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Araştırma Makalesi/Research Article

Türkiye'de 2003 – 2012 Yılları Arasında Uygulanan Sağlıkta Dönüşüm Programı ve Hasta Memnuniyeti Üzerine Etkisi

Sayın San[1]

The Health Transformation Program Implemented between 2003 -2012 and it's Effect on Patient Satisfaction in Turkey

Özet

Amaç: Sağlık hizmetlerine erişebilirliğin arttırılması için 2003 yılından bu yana Türkiye'de ciddi reformlar uygulanmaktadır. Bu çalışma, yapılan sağlık reformlarının Türkiye'de hanehalkı düzeyindeki memnuniyete etkisini analiz etmeyi amaçlamaktadır. Aynı zamanda memnuniyet ile sosyoekonomik özellikler arasındaki ilişki, sağlık eşitsizliğinin bir göstergesi olarak incelenmiştir. **Yöntem:** 2003 ve 2012 yıllarına ait Türkiye Yaşam Memnuniyeti Anketleri kullanılarak kesit veri analizi gerçekleştirilmiştir. Bu çalışma, sağlık merkezlerine yapılan son ziyaret sırasında hastaların sağlık memnuniyetini ve karşılaştıkları sorunları esas almaktadır. Sağlık hizmetleri ve sağlıkla ilgili konulardaki genel memnuniyet t-testi ve Ki-Kare gibi istatistiksel testlerle kamu/özel ayrımı yapılarak analiz edilirken, sosyoekonomik özelliklerin sağlık memnuniyeti üzerindeki etkisini analiz etmek için Stereotip Sıralı Lojistik regresyon modeli kullanılmıştır. **Bulgular:** Sağlıkta Dönüşüm Programı sonucunda sağlık hizmetlerinden memnuniyet açısından "çok memnun" ve "memnun" kişi oranı 2003 yılında % 39'ken, bu sayı 2012'de % 76'ya yükselmiştir. Çalışılan her iki yılda da erkeklerin, evli olanların ve yaşlı insanların sağlık hizmetlerinden memnun olma olasılıkları daha yüksektir. Ele alınan zaman diliminde, reformların bir sonucu olarak, temel sağlık hizmetlerinden şikâyet oranı yaklaşık % 20 – 25 puan azalmıştır. **Sonuç:** Bir taraftan genel hasta memnuniyeti artarken; diğer taraftan kamu ve özel sağlık merkezlerindeki sağlık hizmetleri memnuniyet farkı azalmıştır. Çalışma sonucunda elde edilen sonuçlar ışığında sağlık alanında yapılan reformların, sağlık hizmetlerine erişimi arttırdığı ve dolaylı da olsa sağlık eşitsizliğini azalttığı görülmüştür.

Anahtar Kelimeler: Sağlık politikası, sağlık reformları, hasta memnuniyeti.

Abstract

Objective: Since 2003, Turkey has carried out a series of reforms to improve the availability of healthcare. This study aims to analyze the effect of health reforms on the satisfaction level of Turkish households. Also, the relationship between satisfaction and socioeconomic characteristics is examined as an indicator of health disparity. **Method:** The data analysis was conducted to compare cross-sectional data from the 2003 and 2012 Turkish Life Satisfaction Survey. This study addresses the patient satisfaction and problems encountered by patients during the most recent visit to health centers. While overall satisfaction with healthcare and health-related issues were analyzed by statistical tests such as t-test and Chi-Square in terms of public/private distinction, Stereotype Ordered Logistic regression was used to analyze the effect of socioeconomic characteristics on the patient satisfaction. **Results**: As a result of the Health Transformation Program, ratings of "very satisfied" and "satisfied" with healthcare increased from 39% in 2003 to 76% in 2012. In both years, men, married, and older people were more likely to be satisfied with healthcare. Over the past period of time studied, as a consequence of reforms, complaints about the basic healthcare diminished by approximately 20% to 25% points. **Conclusion:** During the reforms in Turkey, two important successes have been achieved simultaneously: On the one hand, overall patient satisfaction has been increased; on the other hand, the difference in patient satisfaction between public and private health centers has been reduced. As a result, reforms in the health sector increased access to healthcare and indirectly reduced levels of health disparity.

Key words: Health policy, healthcare reforms, patient satisfaction.

