfaction of their work group.<sup>2,20,25</sup>

The Passive/Defensive cluster includes the Approval culture style, in which members are expected to agree with and be liked by others, the Conventional, where members are expected to follow the rules and make a good impression, the Dependent in which members are expected to do what they are told and clear all decisions with superiors, and the Avoidance culture style, in which members are expected to shift responsibilities to others and avoid being blamed for a mistake.<sup>2,20,25</sup>

The Aggressive/Defensive cluster includes the Oppositional culture style, in which members are expected to be critical, oppose the ideas of others and undertake low risk decisions, the Power, in which members are expected to take charge and to control subordinates, the Competitive, where members are expected to compete and to work against their colleagues, and the Perfectionist culture style, in which members are expected to avoid mistakes, but also work long hours engaged in narrowly defined objectives.

The Constructive styles are highly effective and promote individual, group, and organizational performance. In contrast, the Aggressive/Defensive styles have an inconsistent and potentially negative impact on performance, and the Passive/Defensive styles consistently detract from overall effectiveness.<sup>2,20,25</sup>

The OCI® contains 120 items instructing respondents to rate:

"To what extent are people expected or implicitly required to..." (for example "think ahead" or "plan"), with the response options on a Likert 5-scale rating (1=not at all; 2=to a slight extent; 3=to a moderate extent; 4=to a great extent; 5=to a very great extent).

In the current study, the OCI® was used to assess the physicians' current operating culture based on the mean responses of all members who completed the OCI®. Unadjusted (or "raw") mean scores for each of the 12 OCI culture styles were converted to percentile scores and analyzed by Human Synergistics International, the copyright holder of the survey instrument.

The cluster that best describes the operating culture of physicians is the one that has the highest average percentile score (i.e., the highest score when the percentile scores of the four styles within the cluster are averaged). The results for the total group and for each level of health care at which the physicians worked were plotted on a circular diagram or circumplex, which is used to describe operating cultures.

The style that extends furthest from the center of the circumplex is the primary style encouraged by the current operating culture of the Crete health care organizations. The style that is the second most extended from the center of the circumplex is the secondary style. The secondary style typically works with the primary style or is expected when the behaviors associated with the primary style cannot be achieved.

# Statistical analysis

Descriptive statistics were used to analyze the data. The results are presented in tables and circumplexes. All statistical analyses

were carried out using the Statistical Package for Social Sciences (SPSS) software (IBM SPSS Statistics for Windows, version 21.0. Armonk, IBM Corp, New York).

#### **RESULTS**

Socio-demographic characteristics of the study sample

The sample consisted of 75 physicians, 62.7% male and 37.3% female. As regards their level of education, in addition to their medical degrees, 12% were holders of an MSc or PhD. The respondents were almost equally distributed between HCs, GHs and the UH (tab. 1) and the majority (30.7%) had been working in the organization for more than 10 years.

Measurement of the organizational culture of physicians

The cluster that was found to best describe the physicians' operating culture in total was the Aggressive/Defensive cluster, being that with highest average percentile score (92 centile). Correspondingly, with respect to the specific culture styles, the primary styles were Power (97 centile) and Avoidance (97 centile) and the secondary style Oppositional (94 centile) (fig. 1, total culture).

Analysis of the physicians' operating culture by level of health care organization revealed that each health care level primary (i.e., HC), secondary (i.e., GH) and tertiary (i.e., UH) sustained an Aggressive/Defensive culture (91.75 centile, 84.75 centile and 90.75 centile, respectively).

