Pay for performance (P4P) and estrangement: A mixed-method study on the physicians' perceptions of the influence of a new reimbursement system on themselves as professionals, their moral stances, and their working and private lives

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Abstract

Background

Pay-for-performance system (P4P) has been in operation in the Turkish healthcare sector since 2004. While the government defended that it encouraged healthcare professionals' job motivation, and improved patient satisfaction by increasing efficiency and service quality, healthcare professionals have emphasized the system's negative effects on working conditions, physicians' trustworthiness, and cost-quality outcomes. In this study, we investigated physicians' accounts of current working conditions, their status as a moral agent, and their professional attitudes in the context of P4P's perceived effects on their professional, social, private, and future lives.

Methods

First, we held 3 focus groups with 19 residents and 1 specialist regarding their lived experiences under P4P and thematically analyzed the transcripts. Second, we developed a questionnaire in order to assess how generalizable the qualitative findings are for a broader group of physicians. The tool has three parts questioning 1) demographic information, 2) working conditions, and 3) perceived consequences and effects of P4P. 2136 physicians responded to the survey. After refining the data, we conducted the statistical analysis over 1378 responses by using Spearman's correlation coefficient, exploratory factor analysis (EFA) for categorical data, and Kruskal-Wallis variance analysis.

Results

Thematic analysis revealed two dimensions: 1) factors leading to estrangement, and 2) manifestations of estrangement. As for the initial, participants thought that P4P affected *relationships at work; family and social relationships; working conditions; quality of the specialty training; quality of healthcare services*; and it caused *healthcare system-related consequences*. Concerning the latter, the following themes emerged: *Estrangement of the physician; damaging effects on physician's psychology; physician's perception of their future life*; and *physician as a moral agent*. According to EFA, a 5-factor structure was appropriate: F1) Estrangement; F2) adverse effects on the physician's quality of life; F3) favorable consequences; F4) physicians becoming disreputable; F5) unfavorable consequences.

Conclusions

The findings suggest that under P4P, physicians have become more estranged towards their profession, their patients, and themselves. They suffer from deteriorating working conditions, lack of motivation, lack of work-related satisfaction, and hopelessness regarding their future. Furthermore, P4P impairs their ability to realize themselves as moral subjects practicing in alignment with professional values and principles.

Background

Pay for performance system (P4P) is a well-known policy implemented in the healthcare sector in some Western countries for more than 25 years (1). The system is structured on the premise that to increase efficiency in a sector, workers should be subsidized according to the number of daily productions on an individual basis. By this way, it is assumed that they would be incentivized to use their labor capacity ultimately. Competition among individuals at a workplace emerges both as a consequence and a factor that leads to increased working pace per capita, which reinforces productivity alternatively (2). When customized for the healthcare system, the healthcare professional becomes the main production unit, whereas each element of her clinical intervention turns out to be the “product” rated the indicator of her performance and efficiency.

Although promoted and advocated by governments in many countries, healthcare professionals have not received the model immediately. Professional bodies such as medical chambers and associations objected to its implementation by specifying its possible negative consequences such as increased workload and pace, meltdown in regular wages, and increased rates of burnout in healthcare professionals (3–6). Additionally, the perceived unfairness of the P4P model affected the health workers' motivation, reduced collaboration across departments and created tensions in the social relations at health facilities. Such critiques were mostly verified by the actual experiences of healthcare professionals documented in various studies from different countries (7–9).

Parallel to the global policies often called neoliberalism, the Turkish healthcare system underwent tremendous structural reforms over the last two decades under the Health Transformation Program (HTP) [1]. According to the Ministry of Health (MoH), HTP improved the delivery of healthcare services, increased access to healthcare, and promulgated necessary regulations for universal healthcare coverage for all citizens (10–12). On the one hand, the provision and financing of healthcare services were disassociated, and private corporations were allowed to invest in the healthcare sector; on the other, state hospitals were autonomized financially and administratively. The former social security institutions[2] were initially combined with each other and then transformed into a referee council, Social Security Institution (SSI – *SGK in Turkish*), that currently supervises and controls the health market on the national scale. Performance-based supplementary payment model or, in short, pay for performance system (P4P) has been one of the key elements (13,14).