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INTRODUCTION

Patient satisfaction is one of the most important political and socioeconomic issues for both developed and developing countries, including Turkey. In 2002, the Justice and Development Party (the AK Party) came to power in Turkey and declared that the health sector would be given increased importance and priority. Given this objective, in 2003, the Health Transformation Program (HTP) was declared by the Ministry of Health (MoH) and shared with the public (MoH, 2003). The program's objectives included organizing, providing financial aid, and delivering health services fairly and productively. Human centrism, decentralization, and competition in service were declared the fundamental principles of the program.

This study aimed to analyse the effect of the HTP on patient satisfaction among Turkish households. Many reforms (e.g., the merger of governmental hospitals, the centralization of governmental insurance companies, and elimination of the referral chain) have been implemented under the program, resulting in better access to healthcare. As discussed in the conclusion of this study, during the reforms in Turkey, two important advances are simultaneously achieved: On the one hand, the overall satisfaction of health services has been increased; on the other hand, the difference in patient satisfaction between public and private health centers has been closed. In terms of patient satisfaction, the socioeconomic analysis of successful practices in the HTP will be a guide for both developed and developing countries, like Turkey.

In the literature, different criteria have been used to measure satisfaction with healthcare. The accessibility (availability, utilization, and timeliness), and quality (efficiency, safety, and continuity) of healthcare are identified as the main criteria for patient satisfaction with healthcare (Kruk and Freedman, 2008; Naidu, 2009; Aiken *et.al.*, 2012). Furthermore, the presence of public confidence in political/structural institutions is another highlighted factor that is the most important determinant of health system satisfaction (Zhang *et. al.*, 2007; Footman *et. al.*, 2013; Gleengard, 2013).

While patients' experiences with healthcare are the main indicator of satisfaction levels (Bleich *et. al.*, 2009; Schoenfelder *et. al.*, 2011), some variables that are unrelated to patient experiences such as patient expectations (as a function of education, age, gender, and income), self-reported health status, and personality (e.g., sadness) are important determinants of a patient's degree of satisfaction (Akinci *et al.*, 2012). This study addresses patient satisfaction in Turkey and the problems encountered during recent visits to health centers.

In Turkey, the assessment of the HTP has been made in views of stakeholder (Baris *et al.*, 2011; Yasar, 2011), and macro perspective (Tatar *et al.*, 2011; Atun *et al.*, 2013). The economic growth and political stability of Turkey are emphasized as critical factors that helped to achieve the program targets (MoH, 2010; Gursoy, 2015). Recently, two studies have focused on the relationship between the reforms and patient satisfaction in Turkey. While Jadoo *et. al.* (2014) made a cross-sectional analysis using the own-created dataset, they concluded that Turkish people are very satisfied with the health reforms. Stokes *et al*. (2015), using the Life Satisfaction Survey conducted by the Turkish Statistical Institute (TSI), analyzed the relationship between socioeconomic status and health service satisfaction. As a result of multivariate logistic regression analysis, they revealed that patient satisfaction with healthcare has increased during the period of the HTP reforms.

This study will contribute to the literature in two ways. First, on one hand, making a comparative analysis of the patient satisfaction of Turkish households before and after the HTP; on the other hand, under the assumption that private health centers have more quality healthcare than the publics, the change in differences between the satisfaction level of the public and private health centers will be used as a proxy for the quality measure of healthcare. Second, for both years, two different models will be estimated by the Stereotype regression model. One model includes only socioeconomic characteristics; the other one includes both socioeconomic and health-related variables. Thus, this study will lead to understanding the effect of the reforms on the different socioeconomic levels in terms of a micro perspective.

Before and After: The HTP Practices

During the 1990s, the major problems with the Turkish healthcare system for households were the inadequate number of healthcare workers (especially specialists) and availability of hospitals, a mandatory referral chain, long wait times, and the mistreatment of patients by doctors and nurses (MoH, 2010). People had to services from certain hospital groups, depending on their social security organizations. Individuals covered by the Pension Fund (EMEKLI SANDIGI, a social security company only for white-collar workers) received health services only from public hospitals managed

by the MoH. Individuals covered by the Social Insurance Institution (SSK, a social security company only for blue-collar workers) relied on health services from social insurance hospitals managed by the Ministry of Labor and Social Security. Individuals covered by BAG-KUR (a social security company only for self-employed workers) had to pay an additional fee for healthcare.