**Table 1.** Demographic characteristics of physicians operating in the Crete health care system.

		Male		Female		Т	Total	
		n	(%)	n	(%)	n	(%)	
No		47	(62.7)	28	(37.3)	75		
Age (years)	20–29	5	(10.6)	5	(17.9)	10	(13.3)	
	30–39	22	(46.8)	15	(53.6)	37	(49.3)	
	40–49	16	(34.0)	5	(17.9)	21	(28.0)	
	50+	4	(8.5)	3	(10.7)	7	(9.3)	
Educational level n (%)	Higher (university)	39	(82.9)	27	(96.4)	66	(88.0)	
	Higher with specialization MSc or PhD	8	(17.0)	1	(3.6)	9	(12.0)	
Experience (years)	Less than one year	2	(4.3)	6	(21.4)	8	(10.7)	
	1 to 4	12	(25.5)	7	(25.0)	19	(25.3)	
	5 to 6	8	(17.0)	5	(17.9)	13	(17.3)	
	7 to 10	10	(21.3)	2	(7.1)	12	(16.0)	
	10+	15	(31.9)	8	(28.6)	23	(30.7)	
Health care levels n (%)	Primary	17	(36.2)	8	(28.6)	25	(33.3)	
	Secondary	16	(34.0)	9	(32.1)	25	(33.3)	
	Tertiary	14	(29.8)	11	(39.3)	25	(33.3)	

Chi-square test. No significant differences were found between genders

Analysis of the 12 culture styles of physicians according to health care level revealed that, in the primary health care organizations (HC), Oppositional, Power and Avoidance were the primary styles (98 centile) and Competitive the secondary culture style (95 centile) (fig. 2). In the secondary health care organizations (GHs), Power was the primary culture style (95 centile), followed by Competitive (91 centile) as the secondary culture style (fig. 3). In the tertiary health care level organization (UH), Avoidance (98 centile) was the primary culture style, with the Power culture style (95 centile) as the secondary style (fig. 4).

# **DISCUSSION**

Subgroups within organizations develop their own culture types that exert an impact, positive or negative, on the

performance of the organization.<sup>2</sup> Organizational culture in the Greek public hospitals is not very strong; however, perhaps because the managers fail to infuse a common pattern of values among employees, and are effectively unable to shape human resource policies and practices.<sup>26,27</sup>

The results of the current study revealed that the physicians in the health care facilities of Crete, independently of the level of health care, report preponderance of the Aggressive/Defensive culture, while the Constructive styles were the least noted. The Aggressive/Defensive culture encourages members to behave competitively and adopt a controlled and superior attitude, even if they lack the necessary knowledge, skills, abilities and experience, in order to protect their status and sense of security.<sup>28</sup> In this type of culture, the constant pressure results in the display

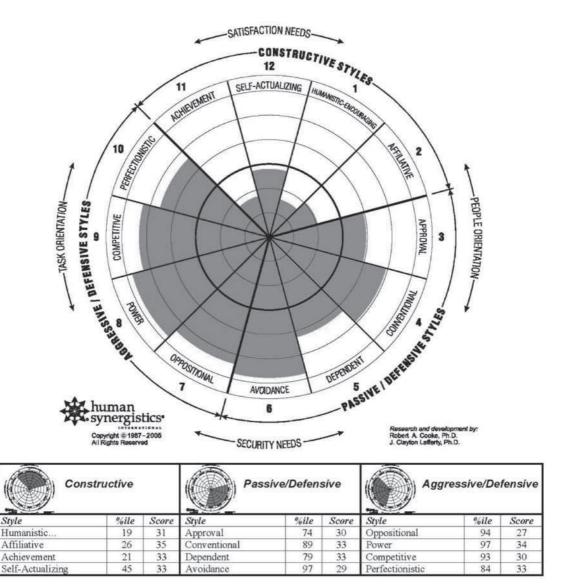


Figure 1. Organizational culture of physicians in the health care system in Crete: Overall (n=75).

