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**VALIDITY OF AND RELATIONSHIP BETWEEN THE
VARIABLES OF ETHICAL CLIMATE AND CULTURE,
PATIENT SAFETY AND ORGANIZATIONAL SUPPORT
ETİK İKLİM VE KÜLTÜR, HASTA GÜVENLİĞİ VE ÖRGÜTSEL DESTEK
DEĞİŞKENLERİNİN GEÇERLİLİK VE İLİŞKİLERİNİN ARAŞTIRILMASI**

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Abstract

In this study, it was assumed that behavioral variables within the organizational environment contribute to improve patient safety. For this purpose, in the initial phase, validity and reliability analysis was conducted for the scale in order to adapt to Turkish. In the second phase, the correlation between ethical climate and culture, patient safety and perceived organizational support (manager and peer support) were investigated. The study population involves employees (N= 300) working in four public hospitals in the province of Konya in Turkey. Arraying measures as ethical climate and culture scale (Trevino et al., 1998), patient safety scale (Carruthers et al., 2009) and perceived organizational support scales (McCaughy, 2008) were completed. As a result of the study, patient safety scale has been reached for Turkey its valid form consisting of 7 questions and 3 sub-dimensions. Ethical climate and culture scale has been reached for Turkey its valid form consisting of 11 questions and 4 sub-dimensions. As another result of that, the new version of perceived organizational support scale has been reached for Turkey its valid form consisting of 5 questions (as 3 items for manager support and 2 items for peer support) and 2 sub-dimensions. The results of the study showed that manager support affected on ethical climate and culture. However, peer support had not any statistically significant effect on ethical climate and culture. Besides, ethical climate and culture impacted on patient safety just on two dimensions as "patient safety training received" and "error reporting confidence".

Keywords: Perceived Organizational Support, Manager and Peer Support, Ethical Climate and Culture, Patient Safety, Medical Error

Özet

Bu çalışmada, örgütsel çevredeki davranışsal değişkenlerin hasta güvenliğini geliştirmeye bulunduğu katkı değerlendirilmiştir. Bu amaçla, ilk aşamada ölçeklerin Tü-

rkiye'ye geçerlilik ve güvenilirlikleri araştırılmıştır. Çalışmanın ikinci aşamasında, etik iklim ve kültür ile hasta güvenliği ve algılanan örgütsel destek (yönetici ve akran desteği) arasındaki ilişki araştırılmıştır. Çalışma örneklemini Türkiye'nin Konya ilindeki dört kamu hastanesinde çalışan personelden (N= 300) oluşturmaktadır. Etik iklim ve kültür ölçeği (Trevino ve Ark., 1998), hasta güvenliği ölçeği (Carruthers ve Ark., 2009) ve algılanan örgütsel destek ölçeği (McCaughey, 2008) çalışma kapsamında kullanılmıştır. Çalışma sonuçlarından biri olarak, 7 sorudan ve 3 alt boyuttan oluşan Türkiye'ye geçerli hasta güvenliği ölçeğine ulaşılmıştır. Türkiye'ye geçerli etik iklim ve kültür ölçeği 11 soru ve 4 alt boyut şekliyle elde edilmiştir. Başka bir sonuç olarak ise, Türkiye'ye geçerli 5 sorudan (3 soru yönetici desteği ve 2 soru akran desteği) ve 2 boyuttan oluşan yeni bir algılanan örgütsel destek ölçeğine ulaşılmıştır. Araştırmanın sonucunda yönetici desteğinin etik iklim ve kültürü etkilediği sonucuna ulaşılmıştır. Akran desteğinin etik iklim ve kültür üzerinde anlamlı bir etkisine ulaşılammıştır. Etik iklim ve kültür ise hasta güvenliğinin yalnızca "alınan hasta güvenliği eğitimi" ve "hata bildirim gizliliği" olarak iki boyutunu etkilemektedir. Diğer sonuçlar araştırmada yer almaktadır.

Anahtar Kelimeler: Algılanan Örgütsel Destek, Yönetici ve Akran Desteği, Etik İklim ve Kültür, Hasta Güvenliği, Tıbbi Hata

INTRODUCTION

Healthcare institutions are aware of the importance of patient safety that can be developed by increasing ethical climate and culture. Furthermore, they have an increasing interest for improving perceived organizational support in order to prevent medical errors and enhance the quality of patient safety.

Communication style, quality and transparency between employees and managers can lead safety culture for both patients and also employees. As one of the parts of social system, health is a means to revise health policies over individuals for all society. Therefore, patient safety can possess a view seems like special just for healthcare institutions; however this concept includes growing effects on general health outcomes of all society.

In the literature, many studies can be observed that are about revealing the correlations of effects of workplace structure that compromises of various factors such as organizational culture (Nieva & Sorra, 2003), ethical culture and climate (McFadden, Henagan, & Gowen, 2009), communication (Kripalani et al., 2007), job satisfaction (Rathert & May, 2007), workload (Rogers, Hwang, Scott, and, & Dinges, 2004), effective teamwork (Barrett, Gifford,

Morey, Risser, & Salisbury, 2009) with patient safety. In the light of this preliminary investigation in the literature canalized the study model as examining the patient safety in terms of aforesaid variables as ethical climate and culture and perceived organizational support as detailing in the following parts of the study design.