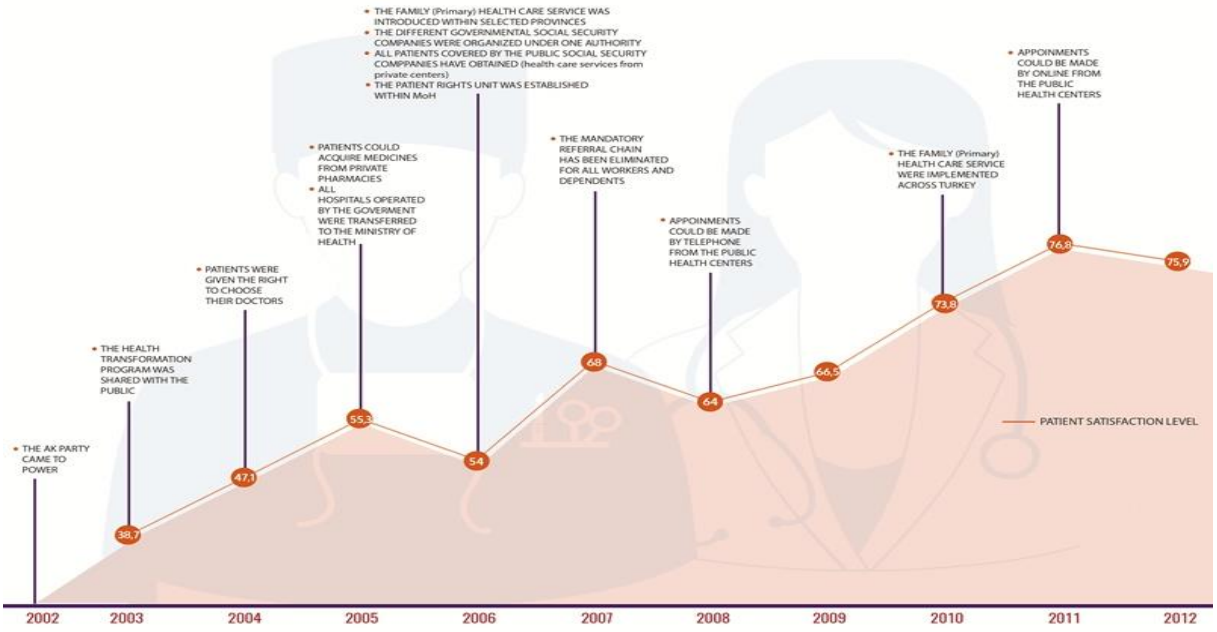
When workers and their dependents wanted to visit health centers, they had to receive a note from their employers (except in emergencies), and they could visit only the medical center whose name is written on the note. This practice was known as the mandatory referral chain. If the workers or their dependents did not have such a referral note or they were not covered by any social security companies, and then they had to pay all fees. This situation led to increased dissatisfaction among patients (World Health Organization, 2012).

Furthermore, there was no effective coordination between the MoH and governmental social security companies. Major limitations affected examination repayments and the medicines' supply. Certain medicines could be obtained only from public hospital pharmacies, and the process of filling necessary prescriptions was ineffective for patients.

As a first step of the HTP, public workers were permitted to obtain healthcare from private health centers in 2003. In 2004, patients were given the right to choose their doctors to increase the quality of healthcare in public health centers. In the following year, people who were covered by SSK could acquire medicines from private pharmacies. Since 2007, the mandatory referral chain has been eliminated for workers and their dependents. In 2005, the Family (Primary) Healthcare was introduced to improve primary healthcare within selected provinces. Subsequently, these practices were implemented across Turkey beginning in 2010 (MoH, 2010).

All hospitals operated by government institutions were transferred to the MoH in 2005, and the efficiency and satisfaction of health services were supposed to increase (The relationship between the reforms and patient satisfaction can be seen in Figure 1). Different social security companies were organized under one authority: EMEKLI SANDIGI, SSK, and BAG-KUR were united under the Social Security Institution (SGK) in 2006.

Figure 1: Health reforms and the change in the patient satisfaction over time



Although incentives for private health centers have increased, all patients covered by SGK have obtained healthcare from the private centers with paying small additional fees since 2006. In 2003, 16% of all patients received healthcare from the private centers; and in 2012, this percentage increased by approximately 40% (Turkish Statistical Institute, 2012).

METHODS

Data

In this study, the Turkish Household Life Satisfaction Survey 2003 and 2012 were used. This cross-sectional survey has been directed each year by the Turkish Statistical Institute (TSI) since 2003 (Turkish Statistical Institute, 2012). The survey is conducted to individuals aged 18 and over, and acquires socioeconomic information on both the household and individual levels.