P4P model in Turkey

In Turkey, P4P was launched at public hospitals in 2004, at family physician centers in 2010 and at university hospitals in 2011 and has been in operation on every level of the delivery of healthcare services since then. The government defended that the policy would have encouraged healthcare professionals' job motivation and improved patient satisfaction by increasing efficiency, speed, and quality in the provision of healthcare services (13,15–18). For that aim, physicians working under P4P are paid a flexible supplementary wage from the institution's circulating capitals in addition to their constant salaries (17,19).

The amount of the supplementary payment is determined according to the individual productivity rate monthly and some specific criteria are used for regulating their delivery. Although the scoring criteria differ from one hospital to another, payments are basically calculated over the number of medical interventions such as physical examinations, diagnostic tests and surgical operations performed by healthcare professionals (17). A hospital's financial revenue and the total amount of supplementary payments to be delivered to its employees are in a reciprocal relationship. For example, the more patients a physician sees during a certain period, the more income is brought to the hospital's budget from value-added medical interventions in the form of direct or indirect out-of-pocket payments, and/or –majorly- of allowances provided by SSI (20). Theoretically, in that case, the hospital can pay more supplements to physicians from the circulating capital in return. In consequence, as the defenders of the model claimed, the hospital administration would encourage physicians to see more patients to increase the contribution from the aforementioned sources to their revenue. In parallel, the emergence of the model is also marked with the increasing number of patients applying for medical assistance, which is considered a consequence of policies that are claimed to provoke the consumption of healthcare services (3, 21–23).

Many authors and organizations have reported that the P4P system has contributed to the overall success of HTP (24–27). According to the annual statistical healthcare report announced by MoH, numbers of patients treated and of medical operations made per year in public and university hospitals continue to increase every year as well as those of patient satisfaction (28). Government officials have proudly declared that with HTP any citizen who applied to a public hospital was seen by a physician immediately (29).

Nevertheless, healthcare professionals interpret this picture far more differently than the MoH officials. They claim that P4P has deteriorated quality of healthcare services despite higher scores based on the quantity of treatments and operations, and they relate these consequences to the worsening conditions of the workplace (30,31). According to them, it has also led to inequality in income distribution of healthcare workers and diminished the satisfaction they get from their job (32,33). The Turkish Medical Association (TMA) Medical Ethics Committee and the Turkish Dental Association (TDA) Dental Ethics Committee reported that most physicians and dentists thought that unnecessary diagnostic procedures were frequently ordered, and medical interventions without indication were vastly made under P4P (34–36). Correlatively, some studies demonstrated during the reform period P4P has been implemented, a significant increase in malpractice cases has been observed. The system also leads to diminished durations for physician-patient interaction due to the tendency to accept more patients to hospitals (37). Given that the excessive number of patients per day per physician has already become a norm in Turkey, it can be said that physicians and dentists would experience difficulty in diagnosing their patients' health problems sufficiently, informing them well about the medical options as well as their benefits and risks, and providing them with lifestyle guidance properly (34). It is also suggested that being constantly exposed to higher numbers of daily outpatients and accelerated working pace cause them to have burnout syndrome (38). Furthermore, it is claimed that members of the same healthcare team have become inclined to compete with each other for more supplementary payment. Rivalry harmed open communication, and solidarity among healthcare professionals and had damaging effects on peace at

work (3,38). Lastly, physicians and dentists working in public and university hospitals complain about not being able to improve themselves professionally because they lack necessary time and resources to be engaged in such activities (34,39).

Objective

Many studies demonstrated the negative effects of P4P on physicians' working conditions and the quality of their relationship both with their patients and their colleagues (3,38,40,41). Issues arising from the P4P system in Turkey such as an increase in malpractice cases, unnecessary diagnoses and treatments, and medical costs, and the impairment of patients' and physicians' perceptions of each other undermining the trust in between were also reported (3,34,35,42). In this study we focused on, however, how the system influences physicians' moral accounts regarding their relationship with their patients, colleagues, and families. Additionally, we investigated how they perceive themselves as healthcare professionals under P4P. We also examined whether, and if so how, their moral accounts and justifications about their own professional attitudes changed after P4P was launched.

Traditionally, residents represented the group of physicians who take on the biggest portion of the workload in third-stage hospitals (university and training-research hospitals) in Turkey. Since outpatient services are the main source of healthcare institutions' revolving fund, they are provided more intensely than other services. Hence, it can be claimed that residents and young specialists have been exposed to P4P the most because they are the physician cohort regarded responsible from the conduct of outpatient services. Therefore, to demonstrate the effects of P4P on physicians through the experiences of those whom we assume the system has affected most severely, we chose residents and young specialists as our universe for the qualitative part of our study.