Patient Safety

Harmful behaviors and interventions towards patients present a study field for health policy and administration in terms of coping with these errors (Entwistle & Quick, 2006, p. 397). *Seeing Like a State* by James C Scott is an ideology for informing patient safety, so as this doctrine is discussed to highlight the reciprocal structure of patient safety efforts and general organizational and management theories (Wears & Hunte, 2014, p. 55).

Health policy and health administration should change their culture in order to contribute safe delivery system and interventions (Szymczak, 2014, p. 252). Improvement quality of care, reducing and prevention of adverse events and control of health status with accountable and value based viewpoint are three basic goals of patient safety efforts (Pettker et al., 2014, p. 319). Patient safety includes and relates with various organizational and managerial

factors such as teamwork, communication, leadership and support (Weaver, Weeks, Pham, & Pronovost, 2014, p. 204). Patient outcome is an important part of understanding and improvement of patient safety, which is compromised of complex patterns (Weaver et al., 2014, p. 207).

Trust as an essential concept within especially health institutions should be utilized functionally so that trusty behaviors in the relationship between health professionals and patients should have boundary in order to prevent behaviors that endanger patient safety (Entwistle & Quick, 2006, p. 411). Technological systems, effective and efficient use of knowledge and also multidisciplinary work allow improving patient safety system (Gordo & Abella, 2014, p. 438). In patient safety, functional interventions and medical trainings should be enhanced to shatter the deficiencies within the patient care process (Kerfoot, Conlin, Trivison, & McMahon, 2007, p. 1150). Reporting as a vital function in patient safety process and sustainability is required to have measurable data for achieving treatment standards to minimize errors basically (Strayer, Shy, & Shearer, 2014, p. 4). Reporting system has mutual key roles, as capturing system errors and improving the healthcare delivery system (Clarke, 2006, p. 1089). Many problems in patient safety reporting present a framework in order to comprehend initial structure of medical errors. Reports do not have epidemiological and quality information; people sometimes can forget to report and work around the problem rather than solution (Clarke, 2006, p. 1090).

Results of the study conducted by Simons et al. (2014) exhibit that standardization in the treatment process can increase willingness to report incidents and creating opportunities for patient safety improvement (Simons et al., 2014, p. 459).

Ethical Climate and Culture

Ethics in workplace that is as a recent focus concept in the literature can be accepted qua a tool in order to understand employee perceptions for the organization (Tará Burnthorne Lopez a, Babin, & Chung, 2009, p. 594). Ethics focuses right or wrong patterns and distinguishes normative rules of behavior in society, similarly in organizations (Buckley et al., 2001, p. 12). Ethical behavior in organizations is connotated as 'good business' by administrators (Buckley et al., 2001, p. 15).

Moral philosophy presents an informative framework to define moral culture within the organization just to clarify it that from deontological perspective intentionality and respect are the key concepts as well as teleological doctrine instills to enhance well-being of employees to gain beneficial consequences (Cohen, 1995, p. 319). Ethical behaviors is a social context of ethical work climate because of changing face of it by individuals and groups, which is introduced to the literature in the mid-1980s by Victor and Cullen (Webber, 2007, p. 569). Ethical behavior has three dimensions as social, environmental and economic, that especially keys for strategic decision making and sustainability of the organization (Goebel, Reuter, Pibernik, & Sichtmann, 2012, p. 7) to generate ethical culture. Ethical norms can be named as a predictor of role ambiguity and conflict, job satisfaction (Zehir, Müceldili, & Zehir, 2012, p. 742), organizational commitment, performance as emphasized in the study of DeConinck (2010) (DeConinck, 2010, p. 386), perceived corporate reputation (Öncer & Yıldız, 2012, p. 721), improved citizenship behavior, reduced deviance (Schminke, Arnaud, & Kuenzi, 2007, p. 177), work engagement (Yener, Yaldiran, & Ergun, 2012, p. 731).

Many ethical issues are confronted

in health organizations as problems for both health employees and also patients. Specifically, in a conducted study by Choe, Song and Jung (2012) it is mentioned in the literature review that various ethical problems such as moral dilemma, moral disagreement, moral blindness, immoralism, unconvertible moral decisions for a health employee are cited from Johnstone (2009) (Choe, Song, & Jung, 2012, p. 497). Employees can exhibit ethical behaviors due to their use different types of ethical criteria with respect to Kohlberg's moral development research (Öncer & Yıldız, 2012, p. 715). Nurses, who is in the beginning of their careers, are frequently inclined to face with some ethical problems like moral unpreparedness and moral blindness (Choe et al., 2012, p. 500). Complex and difficult working conditions can be a reason of nurses' behaviors unethically and creating ethical problems within the organization (Goethals, Gastmans, & de Casterle, 2010, p. 647).