At the household level, the survey consists of questions regarding household income, the adequacy of family income, family size, and security problems of the family. The individual-level questions included demographic and socioeconomic questions (e.g., age, marital status, education level, employment status) as well as questions regarding the level of satisfaction with an individual's situation and services (e.g., health, education, security, municipality, transportation).

The surveys used Likert scale ratings from 1 (very satisfied) to 5 (very dissatisfied) for the satisfaction questions. These data include information from approximately 4,828 people in 2003 and 7,956 people in 2012.

Statistical Analysis

This study compares the respondents' levels of satisfaction with healthcare in 2003 and 2012. In particular, the reason for choosing these two years is to compare patient satisfaction differences between the start and end dates of the HTP reforms. A public-private distinction was made when examining the components of patient satisfaction levels. Even though the relationship between satisfaction levels and variables that are related to the satisfaction is investigated by various statistical tests, certain descriptive statistics and statistical test results that are related to the following hypotheses will be discussed in the result section.

- The categorical proportions of satisfaction levels with healthcare are not different for both years.
- The satisfaction levels and hospital types (public and private) are independent.
- Complaints about health-related services are the same for the periods studied and for both public and private health centers.

In addition to the statistical tests, the effects of patients' characteristics on satisfaction levels were analyzed by the Categorical Dependent Variable Regression Model. Therefore, health-related variables were excluded from the model except for the hospital type, only the effects of socioeconomic characteristics (e.g., age, gender, marital status, education, living area, and income level) on the satisfaction with healthcare can be seen. Even though the satisfaction level of respondents is an ordered variable, as a result of the likelihood-ratio test (Wolfe and Gould, 1998), the Ordered Logistic Regression model was found to violate the assumption of parallel regression (it is also known as the proportional odds assumption) (see notes under Table 4).

The parallel regression assumption implies that coefficients of the independent variables must be nearly the same for all categories (Brand, 1990). Thus the model was estimated using the Stereotype Ordered Regression Model (SORM) (Anderson, 1984). SORM allows the coefficients of independent variables to change by each category of the dependent variable. SORM can be written as

$$P(y = y_s|\boldsymbol{x}) = \frac{exp(\theta_s - \phi_s \boldsymbol{\beta}'\boldsymbol{x})}{\sum_{j=1}^{k} exp(\theta_j - \phi_j \boldsymbol{\beta}'\boldsymbol{x})} \qquad (s = 1, \dots, k) \qquad (1)$$

where, k is the number of outcomes (categories) for the dependent variable; $\boldsymbol{\beta}'$ is the column vector of coefficients for independent variables $\boldsymbol{x}$; θ is the intercept parameter for each category; and the ϕ is the scaling parameter.

In the model, the dependent variable is patient satisfaction, which has three categories (satisfied, fair, and dissatisfied). Independent variables consist of the questions about the patient satisfaction in Table 2, hospital type (public or private), and the characteristics of patients (e.g., gender, age, marital status, educational level, living area, income).

Before the parameters can be estimated, some constraints must be added to identify the parameters. The scaling parameter of the base outcome must be zero ($\phi_1 = 0$), and the scaling parameter of the first (or the last) outcome that are not the base category must be one ($\phi_k = 1$). Thus, SORM is identified to estimate the parameters (Anderson, 1984).

Two different multivariate models were run for both years analyzed. The first model has included only the socioeconomic variables. The second model was also included additional variables that are health-related to find the net effect of socioeconomic characteristics on healthcare satisfaction. All statistical analyses were performed using STATA version 13.0.

RESULTS

Patient Satisfaction

Table 1 shows the level of satisfaction with health care services. Whereas 38.7% of the ratings for general healthcare in 2003 were "very satisfied" and "satisfied," this percentage was nearly 76% in 2012. During this period, ratings of "very dissatisfied" and "dissatisfied" (total dissatisfaction) decreased by approximately 10% points (from 21.7% in 2003 to 11.5% in 2012). Differences in the proportions of each satisfaction category between the two years are statistically significant.

Table 1: Satisfaction comparisons

Notes: The respondents answered the satisfaction question on the basis of the health center from which they had received their most recent service. There were 103 and 122 missing data for 2003 and 2012, respectively. The 2012 survey did not provide "No Idea" option, but this option was provided in the 2003 survey. To ensure the comparability of the data, 21 "No Idea" responses in 2003 were excluded from the analysis.