We hypothesized that P4P system enormously changed the working regime of healthcare professionals and thus, must have drastic effects not just on their professional but also private lives. For this purpose, we wanted to examine experiences of physicians as moral agents both at work and off the job. How they justify their moral stances under this new system lay in the heart of our inquiry. To that end, we conducted the study in two phases: 1) We conducted focus groups to grasp the diversity of qualitative data, and 2) made a cross-sectional questionnaire survey to present their prevalence.

Methods

Design

In this study we focused on whether -and if so how- P4P affects physicians' and young specialists' moral attitudes regarding their daily clinical practice. Therefore, we investigated whether the system has changed their 1) will and motivation to practice medical profession according to what they think relevant professional ethical values, codes and norms are; and 2) current working conditions that would affect their capability to do so. Besides, we inquired 3) their perception of their status and responsibilities as a

moral agent in the face of their situation regarding 1 and 2; and 4) their thoughts and feelings about working under P4P especially with regards to its effects on their social, private, and future lives.

Our study design is composed of two data collection phases: Qualitative and quantitative. Since we had very little evidence and some unproven assumptions regarding physicians’ lived experiences as professionals working under P4P, we first held focus groups (FGs) with residents from different hospitals to acquire deeper insight about their day-to-day experiences. Upon the results, we developed a comprehensive questionnaire and by using it conducted an online survey on Turkish physicians throughout the country.

Focus Groups

In March and April 2012, we conducted 3 focus groups with 19 residents and 1 freshman specialist from 4 major institutions situated in Ankara (Table 1). MVK, an experienced qualitative researcher, moderated the FGs. HT, HE, FA, DE and TCi (two males and three females) took charge of the organization and conduct of the FG sessions as assistant moderators. They were responsible both from the logistics, and the organization as well as keeping notes during the session, transcribing the voice records, and archiving and analyzing the logs. They were all medical students when the FGs were conducted. Before the qualitative data collection phase, MVK trained them on organizing and conducting FG sessions, and analyzing raw data qualitatively. All sessions were realized at Ankara University School of Medicine. Apart from the researchers and participants, there was nobody in the seminar room where the groups were organized. Repetitive sessions were not necessary since we considered the data obtained from those sessions satisfactory. The analysts also considered the data saturation was adequate after three FGs. Except one, all the FG participants were residents continuing their specialty training in different fields such as General Surgery, Dermatology, Psychiatry, Hematology, Nephrology, etc. at the time the study was conducted. One of the participants was a fresh specialist in Cardiology. One focus group facilitator (MVK) and two assistant moderators were present in all the sessions.

Table 1

The configuration of focus groups according to the participants’ affiliation and gender

		Focus Group No.		
		1	2	3
Institution	Ankara University Faculty of Medicine (8)	+	+	+
	Hacettepe University Faculty of Medicine (6)	+	+	+
	Ankara Numune Education and Research Hospital (5)	-	+	+
	Ankara Dışkapı Education and Research Hospital (1)	-	-	+
Gender (n)	Female	2	3	4
	Male	4	3	4
Total (n)		6	6	8

Informed consent was asked from each participant before the sessions and proved by a signed consent form. Each session lasted around 1.5 hours. We voice-recorded the discussions that we decoded as transcript logs afterwards. Additionally, assistant moderators took meeting minutes during the sessions. Logs and meeting minutes composed the rough data for the qualitative analysis.

The moderator followed a structured question form to inquire participants' thoughts and feelings. MVK and HT drafted the questioning route based on previous studies on the topic. Two different experts from bioethics department examined the first draft separately and gave feedback before the researchers finalized it.

The key questions are given below:

1. Has anything changed in your life with the launch of the system?
2. What is the most positive aspect of the "pay for performance" system?
3. What is the most negative aspect of the "pay for performance" system?
4. Can you describe one of your working days under the "pay for performance" system?
5. Do you think that the physicians' relationships with their patients are affected by the "pay for performance" system?
6. Do you think that the "pay for performance" system has any effect on the relations between colleagues?
7. Have the residents' working conditions been affected by the "pay for performance" system?
8. Has anything changed regarding your family relationships during residency?
9. Now, let's stop and imagine 3-4 years later. Where do you see yourself?