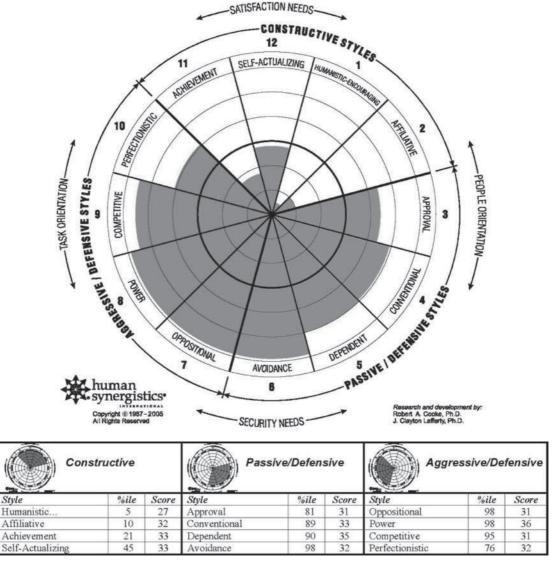


Figure 2. Organizational culture of physicians in the health care system in Crete: Primary health care (n=25).

by individual members of examples of their excellence and expertise, at the expense of teamwork and motivation. Motivational policy in Greek public hospitals is largely limited by the strict legislative framework, which regulates important issues such as salaries and professional development prospects. Doctors' wages are determined by state law; rigid criteria are also in place for issues related to career advancement. <sup>29,30</sup> This lack of motivation and teamwork may explain the results of a study concerning the prevalence of burnout in Greek medical residents, in which 49.5% met burnout criteria and 31.8% indicated burnout on all three subscale scores of the Maslach Burnout Inventory (MBI): High emotional exhaustion, high depersonalization and low personal accomplishment. <sup>31</sup>

General practice and primary and preventive health care

are severely underdeveloped in Greece. <sup>32</sup> Although general practice has been recognized as a distinct medical specialty in Greece for over 20 years, many general practitioners (GPs) report limited public awareness of their role, coupled with a lack of recognition by peers in other specialties. <sup>33</sup> The lack of motivation experienced by physicians in Greek hospitals and HCs is another key element in the Aggressive/Defensive organizational culture. <sup>33,34</sup>

The overall primary culture styles of physicians working in the health care organizations in Crete are the Power and Avoidance culture styles. These behaviors, along with the Oppositional culture style, were reported to be the most prevalent among physicians working in HCs, while the prevalent behaviors for physicians working in the GHs and the UH were the Power and Avoidance culture styles, respectively.

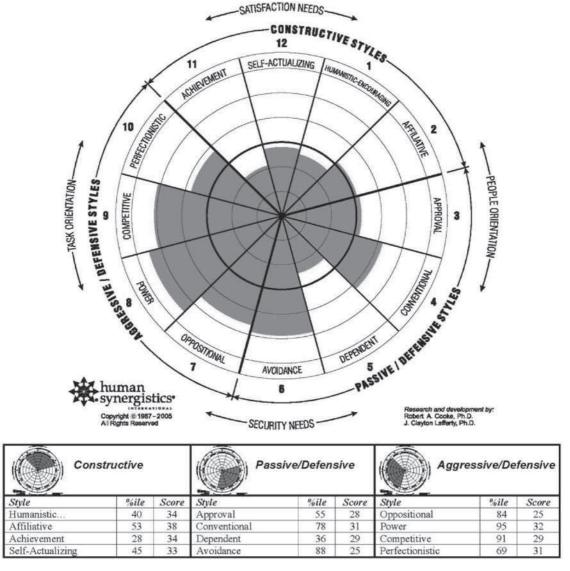
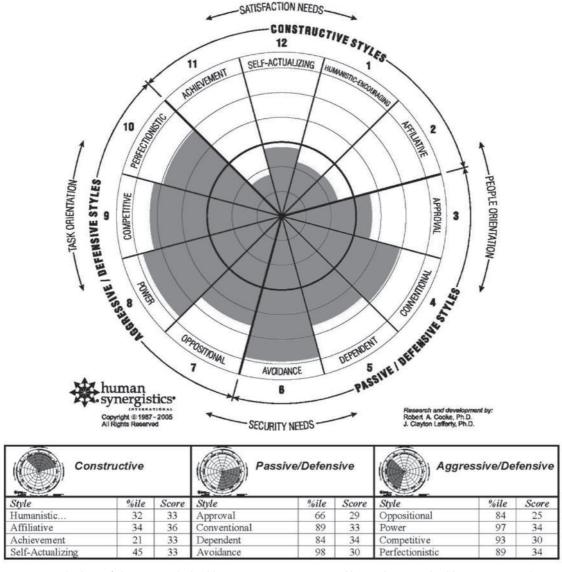