	2003			**2012**			
Satisfaction levels with healthcare	**Overall** $n = 4828$	**Public**[a] $n = 4026$	**Private**[b] $n = 802$	**Overall** $n = 7956$	**Public** $n = 4466$	**Private** $n = 3490$	*z-test scores (overall)*[c]
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	
Very satisfied	173 (3.58)	131 (3.24)	42 (5.22)	566 (7.11)	305 (6.83)	261 (7.48)	1.67***
Satisfied	1697 (35.15)	1366 (33.8)	331 (41.1)	5474 (68.80)	3090 (69.1)	2384 (68.3)	24.81**
Fair	1909 (39.54)	1628 (40.3)	281 (34.9)	995 (12.51)	551 (12.3)	444 (12.7)	15.04**
Dissatisfied	697 (14.44)	597 (14.7)	100 (12.4)	790 (9.93)	447 (10.0)	343 (9.83)	2.66**
Very Dissatisfied	352 (7.29)	304 (7.52)	48 (5.97)	131 (1.65)	73 (1.63)	58 (1.66)	2.36**

Homogeneity test for each year was run. In a test of homogeneity, the null hypothesis that the proportions of satisfaction responses are the same for the public/private health centers is tested. Chi-square test statistics and p-values are listed:

$$2003: \chi^2(4) = 27.17 \ (p - value = 0.000)$$
$$2012: \chi^2(4) = 1.68 \ (p - value = 0.793)$$

These results show that satisfaction levels and hospital types are dependent in 2003, whereas this relation could not observe in 2012.

a Governmental hospitals, (state) university hospitals, and governmental health clinics.

b Private hospitals, private clinics, and private medical centers.

c Proportion tests separately for each category:

$$H_0: Proportion_{2003} = Proportion_{2012}$$

*** Results are significant at 10%

**Results are significant at 5%

Before the HTP reforms, the quality of public and private health services differed significantly. As shown in Table 1, the total satisfaction with public health centers was 37% in 2003, whereas the total satisfaction with private health centers was 46%. After the health services partially opened to competition with the HTP, levels of satisfaction with public and private health centers were nearly the same in 2012. The other evidence confirming the claim that there is a convergence the satisfaction levels is the test results for homogenous. In 2003, satisfaction levels with health services were statistically not the same for public/private health beneficiaries. However, the probability value of test statistics was higher than 0.10 in 2012. This means that satisfaction levels with health services are not changing according to types of health centers (See notes under Table 1.)

During the 1990s, making an appointment was one of the most challenging issues encountered by patients. Especially in public health centers, appointments could not be made by telephone or online until 2008. If a patient wanted to make an appointment in a public health center, he/she had to arrive at the health center early in the morning and write his/her name on a sign-in sheet. If a patient arrived at a public health center closer to noon, it was typically not possible to obtain an appointment.

It was likely that the available appointments had been filled for the day by patients who had already registered.

As shown in Table 2, 46.1% of people who went to public health centers had difficulties making appointments in 2003. In 2008, it became possible to appoint for public health centers by telephone, and appointments could be made online in 2011. As a result, complaints about public health centers decreased to 21.4% in 2012. With this new practice, when a doctors' schedule is full, the hospital information desk is able to direct the patient to suitable hospitals nearby.

Table 2: "Yes" responds to the certain questions about the patient satisfaction

Questions	2003			2012		
	Public[a] $n = 4026$	**Private**[b] $n = 802$	**χ^2 test statistic**[c] (p-value)	**Public** $n = 4466$	**Private** $n = 3440$	**χ^2 test statistic** (p-value)
	n (%)	n (%)		n (%)	n (%)	
Did you have difficulties making an appointment? (Yes=1, No=0)	1857 (46.1)	217 (27.0)	70.74** (0.000)	947 (21.4)	453 (12.9)	99.21** (0.000)
Did you have difficulties taking drugs from pharmacies? (Yes=1, No=0)	1730 (42.9)	242 (30.2)	32.99** (0.000)	422 (11.4)	313 (10.2)	2.77 (0.096)
Did you have a problem about doctors' behaviors toward you? (Yes=1, No=0)	1569 (38.9)	180 (22.4)	52.42** (0.000)	991 (22.4)	607 (17.3)	31.74** (0.000)
Did you have a problem about nurses' and others' behaviors toward you? (Yes=1, No=0)	1733 (43.0)	212 (26.5)	52.92** (0.000)	902 (20.4)	549 (15.7)	29.91** (0.000)

a Respondents who are beneficiaries of public health centers.
b Respondents who are beneficiaries of private health centers.
c Homogeneity test for each year was run. In a test of homogeneity, the null hypothesis is that the proportions of issue responses are the same for the public/private health centers.