Analysis of focus group discussions: The researchers (MVK, HT, HE, FA, DE and TCI) thematically analyzed the transcripts of the group discussions (43) by using inductive content analysis approach (44). Due to the nature of the study, they did not identify themes in advance. They performed the analysis manually.

The analysis steps are explained as follows: First, two researchers read each transcript independently to develop a pre-understanding of the generic data and kept memos of possible themes (Step1: Familiarization). Then, they reread the transcripts to extract and group the relevant answers to the key questions. They clustered the accounts which could not be sorted under any questions and/or were considered to serve as an answer to more than one question in a separate group to be reviewed later. Each researcher applied this operation individually on the FG discussion log, which they were responsible for (Step 2: Deconstruction of the raw data). Subsequently, moderators (the group facilitator and the assistant) coded the excerpts by taking group dynamics into account and categorized them. Then, they cross checked their personal findings and assigned themes to these categories (Step 3: Identification of a thematic framework). While working on the thematic coding, the researchers took the *frequency* (how frequently something is said, though not counted), *specificity* (richness in terms of information and detail), *emotional content* (passion, enthusiasm, or intensity) and *extensiveness* (how many people mentioned an item) of the accounts into consideration (45). Afterwards, they held consensus meetings with the participation of all researchers to discuss and finalize the theme set (Step 4: Indexing). In conclusion, they organized contexts, themes, and sub-themes into tables (Step 5: Charting; Additional File 1). The researchers then reevaluated their first analysis on the basis of these tables and reconstructed the data by defining the pattern of relations between contexts, themes and sub-themes (Step-6: Mapping). They selected samples of extracted accounts that best represented the themes and/or sub-themes, and they quoted them in the final report. Two researchers (MVK and HT) interpreted the results with respect to the relevant literature (Step-7: Interpretation). Finally, they revised the report after a consultation with the rest of the research group. The researchers did not reproach the participants for asking their feedback on the findings.

The questionnaire survey

Based on the results obtained from the first phase (FG discussions) the researchers developed a questionnaire. The main objective was to quantify the qualitative data and to assess how generalizable and valid the findings are for a broader section of physicians.

Three separate experts (a biostatistician, a bioethicist, and a medical education expert) overviewed the first version of the questionnaire. The second draft was developed in line with their suggestions for improvement. The demographic section was enriched, and some evaluative items were removed from the list, while others were expressed differently to increase readability and understandability. Afterwards a pilot survey was conducted on 40 residents working at various clinical departments at the hospital of

Ankara University Faculty of Medicine, whose data were analyzed statistically. Based on the preliminary results the tool was modified to its final version (Additional file 2).

Following a literature review about the effects of P4P on healthcare professionals, researchers decided to add one more section to the beginning of the final version. Eventually the tool is composed of three sections. Section 1 involves 8 items questioning demographic information about participants (age, gender, place of residence, title, affiliation, specialty, marital status, and whether they have a child/children or not). Section 2 inquires physicians' perceptions of their working conditions. Here, the total number of 22 items is sorted into 5 parts as follows: a) Perception of income, and of allocation of time for patient examination, medical interventions apart from polyclinic tasks, activities for professional development, professional education, resting and relaxation, family, and social life [1-11]; b) perceived workload [12-15]; c) number of off-label medical practices [16-18]; d) negative feelings about one's own professional practices [19-21]; and e) perceived quality of one's communication with different parties at work [22-25]. In the first part (P1) participants were to choose one of the three picks of "completely inadequate", "inadequate" and "adequate" scored as 1, 2, and 3 respectively. In the rest of the parts (P2-5) they marked their evaluation on a scale of 0-5 (0: None, 1: Quite a little/few, and 5: Too much/many). Section 3 is composed of 55 items questioning participants' thoughts, attitudes and feelings related to their experiences as professionals working under P4P. All items in this section are in the form of concrete expressions about which the participants were asked to pick one of the 4-likert options: "I totally disagree", "I disagree", "I agree" and "I totally agree." Twenty-one of 55 items are composed of semantically inverse expressions.

The data were collected using haphazard sampling. The survey was made digital and put on internet by using an online survey software. The link to the survey was iteratively sent out via e-mail lists and Facebook groups of which physicians were members. Besides, the survey was sent to some hundreds of private e-mail addresses of healthcare professionals whom the researchers knew of. Lastly, upon the researchers' request Ankara Medical Chamber called on its members to participate in the survey several times. In the introductory section of each e-mail call or Facebook message the researchers kindly asked physicians to fill in the survey and share the concerned link with other physicians whom they thought could be suitable participants for the study. The survey was kept circulating online from April 2013 until February 2018.