Figure 3. Organizational culture of physicians in the health care system in Crete: Secondary health care (general hospitals) (n=25).

A Power culture is descriptive of non-participative organizations structured on the basis of the authority inherent in the members' positions. The organizational model of Greek hospitals is characterized by very little horizontal coordination, and lack of standardization of procedures. The members of the hospital staff become addicted; therefore, to a non-accountability culture of not servicing internal or external clients, which eventually leads to an overall decline in the entire institution.<sup>35</sup> In addition, the lack of internal operation procedures leads to ineffective communication and confusion in task allocation.<sup>36</sup>

Avoidance culture characterizes organizations that fail to reward success but nevertheless punish mistakes. This negative reward system leads members to shift responsibilities to others and to avoid possibility of being blamed for problems or errors. The survival of this type of organization is doubtful, since members are generally unwilling to make decisions, take action or accept risks in such an environment. The study findings are not surprising, as the Greek NHS remains conventional, highly centralized and pyramid-based.<sup>32</sup>

The Avoidance culture leads people to do nothing, to resist change, to avoid conflict and to be non-committal. People are penalized for showing initiative or taking chances. This is probably the worst possible culture for organizational effectiveness and safety practices. Greek public hospitals face major organizational problems such as permanent employment, political party power over



 $\textbf{Figure 4.} \ Organizational\ culture\ of\ physicians\ in\ the\ health\ care\ system\ in\ Crete:\ General\ hospitals:\ Tertiary\ health\ care\ (university\ hospital)\ (n=25).$ 

employee relations, absence of employee evaluation and lack of motivation and reward systems. The system thus relies heavily on employee willingness to contribute to the effective and quality performance of the hospital.<sup>26</sup>

The bureaucracy governing the Greek health system, the dearth of effective management and the lack of accountability, together with the absence of meritocracy and motivation, may be decisive factors in the development of such organizational behaviors among physicians. 34,36,37

In a study on the need for the introduction of quality management into Greek health care, the researchers argued that the health managers are effectively unable to ensure employee motivation, reward or punishment.<sup>36</sup> Greek physicians, meanwhile, value "achievements" as an important

motivating factor, referring to intrinsic motivators such as pride, appreciation, respect and social acceptance.<sup>38</sup>

The findings concerning the Aggressive/Defensive and Passive/Defensive culture styles regarding the physicians operating in the HCs of Crete do not differ significantly from those for the total physicians participating in the study. A possible explanation may be that the culture during undergraduate medical training is clearly oriented towards specialization and is the same for all medical students. The Faculty of Medicine of the University of Crete is the only medical school in Greece to include primary care in its undergraduate curriculum.<sup>39</sup> Lionis and his research partners point out that the establishment of integrated primary care HCs in Greece is still in its infancy, and that

major restructuring of the current NHS and organizational culture changes are needed.<sup>32</sup>

Consideration should also be given to the second most prevalent behavior (secondary culture style) of physicians in the analysis by health care level. Competitive behavior is expressed by employees who work against (rather than with) their colleagues in order to be noticed, setting unrealistic standards of performance (either too high or too low).