H_0: *The issue that is related to the health service is independent from the health center types.*

**Results are significant at 5%

Even though compared to 2003 and 2012, the differences in the complaint about the appointment between public and private health centers had been getting converge, the statistically significant effect of the hospital types on the complaint has been ongoing. A reason for this may be that the number of patients in public health centers is too high compared with the private centers.

The medicine supply was also a major problem in the health sector. Patients were mandated to use certain pharmacies depending on their social security companies. In 2004, SSK enrollees and Green Card holders (people whose income levels are below a certain level can utilize this program) could obtain medicines from any pharmacy, thereby eliminating discrimination among social security institutions.

As shown in Table 2, patient complaints about the medicine supply within public health centers dramatically declined from 42.9% in 2003 to 11.4% in 2012. Medicine supply problems within private centers were also declined by 20% points (from 30.2% in 2003 to 10.2% in 2012). In 2003, the medicine complaints and hospital types were related; whereas, in 2012, there was no statistical link between the medicine complaints and hospital types. After the HTP reforms, all patients are able to get their medicines wherever they want regardless of either public or private centers where they receive health services.

Health services also suffered from the problematic behavior of doctors and nurses toward patients. Informal relations between patients and nurses are another source of problems. Patients who have informal relationships with nurses or caregivers can easily make appointments even if the hospital's/doctor's quota is full. When other patients are waiting, a patient who has a close relationship with a nurse or caregiver could easily visit the doctor's office without an appointment. However, the hospital electronic tracking system has prompted a reduction in this problem. As shown in Table 2, problems associated with nurses' or others' behaviors in the public centers were reduced by more than half (from 43.0% in 2003 to 20.4% in 2012).

Although a modest reduction in complaints about the behaviors of doctors, nurses, and caregivers, there is statistical relation between the complaints and the hospital types. One of the reasons for this is the limited time assigned for the examination of patients in public health centers (because of

congestion). Another reason is that the primary aim of public centers is to reach as many patients as possible. As a result of this situation, it is expected that satisfaction levels decrease as the number of patients treated increase.

Socioeconomic Characteristics

Levels of healthcare satisfaction according to certain socioeconomic variables are presented in Table 3. In Table 3, it is seen that the satisfaction level of men in both years is slightly higher than that of women. While the satisfaction level for both genders has almost doubled in 2012; the level of dissatisfaction has declined almost twice compared to 2003.

Table 3: Satisfaction levels according to socioeconomic characteristics

Variables	2003				2012			
	n	Satisfied[a] (%)	Fair (%)	Dissatisfied[b] (%)	n	Satisfied (%)	Fair (%)	Dissatisfied (%)
Gender								
Male	2573	39.6	39.8	20.6	3505	76.2	12.9	10.9
Female	2255	38.1	38.7	23.2	4451	75.7	12.2	12.1
Age[c]								
18 – 29	1327	37.9	40.8	21.3	1630	71.6	15.0	13.4
30 – 39	1205	35.8	41.6	22.6	1897	71.0	13.8	15.2
40 – 49	1009	36.4	40.9	22.7	1542	75.1	12.8	12.1
50 – 59	623	42.4	36.2	21.4	1362	78.3	10.8	10.9
60 +	664	46.8	33.3	19.9	1525	85.1	9.40	5.50
Marital Status								
Married	3819	39.3	39.0	21.7	6054	76.4	11.9	11.7
Others[d]	1009	37.3	41.1	21.6	1902	74.2	14.2	11.6
Education Level								
Primary[e]	2447	39.6	39.4	21.0	4461	82.0	9.40	8.60
Elementary	483	41.8	37.4	20.8	941	75.1	12.8	12.1
High schools	871	39.7	38.8	21.5	1455	67.7	15.9	16.4
Collage and over	478	41.5	37.9	20.6	1099	63.3	20.1	16.6
Living Area								
Urban	3334	37.5	39.8	22.7	5865	73.9	13.9	12.2
Rural	1494	41.9	38.5	19.6	2091	81.4	8.60	10.0
Income Level								
Low	2805	37.8	40.5	21.6	3431	79.0	10.2	10.8
Medium	1814	39.3	38.7	22.4	3914	74.7	13.4	11.9
High	209	48.4	34.9	16.5	611	66.1	19.3	14.6

[a] It is the sum of "good" and "very good" satisfaction.
[b] It is the sum of "poor" and "very poor" satisfaction.
[c] Continuous age variable was divided into five categories.
[d] It consists of single, separated, divorced, or widowed people.
[e] This category includes illiterate, also people who are literacy without any certificates.