Analysis of the survey: Although the researchers developed the questionnaire according to the findings of the focus groups conducted solely with physicians in training (residents), they sent out the survey to all physicians who were working under P4P. By this means, they investigated whether there was a difference between groups of physicians who are working in different areas of the healthcare system such as primary care, university hospitals, public or private healthcare institutions as well as the prevalence of findings within each group.

2136 physicians responded to the survey. This sum is composed of general practitioners (GPs) and family physicians (FPs), physicians in training (residents), specialist doctors (SDs), and faculty members

(FMIs). GPs and FPs were considered one group since their working conditions are mostly the same in Turkey. Dentists were excluded from the study since their working conditions were considered distinctly too variable. The institutions that participants were affiliated with were grouped into five categories as family physician centers (FPCs), training and research hospitals (TRHs), university hospitals (UHs), public hospitals (PubHs), and private hospitals (PriHs).

The data were refined using two criteria. First, responses without one or more of the demographic information of age, gender, professional title, and institutional affiliation were eliminated. Second, responses with less than 47/55 (<85% response rate) completed items of Section 3 were considered invalid and excluded from the data set. As a result, the statistical analysis was conducted over a total number of 1378 responses.

Descriptive statistics were summarized as counts and percentages for categorical variables, mean and standard deviations for ordinal and continuous variables. The degree of association between variables were calculated by using Spearman's correlation coefficient. The 55 items of Section 3 were submitted to an exploratory factor analysis (EFA) for categorical data using weighted least square method to investigate the dimensionality of the item set. The Tucker Lewis Index (TLI: >0.90 acceptable, >0.95 excellent), the Comparative Fit Index (CFI: >0.90 acceptable, >0.95 excellent) and the Root Mean Square Error of Approximation (RMSEA: <0.08 acceptable, <0.05 excellent) were used as goodness-of-fit statistics (46). Differences among groups for factors were evaluated by Kruskal-Wallis variance analysis. When the p-value from the Kruskal-Wallis test statistics is statistically significant, a multiple comparison test was used to know which group differs from which others. The Bonferroni correction was applied for all possible multiple comparisons. Model fit was evaluated using the root-mean square error of approximation (RMSEA) that accounts for model parsimony. RMSEA values < 0.08 suggest an adequate fit; values < 0.05 indicate a good fit (47). Items with factor loadings below 0.30 were eliminated. Factor scores were calculated as the average of item scores. A p value less than 0.05 was considered significant.

Results

Findings from the focus groups. The findings suggest that after the launch of the P4P system, the participating residents have become more estranged toward their professions, their professional environment, their patients, and themselves. Less motivation to practice ethical codes in the wards and loss of hope regarding their future are assumed to reinforce this tendency as well as the anxiety and burnout that they experience.

Thematic analysis revealed several dynamics functioning as either an underlying factor or an essential dimension of physicians' perceived estrangement. Therefore, we present the results in two groups as follows: 1) factors leading to estrangement, and 2) manifestations of estrangement.

Factors leading to estrangement

Participants thought that P4P affected various aspects of their professional and private lives, which we consider contributed to their estrangement. *Relationships at work, family, and social relationships, working conditions, quality of the specialty training, quality of healthcare services, and healthcare system-related consequences of P4P* are among them. They also pose the contexts where their critical experiences occur.

1) Relationships at work

Our analysis revealed that P4P affected physicians' relationships both with their patients and their relatives, and with their colleagues and superiors negatively. It impaired their communication with the former and they were subjected to inappropriate behavior by them more often. They also thought they had become less reputable in patients' and their relatives' eyes.

"... at our department, anti-depressants are ordered very often; other departments do the same thing too. But an anti-depressant isn't effective in the first three weeks and in the first week it has only adverse effects. Thus, the patient takes the drug, after two days it interrupts his sleeps; he has vivid dreams. Then, he sees another doctor thinking that the drug prescribed by the previous one isn't good; there 26 of 28 tablets are wasted. He gets a second drug; he experiences the same until somebody finds an opportunity to explain this to him." [FG-I/P-6/Ln. 899-904][3]

Similarly, the participants either regarded their superiors less and/or felt angry with them since they either witnessed or were subjected to unethical behavior such as being treated merely as an instrument by them.