It is difficult to measure ethical culture clearly, so as in the researches this concept is considered with related factors, in other words as indirectly (Goethals et al., 2010, p. 646). Ethical issues are very close to patient safety and key points for promoting quality health delivery, since the lack of ethical clarity within the organization can be a threat for both the organizational culture and treatment process (Nelson, Neily, Mills, & Weeks, 2008, p. 22). Ethical codes provide standardization about responsibility and accountability, so that respecting these characteristics contribute to patient safety and well-being of health professionals and patients and also reduce medical errors (Erlen, 2007, p. 131). As regarding the study of Ulrich et al. (2007) positive ethical climate has an impact on nurses' job satisfaction and intention to leave (Ulrich et al., 2007, p. 1715). By the way, ethical standards are vital within the workplace, for preventing problematic issues due to differences

ethical values between the organization and employees (Yener et al., 2012, p. 731).

Hypothesis 1a. *Ethical climate and culture has a positive relationship with patient safety- patient safety training received.*

Hypothesis 1b. *Ethical climate and culture has a positive relationship with patient safety- error reporting confidence.*

Hypothesis 1c. *Ethical climate and culture has a positive relationship with patient safety- disclosure responsibility.*

Perceived Organizational Support

Human capital as one of the important resource of the organization, strengthens the organization in terms of skillful employees, sustainable development and competitive advantage (AlZalabani & Modi, 2014, p. 33). Perceived organizational support is a basic phenomenon that provides a well career decision process and concentration on their tasks and responsibilities (Kawai & Strange, 2014, p. 2443).

Perceived organizational support can be defined as general beliefs and thoughts of employees regarding as how their organization appreciates their well-being and involvement to the tasks (Wu & Liu, 2014, p. 62). Social exchange theory, which is a major view in order to explain the structure of perceived organizational support, emphasizes the wellness about a reciprocal relationship between employees and the organization and also willingness of employees about the contribution to the organization to extent the meaning of the concept clearly (Wu and Liu, 2014, p.64; Fu, Sun, Wang, Yang and Wang, 2013, p. 949). Besides, organizational identity theory can state an alternative for explaining perceived organizational support and related outcomes (Shen et al., 2014, p. 410).

Perceived organizational support presents a framework regarding as reinforcement about reward expectation, psychological well-being and self-efficacy of employees (Caesens & Stinglhamber, 2014,

p. 260). According to the results of Al-Zalabani and Modi's (2014) study, human resources in Saudi Arabia are improved by especially promoting perceived organizational support in order to achieve organizational success (AlZalabani & Modi, 2014, p. 47). Supporting employees has an impact on their reaction toward changing environment and participation (Fuchs & Prouska, 2014, p. 379). The role of perceived organizational support surfaces due to low psychological breakdown in order to enhance employee investment (He, Pham, Baruch, & Zhu, 2014, p. 2787).

In many studies, perceived organizational support is found as associated with various concepts such as intention to stay, career satisfaction (Cao, Hirschi, & Deller, 2014, p. 2013), organizational commitment (Garg and Dhar, 2014, p. 72; Kawai and Strange, 2014, p. 2443) organizational citizenship behavior, organizational loyalty (Celep & Yilmazturk, 2012, p. 5764), turnover, affective commitment, improving patients' outcomes (El Akremi, Colaianni, Portoghese, Galletta, & Battistelli, 2014, p. 1186), job satisfaction (Fu et al., 2013, p. 947), positive change evaluations (Fuchs & Prouska, 2014, p. 363). Perceived organizational support enables well service quality as highlighting expectations and requirements of human resources in health institutions, i.e. doctors, nurses and health administrators (Fu et al., 2013, p. 949).

The study results of Celep and Yilmaztürk (2012), which was conducted among teachers addressed that feeling safety in the organizational environment enhances perceived organizational support and with the reference to this view they can foster their relationships and loyalty within the organization (Celep & Yilmazturk, 2012, p. 5770). El Akremi, Colaianni, Portoghese, Galletta and Battistelli's (2014) study exhibits a clear viewpoint resulted as positive and supportive feelings of nurses generate a positive impact on social interactions and remaining within the organization (El Akremi et al., 2014, p. 1200).

Perceived organizational support makes employees to exhibit extra roles and behaviors as loyalty for the organization and also the organization to perform more attention and care for its employees in order to enable their remaining (Wang, Ma, Liu, & Liu, 2014, p. 1074). Organizations should empower employees and support their well-being in furtherance of reinforcing moral culture (Cohen, 1995, p. 334).