As the age level increases in both years, patient satisfaction increases. Low levels of satisfaction in early adulthood may be related to high expectations at this age stage. Excessive dissatisfaction with previous services could be shown as a reason for the very low dissatisfaction of people over the age of 60 in 2012.

While there is no significant difference in satisfaction level according to marital status; in 2012, the level of satisfaction for both statuses made a serious increase. As the education level increases, satisfaction decreases while dissatisfaction increases for each year. The disparity can be explained by increasing expectations as education increases.

Although it cannot be said that the living area has caused a serious difference between the satisfactions levels, people who are living in the rural areas are more satisfied than people who are living in the urban.

When the income level, which is the last variable in Table 3, is analyzed, the level of satisfaction increases as the income level increases in 2003. On the other hand, in 2012, satisfaction level decreases as income level increases.

When the satisfaction levels of both years are categorically compared for each variable, the lowest increase in satisfaction has been achieved at the higher educational level (collage and over) and at the high income level.

The results of two different SORM estimations for both years are shown in Table 4. One of the most important results derived from this study is that none of the socioeconomic characteristics (except income levels) did have not statistically significant impact on satisfaction levels in 2003. As shown in Table 4, health-related variables have significant effects on satisfaction with the expected direction. In other words, before the HTP, individual characteristics were not decisive for satisfaction levels with healthcare. If someone has a high income and receives the healthcare from private centers, he/she was more satisfied than the others.

* $p < 0.05$

Table 4: Stereotype ordered regression results

Dependent Variable: Patient Satisfaction[a]	**2003**		**2012**	
Variables	**MODEL I[b] Coef.**	**MODEL II[c] Coef.**	**MODEL I[b] Coef.**	**MODEL II[c] Coef.**
ϕ_1	0	0	0	0
ϕ_2	.878*	.833*	.927*	.658*
ϕ_3	1	1	1	1
Gender: *(1) Male, (0) Female*	.071	.116	.150*	.125
Age	.004	.003	.011*	.011*
Marital Status: *(1) Married, (0) Others*	- .037	-.011	-.082	-.157
Education Level (*Base group: Primary)*				
Elementary	.048	.052	-.278*	-.438*
High schools	-.130	-.158	-.644*	-.777*
Collage and over	-.189	-.184	-.855*	-.963*
Living Area: *(1) Urban, (0) Rural*	.149	-.023	-.189*	-.123
Income Level *(Base group: Low level)*				
Medium	.176*	.096	.004	-.060
High	.711*	.264	-.048	-.216
Hospital type: *(0) Public, (1) Private*		.293*		-.136
Difficulties in getting an appointment: *(0) No, (1) Yes*		-.614*		-.960*
Difficulties in medical intake: *(0) No, (1) Yes*		-.254*		-.946*
Misconduct of doctors: *(0) No, (1) Yes*		-.709*		-.687*
Misconduct of nurses: *(0) No, (1) Yes*		-.137*		-.285*
LR χ^2	18.65	272.84	167.59	545.04
df	9	14	9	14

Notes: The hypothesis for parallel regression assumption is as follows:

$$H_0: \boldsymbol{\beta}_1 = \boldsymbol{\beta}_2 = \cdots = \boldsymbol{\beta}_{J-1} \quad for\ categories\ m = 1,2,\ldots,J$$

The results of likelihood-ratio test of parallel regression assumption are as follows:

$$2003: \chi^2\ (33) = 60{,}70\ (p - value = 0.00)$$

$$2012: \chi^2\ (33) = 127.91\ (p - value = 0.00)$$

[a] It includes three categories: (0) Dissatisfied, (1) Fair, (2) Satisfied. As a result of the likelihood-ratio test, "Very satisfied" and "satisfied", and "Very dissatisfied" and "dissatisfied" categories were combined.

[b] It includes only socioeconomic variables.

[c] It includes both socioeconomic and health-related variables.