"Our professor, he shows up in every council and says, 'this has this many points, that has that much, points are important, bla bla...' (Laughing). They were doing bone marrow transplantations non-stop, and I think there is this thing underlying most such decisions, points. Because, well, once a patient with a transplantation decision became ex [died]. I mean, even receiving chemotherapy was impossible [for her], let alone transplantation. . ." [FG-I/P-4/Ln. 378-383]

Lastly, P4P diminished or disturbed peace at work and impaired solidarity among healthcare professionals since it worsened the relationships between physicians, teams, and departments.

"Say, you need to go somewhere. First, you are supposed to talk to your resident fellow. Then you speak with the specialists. Then, you go to your chief. That ritual is life draining. Because all say 'sure, just go, but we are just a couple of people here.' Once a person leaves that dirty wheel, his duties will be loaded onto someone else's shoulder. . ." [FG-III/P-5/Ln. 1172-1178]

These experiences might have led to negative feelings such as anger, anxiety, intolerance, timidity, loneliness, distrust, lack of safety and diminished professional satisfaction.

2) Family and social relationships

The participants all agreed that P4P had negative influence on their family relationships and narrowed their social network, which might have resulted in receiving limited or no social support. In fact, some participants mentioned that they needed to be understood and backed up by their partners and/or parents as they had started working harder than they had used to do.

"We were just married when my husband started his residency. Before that, we had been dating for six something years. The man I had known for six years turned into an utterly different person in the very first month of our marriage. It was like a nightmare . . . although you can barely keep up your own life, suddenly there is someone in need of care next to you. [FG-III/P-2/Ln. 1140-1146]"

Besides, some added that they felt worried or guilty for not being there whenever their family members needed them.

I realized that I've started to live more intolerantly. I don't call my parents as often as I used to, but they don't bother me too much with such trifles at home anymore, they know maybe I won't shake it too much. My head is tired; I'm done listening to trouble all day. I'm like, "Okay okay . . . Well, now they saw that there is not much good from me. They don't involve me much in their family matters and things anymore. [FG-I/P-5/Ln. 1204-1209]"

3) Working conditions

The participants observed an increase in patient numbers, medical interventions, and bureaucracy with the introduction of P4P. Additionally, they mentioned that hospitals were run with insufficient personnel numbers. As they were concerned about collecting as many performance points as possible, they were more likely to waive their right to vacation/leave. Moreover, they frequently had to deal with stuff that fall outside their job description such as secretarial tasks. Some also stated that they worked off-the-clock to keep up with the quality measures of the medical care they provided. All these factors eventually led to an increase in the overall workload the residents had to shoulder. In addition, fear of losing performance points due to duty-offs urge residents to work almost non-stop and spare less time for rest.

"There is a screen in between, I type there. She tells you something behind the screen. Without raising your head, you say 'come on in, lie down'. Meanwhile, you try finishing your typing. . . . Then, you look at her out of the corner of your eye and understand what it is. You run there right away and, you know, make a quick examination, then you return to your seat and slip her hand a piece of paper. You don't really see the patient's face, you are jammed." [FG-I/P-5/Ln. 675-679]"

Moreover, the participants complained about having to work under direct or indirect pressure either coming from administrators, superiors, or colleagues, or of catching up with the performance measures originating from the harsh competition between different hospitals and/or departments.

"You must increase your turnovers, he said. Gosh! Is here an enterprise? What is it with the turnovers? In psychiatry, patients stay at the hospital longer. Because it is necessary, I mean, a longer stay is necessary, they already hardly collect themselves. I mean, you pull a ruined disoriented schizophrenic patient together barely in three-five weeks. But we are told to discharge them quickly in about one week! Pardon me? The effects of the drugs you give to them don't even start in less than a week." [FG-I/P-1/Ln. 745-749]

These elements mark the deterioration of the working conditions, which might presumably lead to physician burnout, anxiety, exposure to mobbing, feelings of being under threat, and inability to refresh oneself.