Hypothesis 2a. *Manager support has a positive relationship with ethical climate and culture.*

Hypothesis 2b. *Peer support has a positive relationship with ethical climate and culture.*

Method

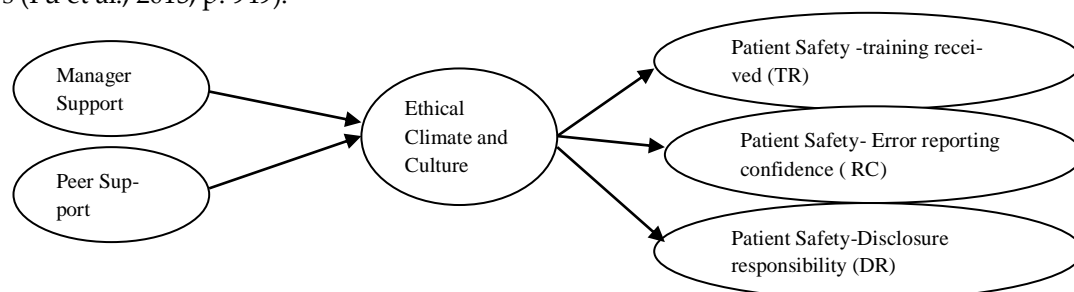


Figure 1. Research Model

Participants

The study population involves employees (N= 300) working in four public hospitals in the province of Konya in Turkey. Participants were selected via stratified sampling method as 75 employees from 4 hospitals. Participants have been composed of nurse (n=147, %48.1), doctor (n=56, %18.7) and administrative personnel (n=46, %14.9), most of them have an education with associate degree (n=74, %24.7) and bachelor degree (n=137, %45.7) and are women (n=167, %55.7), and married (n=156, %52). It was found that age average of the participants is 30.32 (SD =7.063) average of professional working years is 5.64 (SD =5.345).

Instrumentation

The study was performed with four scales as ethical climate and culture, patient safety, perceived organizational support and job control.

Patient Safety Scale: The study of Carruthers et al. (2009) was used. This scale is constituted by 9 dimensions as "Patient safety training received", "Error reporting confidence", "Working hours as error cause", "Error inevitability", "Professional incompetence as error cause", "Disclosure responsibility", "Team functioning", "Patient involvement in reducing error", "Importance of patient safety in the curriculum" and has totally 30 questions and 6 of that are reverse coded. It was rated with 7-point likert originally and was revised with 5-point Likert (1=strongly disagree, 5=strongly agree). Its Cronbach Alpha value was found between values .64-.82, so as acceptable. Validity of the scale was analyzed with confirmatory factor analysis and Cronbach Alpha coefficient was used to research the reliability of it within this study.

Ethical Climate and Culture Scale: The study of Trevino et al. (1998) was used and the scale was consisted of totally 39 questions. The dimensions of the scale are

arranged as "Ethical environment" (9 items), "Employee-Focused Climate" (6 items), "Community-Focused Climate" (4 items), "Obedience to Authority" (3 items), "Code Implementation" (4 items), "Self-Interest Climate" (2 items), "Efficiency Climate" (4 items), "Rules and Procedures Climate" (2 items), "Personal Ethics Climate" (3 items), "Law and Professional Codes Climate" (2 items). It was rated with 7-point Likert originally and was revised with 5- point Likert (1= strongly disagree, 5= strongly agree) and its reliability was found as high ($\alpha =0.94$). Reliability and validity of the scale for Turkish was searched in the study of Aslan and Akarçay (2012). The original reliability and validity of the scale was found as low and a new version scale was achieved that consisted of totally 4 dimensions as "Ethical environment", "Employee-Focused Climate", "Community-Focused Climate", "Rules, Procedures and Law Climate" and 13 questions. Reliability and validity of the new scale was found as highly (Cronbach Alpha coefficient is between .70-.76). Validity of the scale examined in the study of Aslan and Akarçay (2012) was analyzed with confirmatory factor analysis and Cronbach Alpha coefficient was used to research the reliability of it within this study.

Perceived Organizational Support (Manager and Peer Support) Scale: The original of the scale was consisted of 4 items and performed by Caplan et al. (1975). The scale of McCaughey (2008) has 2 dimensions 8 manager support and peer support) and each of that has 4 questions. It was rated with 5- point Likert (1= there is no such a person, 5= too much). The study of McCaughey (2008) was found as reliable as .80. Validity of the scale was analyzed with confirmatory factor analysis and Cronbach Alpha coefficient was used to research the reliability of it within this study.

FINDINGS

Measurement analysis

A reciprocal translation was conducted with scales English to Turkish by 6 philologists. Initially, factors of the scales were identified with exploratory factor analysis (EFA) via SPSS 10.0 version and then confirmatory factor analysis (CFA) via LISREL program (Jöreskog & Sörbom, 1993). EFA latent has consisted of subjective decision series such as defining the numbers of variables (Auerbach, & Beckerman, 2011). The validity and reliability of scales were analyzed within the study. Validity of the scales was analyzed with confirmatory factor analysis. Goodness of fit of the scales was investigated in confirmatory factor analysis. Accordingly, χ^2/df ratio, RMSEA

value, GFI, NFI, CFI, NNFI and AGFI indexes were researched (Schermelleh-Engel, Moosbrugger & Müller, 2003). Cronbach Alpha coefficient was used to research the reliability of the scales. Ultimately, mean and standard deviation values of the scale items were calculated. Item-total correlation was examined for the relation between each items and general scale score. High correlation value with total scale score is an indicator of measuring degree of desired item for desired variable and it also demonstrates item reliability. Accordingly, correlation coefficients should not be negative and be higher than 0.25 (Altunışık, Coşkun and Bayraktaroğlu, 2012: 228). Lastly, *t* value in confirmatory factor analysis should be significant (Schumacker and Lomax, 2010).