An additional important finding of the study is that the physicians overall, but mainly those in the primary health care organizations, the HCs of Crete, present the lowest scores in the Humanistic and Affiliative culture styles. The absence of a Humanistic culture shows that members do not treat each other with dignity and respect, and colleagues do not value or support the ideas of others or resolve conflict in a constructive manner, but discourage others from growing and developing. Furthermore, the absence of Affiliative culture reveals the lack of team building and participative management.<sup>25</sup>

This measurement of organizational culture of physicians in the Crete health care system identifies targets for cultural changes. Only when an effective diagnosis or cultural audit has revealed how the current order is sustained can effective change management strategies be deployed. Leadership plays a central role in any cultural transformation. In order to produce effective and efficient quality services, physicians must be encouraged to reduce the behaviors expressed by the Avoidance, Power, Oppositional and Competitive culture styles and increase the specific behaviors of the Humanistic-Encouraging, Affiliative and Self Actualizing culture styles (components of the Constructive culture). The Constructive culture promotes the fulfillment of higher-order needs and is associated with performance, growth, and quality work.<sup>25</sup> Creating a constructive organizational culture is not an easy task, especially in the health care setting. It requires a strong mission statement and a defined sense of purpose to guide behaviors. This mission should generate a sense of collectivity and emotional attachment that develops a community focused on organizational goals. 40,41

In the Constructive culture, human resource management plays a decisive part, with reliance on teamwork and collaboration to reinforce cultural values through the recruitment, training and socialization of organizational members. The formulation of a structured personnel management strategy could have a positive impact on the quality of the services provided. A change in the organizational culture of the physicians may be achieved by the establishment of a successful motivation policy based on effective diagnosis of employee needs and the choice of an appropriate leadership style arising from the various extant theories. Two main styles of leadership are widely recognized. "Transactional" leadership is based on securing organizational compliance and control by using motivational factors such as reward systems. The workforce in the health sector has specific features that cannot be ignored, and motivation can play an integral role in many of the compelling challenges facing health care today.42 The other style is the "transformational" leadership process, which inspires cognitive change by redefining the meaning of information to which organizational members are exposed. Integrating these two styles will be a necessary and challenging project. Organizational transformation in health care organizations should involve all employees, and therefore a team-oriented approach should be adopted.

In conclusion, health care everywhere is undergoing a massive transformation due to a changing workforce, high costs and increased complexity of technology, increased needs from the aging population, increased regulations, regulatory compliance and demand for continuous quality improvement. The Greek health care system in particular is also in crisis due to the Greek national debt. The recognition and assessment of organizational culture could be particularly valuable in the health care system, with the potential for maximizing service, quality and outcomes for both the health care providers and the recipients of care. Physicians must shift to Constructive culture styles and play an important role, working together with other health care professionals, in order to create a shared vision through active engagement and achieve sustainable desired change in care delivery, resulting in improved outcomes\*.

<sup>\*</sup> All OCI® terminology, style names and descriptions: From Organizational Culture Inventory TN by R.A. Cooke and J.C. Lafferty, Human Synergistics. Adapted by coryright 2015 by Human Synergistics. Adapted by permission.