". . . in pediatrics residents are warned by their professor not to get pregnant. 'If you want to conceive, show a valid reason for that, something like I am getting old (people laughing).' I am serious, there is such a thing. 'I can arrange no night-duties for you, but just so you know, if you give birth, you will have night-duties.' Normally, legally, you cannot be asked to do that in the first year after giving birth, but there is no such thing." [FG-III/P-4/Ln. 1233-1239]

4) Quality of the residency training

According to the participants, the compromised quality of the residency training was another important consequence of P4P. Due to the increased workload, the time spared for training-related activities diminished, case-based training was hampered, and physicians did not have the opportunity to develop themselves professionally by seeing various medical interventions and by attending courses and conferences. These factors might make physicians deprived of their seniors' mentorship and eventually obstruct their professional competence.

"We can't attend courses, for example. Because when somebody goes to a course, congress, or something else, the rest must do her job. That is why we are disinclined to do that. I mean, you might have to say 'well, anyway, let me not go then.' Then, all joking aside, four years have already been passed. Or, I don't know, for example you want to learn something. A patient comes in. There are two treatment methodologies; one lasts one hour and the other, say, only fifteen minutes. You cannot learn the one that takes an hour." [FG-I/P-5/Ln. 1136-1142]

5) Quality of healthcare services

The participants stated that under P4P, they could not exercise due care and attentiveness toward their patients.

"I did an outpatient clinic in oncology for two months. The professor limited the number of patients back then. Twenty-five patients a day, it was a wonderful period. . . . I communicated with them very nicely; I could also consult with the professor. I mean, it was also good for my training, besides that the patients

received an efficient treatment. . . . However, here, for example, I did gastroenterology for a short time and saw 60 patients a day. . . . I could not establish any communication with anybody. All I mind was to finish all the patients immediately, . . . I used to adopt the approach that 'let her get a new appointment in a month [for ultrasound], and then I will not be here anyway.'" [FG-I/P-4/Ln. 950-961]

They also added that they could not perform their profession properly due to lack of time, tendency to commit more medical errors, and automation. It is assumed that this process might induce feelings of professional incompetence and lower self-esteem in physicians.

"For example, recently they offered a new setup; the quotation for surgery's package program has become 41.50 lira. . . . When you order MRI and colonoscopy for a patient, the package hits 120 lira. You fear that they will cut the 80 lira-difference from your revenue. . . . As you are afraid, you don't order the necessary tests . . . I mean, here especially in surgery, we will skip many diagnoses." [FG-II/P-3/Ln. 445-449]

Besides, they thought that P4P negatively affected patients' health status due to multiple disruptions it caused in the provision of healthcare services. This, in turn, might make the physician feel responsible to or embarrassed of such undeserved consequences.

"Somehow, she ([the patient]) doesn't have any other time. . . . She wants to be seen even if she is the hundredth patient that day. She says, 'I can never come again in the morning'. They ([the patients]) don't even have the luxury to complain about this because when the quality of our lives decreases, theirs get even worse. If we consider ourselves as a compass, we always talk about how bad our lives are, but citizens' conditions get much poorer." [FG-III/P-7/Ln. 1051-1056]

Lastly, a few participants mentioned that patients might have been pleased thinking that physicians care for them better than they used to do earlier.

6) Healthcare system-related consequences of P4P

In all groups, the participants highlighted multiple negative healthcare system-related consequences of P4P, while they mentioned only a few of its positive effects. The themes of the latter are as follows: increased efficiency of services, growth in physicians' income, and patients' increased access to physicians. Nevertheless, the former largely involves a wide range of themes such as problematic diagnostic standardization measures, adverse effects on teamwork, disruptions in the organization of services, corruption, and encouragement of inappropriate behavior.

"With the diagnosis I make, this patient can't be hospitalized. So, we change the diagnostic records. It ([the P4P regulation]) says the patient can be admitted only on that certain diagnosis. . . . We must add made-up mentions to the patient reports. We constantly play with our operation notes (Sighs)." [FG-II/P-3/Ln. 424-429]

“They say ‘do something that hasn’t been done before.’ . . . The government really encourages this; it has incredible points, I mean, it brings incredible income. Furthermore, it urges us to do something novel. For example, . . . they try atrial fibrillation ablation; they applied it to three patients and two of them died. When viewed from this angle, we should question how right the implementations done with an itching palm are.” [FG-I/P-3/Ln. 888-894]

The participants also touched upon system malfunction, increased healthcare costs, injustice in the income delivery among healthcare professionals, physician exploitation, physicians becoming disreputable, violence against physicians, and commercialization of the healthcare system.