Table 1. Results of the measurement analysis patient safety scale

Dimensions	Initial EFA			CFA Model 1	t-value	Total-item correlation	Mean	Std. Deviation	Cronbach alpha
	Factor 1	Factor 2	Factor 3						
Patient Safety Scale^b							3.66	.897	.815
Patient safety training received									
1.	.855			.76	13.90	.873**	3.54	1.180	
2.	.856			.80	14.76	.855**	3.67	.989	
3.	.841			.77	14.14	.842**	3.77	.969	
Error reporting confidence (RC)							3.03	1.100	.804
1.		.909		.79	7.58	.919**	3.03	1.229	
2.		.908		.85	7.75	.911**	3.02	1.175	
Disclosure responsibility (DR)							3.53	.932	.735
3.			.847	.66	7.85	.863	3.42	1.111	
4.			.837	.71	8.14	.849	3.64	1.065	

Note: Standardized item loadings reported for CFA. $p < .001$ for all loadings. **Correlation is significant at the 0.01 level (2-tailed)

^aItems were below .70, ^aItems were required modification indexes. ^bThe items are as in the original source of Carruthers et al. 2009, p.e374.

Initially, explanatory factor analysis was performed for the scale KMO: .665, Bartlett's test is 613,039, ($p < .01$). Total variance explained is for both factors are 76.69 % and initial eigenvalues is 15.6. In the second phase, confirmatory factor analysis was performed for the scale. In new version of the scale, the scale reached acceptable goodness-of-fit values with three dimensions (Goodness-of-Fit Statistics: $\chi^2/df = 15.05/11 = 1.36$, NFI=.98, NNFI=.99, CFI=.99, AGFI=.96, GFI=.99, RMSEA=.03). The ratio χ^2/df 1.36 is accepted as "acceptable" (Schermelleh-Engel, Moosbrugger & Müller, 2003). Normed fit index (NFI) values (.98), goodness of fit index (GFI) values (.98), and Comparative fit index (CFI) (.99) over .95, then it is indicated that it have a goodness of fit as good (Şimşek, 2007). Non-normed fit index (NNFI) value (.99),

.95 \leq NNFI is evaluated as acceptable (Schermelleh-Engel, Moosbrugger & Müller, 2003). Goodness of fit for AGFI value (.96) is expressed as good for .90 \leq AGFI (Schermelleh-Engel, Moosbrugger & Müller, 2003). If Root Mean Square Error of Approximation (RMSEA) value is below or equal 0 and 0.05, data fit of model will be excellent (Colom, Rebollo, Palacios, Juan-Espinosa, & Kyllonen, 2004; Şimşek, 2007, p.19; Auerbach, & Beckerman, 2011). The coefficients ranged from .73 to .81 and were significant at the .00 level. Finally, t value in confirmatory factor analysis was found as significant. Item-total correlation coefficients of the scale were found as between .84-92, so as over .25. Patient safety scale has been reached for Turkey its valid form consisting of 7 questions and 3 sub-dimensions.

Table 2. Results of the measurement analysis ethical climate and culture scale

Dimension ^b	Dimension ^d	EFA				CFA Model 1	CFA Model 2	CFA Model 3	t-value	Total-item correlation	Mean	Std. Deviation	Cronbach alpha
		Factor 1	Factor 2	Factor 3	Factor 4								
Ethical Climate and Culture Scale												.900	
Ethical environment	Ethical environment											.811	
3.	2	.77				.83	.82	.84	15.21	.684**	2.92	1.08	
5.	4	.81				.81	.83	.81	16.88	.500**	3.07	1.01	
6.	5	.74				.63	.63 ^c						
9.	7					.34 ^a							
Employee-Focused Climate	Employee-Focused Climate											.781	
3	12	.70				.77	.81	.81	15.17	.640**	3.11	1.07	
4	13	.80				.81	.79	.79	14.57	.906**	3.10	1.07	
5	14	.70				.70 ^c							
Community-Focused Climate	Community-Focused Climate											.815	
1.	16		.79			.71	.71	.71	13.22	.630**	3.28	1.06	
2.	17		.78			.82	.83	.83	16.47	.505**	3.27	1.06	
3.	18		.59			.78	.79	.79	15.26	.831**	3.28	1.08	
Rules and Procedures Climate	Rules, Procedures and Law Climate											.840	
1. Rules and Proce-	33		.73			.77	.77	.77	14.89	.662**	3.39	.98	
2. Rules and Proce-	34		.84			.86	.86	.86	17.64	.552**	3.37	.98	
1. Law and Profession-	38		.77			.78	.78	.78	15.20	.847**	3.35	.99	

Note: Standardized item loadings reported for CFA. $p < .001$ for all loadings. **Correlation is significant

at the 0.01 level (2-tailed)

^aItems were below .70, ^cItems were required modification indexes. ^bThe items are as in the original source of Trevino et al.,1998, pp.459-460; ^d The items, which were obtained by validity and reliability analysis for adapting to Turkish by Aslan and Akarçay (2012).