#### ΠΕΡΙΛΗΨΗ

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ΣΚΟΠΟΣ Καταγραφή και ανάλυση της οργανωσιακής κουλτούρας συνολικά και ανά επίπεδο φροντίδας υγείας, των υπηρεσιών υγείας της Κρήτης, όπως τη βιώνουν οι ιατροί που εργάζονται σε αυτές. ΥΛΙΚΟ-ΜΕΘΟΔΟΣ Εφαρμόστηκε συγχρονική μελέτη για την καταγραφή της οργανωσιακής κουλτούρας. Η έρευνα διεξήχθη σε δείγμα 75 ιατρών οι οποίοι εργάζονταν σε 7 κέντρα υγείας, σε 4 δημόσια γενικά νοσοκομεία και σε ένα πανεπιστημιακό νοσοκομείο της νήσου Κρήτης, που επιλέχθηκαν με τη μέθοδο της πολυσταδιακής τυχαίας δειγματοληψίας. Για τη μέτρηση της οργανωσιακής κουλτούρας χρησιμοποιήθηκε η ελληνική έκδοση του ερωτηματολογίου οργανωσιακής κουλτούρας (OCI®), το οποίο βασίζεται στη θεωρία των Cooke, Rousseau και Lafferty σχετικά με τις κοινές προσδοκίες συμπεριφοράς που λειτουργούν στο πλαίσιο του οργανισμού και αντιπροσωπεύουν την κουλτούρα του. ΑΠΟΤΕΛΕΣΜΑΤΑ Τα αποτελέσματα της έρευνας έδειξαν ότι το μοντέλο οργανωσιακής κουλτούρας το οποίο χαρακτηρίζει το ιατρικό προσωπικό που εργάζεται σε οργανισμούς υγείας της Κρήτης, συνολικά και ανά επίπεδο φροντίδας υγείας, είναι η επιθετική/αμυντική κουλτούρα (στο σύνολο 92η εκατοστιαία θέση, στο πρωτοβάθμιο επίπεδο φροντίδας υγείας στην 91,75η εκατοστιαία θέση, σε δευτεροβάθμιο επίπεδο οργανισμών στην 84,75η εκατοστιαία θέση και στην 90,75η για το τριτοβάθμιο επίπεδο φροντίδας υγείας). Η ανάλυση των οργανισμών από τους 12 τρόπους κουλτούρας στο πρωτοβάθμιο επίπεδο υγείας έδειξε ότι οι ιατροί θεωρούσαν πως τα συχνότερα συμπεριφορικά πρότυπα (πρωτεύοντες τρόποι) ήταν το αντιδραστικό, η επιβολή εξουσίας και το συμπεριφορικό πρότυπο αποφυγής (98%). Το συμπεριφορικό πρότυπο της επιβολής εξουσίας καταγράφηκε ως πρωτεύον σε δευτεροβάθμιους οργανισμούς υγείας (95%). Τέλος, στο Πανεπιστημιακό Νοσοκομείο Κρήτης οι ιατροί θεωρούσαν ότι το πλέον συχνό συμπεριφορικό πρότυπο ήταν αυτό της αποφυγής (98%). Αξίζει, τέλος, να επισημανθεί ότι όσον αφορά σε συμπεριφορές που συνθέτουν εποικοδομητική κουλτούρα σε έναν οργανισμό, η ανάλυση των αποτελεσμάτων στο σύνολο του ιατρικού προσωπικού αλλά και σε σύγκριση ανάλογα με το επίπεδο φροντίδας υγείας του οργανισμού στον οποίο εργάζονταν, κατέγραψε χαμηλές εκατοστιαίες θέσεις, με τις χαμηλότερες να καταγράφονται στους ιατρούς που εργάζονταν σε πρωτοβάθμιες δομές υγείας, στην ανθρωπιστική συμπεριφορά (5η εκατοστιαία θέση) και στη συμπεριφορά διαπροσωπικών σχέσεων (10η εκατοστιαία θέση). ΣΥΜΠΕΡΑΣΜΑΤΑ Οι ιατροί αντιμετωπίζουν προκλήσεις τόσο σε οργανωσιακό επίπεδο (κουλτούρας) όσο και στην επαγγελματική τους κατάσταση. Μια στροφή σε περισσότερο εποικοδομητικές οργανωσιακές συμπεριφορές θα οδηγήσει από κοινού με τους άλλους επαγγελματίες υγείας σε μεγαλύτερη προσαρμοστικότητα, και στην επίτευξη αποτελεσματικότερης και περισσότερο ποιοτικής απόδοσης σε ένα ταχέως μεταβαλλόμενο και απαιτητικό περιβάλλον υγείας.

**Λέξεις ευρετηρίου:** Ιατροί, Κρήτη, Οργανωσιακή κουλτούρα, Ποιότητα υπηρεσιών υγείας, Υπηρεσίες υγείας

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