* $p < 0.05$

After the HTP, the government intended to increase the satisfaction levels of lower segments of society (e.g., lower-income and education level). A reason for this choice is that the government has been gotten significant proportions of its vote by these social groups. Even though income and satisfaction levels were positively related in 2003, an opposite relationship was found in 2012. This relationship is not also statistically significant; however, one of the reasons for this change is the increasing use of private health centers. Whereas 15% of low-income people received services from private centers in 2003, this ratio increased to 1 in 3 low-income people in 2012. The lack of available appointments and longer waiting times for appointments in private centers can be considered limiting factors related to the increased levels of dissatisfaction among higher-income people.

In 2012, compared with other groups, the satisfaction levels of males, lower-income, and older individuals were higher. An interesting result is obtained by adding health-related variables to the model: The hospital types have not a statistically significant effect on the satisfaction level. This result can be interpreted that healthcare quality in public and private health centers have converged so that there is no statistically significant difference between the two in terms of patient satisfaction after the reforms.

DISCUSSION AND CONCLUSION

This study is one of the few studies that focus on the effect of the HTP reforms on Turkish households' satisfaction levels. Unlike other studies, this study includes a direct comparison of the differences in households' satisfaction levels over time, as well as changes in satisfaction levels between public and private health centers. Even though levels of satisfaction with health care services have greatly increased over the last decade, it would be inappropriate to evaluate the HTP reforms by referring only to household satisfaction levels. The burden of health reforms on budgets of the government and households was not considered in this study. Moreover, changes in health care working conditions (e.g., the elimination of private examination offices) and the effects of these changes on the job satisfaction of health care workers (e.g., doctors, nurses, and pharmacists) were not examined in this study. In future studies, the sustainability of the new health system in terms of both financial and employee satisfaction can be analyzed.

Expectations are important factors affecting satisfaction levels, which can be high as a result of low expectations, even if the health system is worse. In this study, experiences and expectations could not be matched because the data used in this study did not include expectations for healthcare. Another limitation of this study was that satisfaction levels were compared using cross-period data. The approach of accepting the comparability of individuals' satisfaction levels at different times can be subject to problems, as life experiences and expectations can change over time. However, the TSI does not have a longitudinal survey that includes information regarding patient satisfaction.

An evaluation of healthcare reforms based on the satisfaction levels of individuals or households should not neglect to consider the overall performance of the government (Papanicolas *et al.*, 2013). The real national income per capita increased nearly two-fold in the past two decades. Moreover, improvements in welfare (e.g., increasing the possibility of obtaining a house or a car), particularly the development of education and transportation, have increased overall satisfaction with the government. In the 2002 general election, the voting rate for the AK Party was 34.5%; this rate was 49.9% in the 2011 general election (KONDA; 2015). As a result, one can observe a strong relationship between the overall performance of the government and satisfaction with healthcare.

Patients' access to health services was improved through the redesign of the Turkish health system. After these reforms, people could more easily obtain health services, and they encountered fewer problems as a result of reorganizing the relationship between the MoH and the Social Security Institution. In other words, the HTP reforms increased access to healthcare and reduced levels of health disparity. However, disparities between Turkish regions/cities were not considered in this study. In future studies, the efficiency of the HTP reforms should be analyzed in terms of the distribution of health services among regions/provinces in Turkey.

Despite achieving many successes, one of the HTP's shortcomings was its focus on short-term politics. With the reorganizing of the system, most daily health care problems were solved by the MoH; however, some structural problems were not addressed. In case of incorrect diagnoses or treatments, patients do not know how to assert their rights. Moreover, patients do not commonly sue for damages resulting from wrongful surgeries.

From the patient perspective, Turkish households do not fully realize that they have purchased such services through their payback health deductions.

Consumer awareness of health is vital. One way of achieving consumer awareness is by transitioning to a partially or completely out-of-pocket system. Such a system would ensure that all households are cognizant of their insurance premiums and healthcare expenditures. However, such a change would not be easy in a country where even a limited contribution payment for healthcare unfavorable reactions by the public.

From the micro perspective, one of the most important points to be successful in the HTP is to increase the overall satisfaction of healthcare. Even though increasing satisfaction in all different segments of a society with a macro policy is quite difficult, the HTP practices have overcome this difficulty. However, especially after the HTP, the statistically significant differences in patient satisfaction among different socioeconomic categories (e.g., age, education, income level) address the issue that is the bias of policies to reach different segments of society. The reason for this bias is that the government deliberately prefers certain social categories to the others; however, it may also be caused by having different expectations of different social classes.

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