Initially, explanatory factor analysis was performed for the scale KMO: .894, Barlett's test is 1,927E3, ($p < .01$). Total variance explained is for both factors are 71.447 % and initial eigenvalues is 6.612. As it is seen, it is determined that the scale has four factors as in the original source. Item in the dimension of environment that numbered as 9 in the original version was moved from the scale and thus, EFA was re-applied. KMO: .896, Barlett's test is 1,873E3, ($p < .01$). Total variance explained is for both factors are 74.277 % and initial eigenvalues is 5.877. In the second phase, confirmatory factor analysis was performed for the scale. In the scale, questions that defined with four dimensions was identified similarly, however goodness-of-fit values could not be reached (Goodness-of-Fit Statistics*: $\chi^2/df = 153.13/59 = 2.59$, NFI=.92, NNFI=.93, CFI=.95, AGFI=.89, GFI=.93, RMSEA=.07). 4th question had factor loading under .40 and 7th item showed correction indices.

Thus, Model 2 was handled. The goodness-of-fit measures were not reached (Goodness-of-Fit Statistics*: $\chi^2/df = 93.97/38 = 2.47$, NFI=.94, NNFI=.95, CFI=.97, AGFI=.91, GFI=.95, RMSEA=.07). 6th item showed correction indices. CFA was performed for Model 3. The goodness-of-fit measures were reached (Goodness-of-Fit Statistics*: $\chi^2/df = 73.31/29 = 2.52$, NFI=.95, NNFI=.95, CFI=.97, AGFI=.91, GFI=.95, RMSEA=.07). The coefficients ranged from .78 to .90 and were significant at the .00 level. Finally, t value in confirmatory factor analysis was found as significant. Item-total correlation coefficients of the scale were found as between .50-90, so as over .25. Ethical climate and culture scale has reliability and validity in Turkish, was reached as a result of the analysis. As a result of CFA analysis, ethical climate and culture scale has been reached for Turkey its valid form consisting of 11 questions and 4 sub-dimensions.

Table 3. Goodness-of-Fit Statistics

Model	χ^2	df	NFI	NNFI	CFI	AGFI	GFI	RMSEA
Model 1	153.13	59	.92	.93	.95	.89	.93	.07
Model 2	93.97	38	.94	.95	.97	.91	.95	.07
Model 3*	73.31	29	.95	.95	.97	.91	.95	.07

Note. CFI = comparative fit index; GFI = goodness of fit index; AGFI= adjusted goodness of fit index; normed fit index (NFI); non-normed fit index (NNFI); RMSEA = root mean square error of approximation. *model with acceptable fit.

The most valid model is model 3 as seen in Table 3. Normed fit index (NFI) values (.95), goodness of fit index (GFI) values (.95), and Comparative fit index (CFI) (.97) over or equal .95, then it is indicated that it have a goodness of fit as good

(Şimşek, 2007). Non-normed fit index (NNFI) value (.95), $.95 \leq NNFI$ is evaluated as acceptable (Schermelleh-Engel, Moosbrugger & Müller, 2003). Goodness of fit for AGFI value (.91) is expressed as good for $.90 \leq AGFI$ (Schermelleh-Engel,

Moosbrugger & Müller, 2003). RMSEA values (.07) between .05 and .08 are considered acceptable. Models with values above .10 represent a poor fit (Colom, Rebollo,

Palacios, Juan-Espinosa, & Kyllonen, 2004; Şimşek, 2007; Auerbach, & Beckerman, 2011).

Table 4. Items loadings from confirmatory factor analyses for perceived organizational support scale

Dimensions	Initial EFA	CFA Model 1	CFA Model 2	CFA Model 3	t-value	Total-item correlation	Mean	Std. Deviation	Cronbach alpha
Perceived organizational support									.764
Manager Support									.711
1.	.639	.68	.59	.58	9.02	.838**	2.81	.981	
3.	.611	.62 ^c							
5.	.791	.73	.79	.77	11.26	.860**	2.91	1.050	
7.	.867	.72	.73 ^c						
Peer Support									.726
2.		.798	.69 ^c						
4.		.809	.60	.53	8.88	.734**	3.61	1.018	
6.		.700	.79	.83	15.42	.785**	3.12	1.050	
8.		.610	.69	.70	11.38	.782**	3.12	1.046	

Note: Standardized item loadings reported for CFA. $p < .001$ for all loadings. **Correlation is significant at the 0.01 level (2-tailed)

^aItems were below .70, ^cItems were required modification indexes. ^bThe items are as in the original source of McCaughey (2008).

Initially, explanatory factor analysis was performed for the scale KMO: .773, Bartlett's test is 913,429, ($p < .01$). Total variance explained is for both factors are 61.059 % and initial eigenvalues is 13.8. In the second phase, confirmatory factor analysis was performed for the scale. The goodness-of-fit measures were not reached for initial version of perceived organizational support scale (Goodness-of-Fit Statistics*: χ^2/df

=176.68/19=9.29, NFI=.81, NNFI=.74, CFI=.82, AGFI=.76, GFI=.87, RMSEA=.16). Model 1'de, two items (2 and 3) were showed correction indices, the scale was reanalyzed and the goodness-of-fit measures were not reached in the model 2 (Goodness-of-Fit Statistics*: χ^2/df =40.17/8=5.02, NFI=.93, NNFI=.88, CFI=.94, AGFI=.89, GFI=.96, RMSEA=.11). 4th item showed correction indices. CFA was con-

Ethical Climate and Culture	3.29	.810	.426*	.252*						
Ethical environment	3.00	.963	.459*	.365*	.718**					
Employee-Focused Climate	3.25	1.010	.382*	.227*	.747**	.548**				
Community-Focused Climate	3.27	.957	.355*	.187*	.772**	.479**	.503*			
Rules, Procedures and	3.36	.872	.273*	.149*	.758**	.490**	.438*	.626*		
Patient Safety-training received	3.66	.917	-.002	.055	.127*	.078	.076	.145*	.182*	
Patient Safety-Error reporting	3.19	1.129	-.031	-.116*	-.150**	-.065	-.193*	-.139*	-.160*	-.009
Patient Safety-Disclosure re-	3.69	.915	-.025	.007	.087	.095	.053	.124*	.125*	.223*
										.207**

**Correlation is significant at the 0.01 level (2-tailed)

As seen in Table 6, the results of performed correlation analysis, a positive low correlation was discovered between the ethical climate and culture total score and manager support ($r=.426$) and peer support ($r=.252$). A correlation between ethical climate and culture for total score and patient safety-training received was found as positively and significantly ($r=.12$). A correlation between ethical climate and culture for

total score and patient safety-error reporting confidence was found as negatively and significantly ($r=-.15$) ($p>.01$). However, it could not be found that ethical climate and culture total score is correlated with safety-disclosure responsibility as statistically significant ($p<.05$).

Structural model estimation

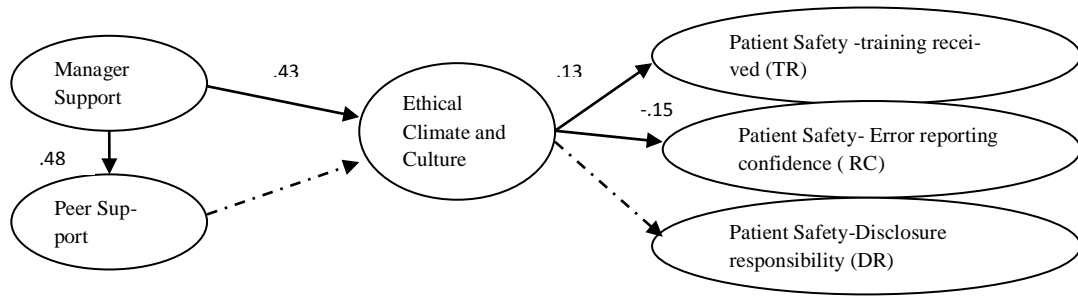


Fig.2. The Result Model

...: Invalid path

At the result of the path analysis done it has been determined the path coefficient between manager support and ethical climate and culture as .43 ($p < .01$). The path coefficient between manager support and peer support as .48 ($p < .01$). The path coefficient between ethical climate and culture and patient safety-patient safety training received as .13 ($p < .01$). The path coefficient between ethical climate and culture and patient safety-error reporting confidence as -.15 ($p < .01$). Other paths were not reached as statistically significant ($p > .05$). It

could be stated the model is good fit because obtained values in the model are yield values of Goodness-of-fit. χ^2/df ratio 5 and below is accepted as the goodness-of-fit measures of the model is very well. Similarly, RMSEA value is 0 and below of 0.05, GFI and NFI values are over 0.95; CFI and NNFI values over .97 and AGFI value is over .90 indicates The goodness-of-fit measures of the model is excellent (Scher-melleh, Moosbrugger, 2003) (Goodness-of-Fit Statistics: $\chi^2/df=7.42/6=1.23$, NNFI=.98, NFI=.95, CFI=.99, AGFI=.98, GFI=.99, RMSEA=.02) (See Fig.2).

Table 7. Standardized parameter estimates, t-values, and model fit statistics

Structural path	Standardized value	t value	Hypothesis
<i>Ethical climate and culture</i> → <i>patient safety- patient safety training received</i>	.13	2.21	H1a accepted
<i>Ethical climate and culture</i> → <i>patient safety- error reporting confidence</i>	-.15	2.62	H1b accepted
<i>Ethical climate and culture</i> → <i>patient safety-disclosure responsibility</i>	.09	1.51	H1c rejected
<i>Manager support</i> → <i>ethical climate and culture</i>	.43	8.12	H2a accepted
<i>Peer support</i> → <i>ethical climate and culture</i>	.08	1.38	H2b rejected

Goodness-of-Fit Statistics: $\chi^2/df=7.42/6=1.23$, NNFI=.98, NFI=.95, CFI=.99, AGFI=.98, GFI=.99, RMSEA=.02

In Table 7, standardized value and t values are exhibited. Accordingly, t values were found as statistically significant.

Discussion

New versions of ethical climate and culture, patient safety and perceived organizational support (manager and peer sup-

port) scales were gained for the literature by conducting validity and reliability analysis for adapting Turkish within the study. Afterwards, the correlations between ethical climate and culture, patient safety and perceived organizational support (manager and peer support) were investigated.

In consequence of the study, patient safety scale has been reached for Turkey and its valid form consisting of 7 questions and 3 sub-dimensions. Ethical climate and culture scale has been reached for Turkey its valid form consisting of 11 questions and 4 sub-dimensions. As a result of that, the new version of perceived organizational support scale has been reached for Turkey its valid form consisting of 5 questions (as 3 items for manager support and 2 items for peer support) and 2 sub-dimensions.

As another result of the study, while manager support effects on ethical climate and culture, peer support has no significant effect on aforesaid variables. Such a consequence is meaningful in terms of rerunning that the manager has the most important role for creating ethical climate and culture in health institutions. This assumption leads to reflection that constituting ethical culture would be possible by the leaders, who internalize ethical climate. While it is expected to be obtained as a result that peer support is a milestone in order to create ethical climate and culture, this result cannot be performed within the study. However, as another result of the study, manager support allows peer support. Such a result shows that manager support is a crucial variable in health institutions.

Ethical climate and culture has an effect on two dimensions of patient safety as "patient safety training received" and "error reporting confidence". However, any correlation with the other dimension of "disclosure responsibility" was not observed. The means of the variable of patient safety is found for the dimension of "patient safety training received" as 3.66, "error reporting confidence" as 3.19 and "disclosure responsibility" as 3.69. It is followed that large majority of the participants feel themselves more convenient for reporting

medical errors within the dimension of "patient safety-error reporting confidence" similarly they have a common idea that the medical errors should be reported as seen in the dimension of "patient safety-error reporting confidence".

Ethical climate and culture have a positive correlation with the dimension of "patient safety training received". That's mean is that a well ethical climate and culture via a better medical education contribute to the prevention process of the medical errors. On the contrary, ethical climate and culture have a significant correlation with the dimension of patient safety-error reporting confidence. That's mean is that higher the perception of ethical climate and culture is, more feeling of comfort to report medical errors occurs. The perception of ethical climate and culture (Mean= 3.29) cannot be found as correlated with the perception of reporting of medical errors that should be notified. This result can be interpreted as that whatever the ethical climate and culture is in health institutions, a common idea is revealed as reporting medical errors that should be notified.

On the contrary to the expected, the relationship between ethical climate and culture and patient safety was not defined. Accordingly, the lack of this relation has invalidated the mediating roles of organizational support and job control. Harm to patients is a crucial concept of health policies recently that occurs in complex health delivery system and even health professional has high knowledge and talented (Entwistle & Quick, 2006, p. 399). The actual patient outcomes cannot be understandable clearly, hence patient safety improvement arises a perception that all individual efforts would be limited due to complexity of patient safety conditions and health employees' task structures (Colla, Bracken, Kinney, & Weeks, 2014, p. 365). Moreover,

dominant existence of laws and regulations within the health sector could border personal values and efforts in decision-making process, in the light of these assumptions our research result present a considerable and necessary to investigate perspective for the future studies.

As a result in this research, ethical climate and culture has a direct impact on manager support, peer support and job control. Being the perception of ethical culture within the organization would contribute to both decision making of health employees about their tasks and also manager support and peer support. Since, trusty environment would detain health employees to behave as discomfortable and effort doing best for the patient according to their own will based on ethical structure (Entwistle & Quick, 2006, p. 411). Ethical values and principles would expand the perception of supporting employee's well-being by taking into consideration their needs, values and expectations, so that employees could response work tasks and requirements better and extensively (Valentine, Greller, & Richtermeyer, 2006, p. 587).

As differently, peer support influences both manager support and also job control. Such a result exhibits the importance of peer support for health employees. Yet, health employees, who have to work as dependent to a team, are impressed by others (El Akremi et al., 2014, p. 1200). The most important result of the study is peer support that related with multiple reciprocal dependence principle of James Thomas (Koçel, 2005: 284). Additionally, this result is supported in the literature (Ulrich, 2011; Frazier, Berman and Steward, 2002; Janssens, Verleden, De Peuter, Petersen and Van den Bergh, 2011; Raines et al. 2014; Kubicek, Korunka and Tement, 2014) in terms of association between employee behaviors, emotions, work outcomes, controlling traumatic job resources

and ethical thoughts and decisions also promoting employee well-being within the organizational structure.

Determining manager support for creating ethical climate and culture within the health institutions refer to the effects of ethical leadership for the further studies. It is suggested to be investigated the correlation of dimension of ethical leadership with ethical climate and culture. Similarly, the result is obtained that peer support is occurred by additional contribution of manager support. The possible reason to be observed this result may be Turkey's cultural structure that leads to employees to obey the managers' rules and orders and also, subservience the authority of the managers. Thus, it can be a better contribution for the further studies that revealing the effects of leader-member exchange theory in terms of in-group and out-group influences.

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