“ . . . I think they are trying to finish the preventative healthcare thing. Because there you protect the patient, and she doesn’t get sick. But there is no need to protect, let them become all ill, so that they come ([to the hospital]) and make the system run. The aim is, I mean, may money circulate, and may some people get rich.” [FG-I/P-1/Ln. 583-586]

Having witnessed, been subject to or had to be a part of multiple inappropriate, improper, or even clearly wrong practices and attitudes, the residents might have lost their faith in their profession due to stigmatization, feelings of depreciation, insecurity and/or meaninglessness.

Manifestations of estrangement

In their accounts, the participants specified certain dimensions of their multifaceted estrangement as a central consequence of P4P. One of them, *the estrangement of the physician*, involves the core codes that mark the immediate manifestations of estrangement. Others concerning the *damaging effects on physician’s psychology*, *physician’s perception of their future life* and *physician as a moral agent* display it less directly, though still strongly.

1) Estrangement of the physician

According to the statements of our participants, P4P-related implementations majorly caused physicians to feel estranged from not only their profession but patients, other people, and themselves as a human being and a professional. Firstly, they declared that they were losing their faith in and respect for the medical profession, they could get less or no professional satisfaction, and they had been gradually losing their control over their vocational practices. Besides, they also mentioned that they were pessimistic about the future of the profession, and they would have been unwilling to choose medicine as a profession if they had been given a chance to start their career again.

“For example, [I say] ‘give me your hand, let’s have a look. Tongue out. Ok, done’ (Participants laughing). Because we can’t fulfill any medical need. I mean, maybe not no part of the training we had, but we can apply only a little portion of it. We see the patient (Participants laughing). Sometimes she’s walking, we see her walking, or sometimes we see her lying on the stretcher.” [FG-III/P-7/Ln. 860-864]

"We perform a profession. This is not a sacred thing. Our hand is not God's hand. All in all, it's a profession. A job, which we do for money and use as a means of living. But it's more than that. Why is it more than that? Because . . . we have a profession for which we finished a university, we got training on. Okay, we do it for earning a living but it's a profession of honor, it's one of kind of morality. We perform a profession that all scientists performed a long time ago. . . . But when we come to today, they [(physicians)] have been becoming a professional group whose only work is to make money." [FG-III/P-67/Ln. 353-362]

Secondly, our analysis revealed that the residents usually felt angry with their patients and were mostly nervous and intolerant while dealing with them. Moreover, they tended to ascribe this feeling to the public as well. Most of them stated that they did not rely on people anymore.

"A patient's relative, you ask him to leave the room because he quarrels with the nurse, and he disturbs other patients. The security guy comes to take him out. The relative says 'Now what? Should I go now and call the media?' The crud he displays is immeasurable. He swears at everybody, he swears at the healthcare personnel and the nurse. You cannot get rid of him. Then when the head doctor, or the chief physician, whatever, comes, 'Oh, please, show a bit of tolerance!' Why tolerance?!" [FG-III/P-6/Ln. 206-210]

Thirdly, they stated that they abstained from people, sought silence and solitude whenever possible. Very often residents expressed that they would have liked to travel somewhere where nobody lives for some time. Similarly, they could not stand to talk, listen to or see anybody after a workday. They also added that their desire to meet friends diminished day by day.

"I am worn-out, sometimes I don't want to go out from home. Let me just sit at home in the weekend, let me stand still, not go anywhere, not speak with anybody. Let me not listen to anybody's problem. You know, we constantly have to listen to people and speak with them. I feel daunted because of that. I am tired of talking and speaking and I long for silence. May nobody start on me for one day." [FG-I/P-1/Ln. 1215-1219]

Fourthly, prominent emphases were that the residents lose their self-confidence, they cannot protect their professional integrity and their self-esteem decreases, as P4P leaves no room to develop informed clinical decisions due to the increased speed and intensity of the healthcare services.

"This situation ([P4P]) . . . suppresses everything, my self-sufficiency, my self-confidence. You pull yourself back. You withdraw yourself from normal life. . . This, for example, is something very troubling for surgery. I mean, as a surgeon, you need to be self-confident. However, because of this unnecessary workload, plus this, I mean, the oppression due to the hierarchy amongst us, and the redundant work, and so on, you gradually become nonassertive surgeons. Such a surgeon is zero, I mean, nothing!" [FG-III/P-5/Ln. 1178-1184]

Lastly, they suffer from not being able to be effective in their private life. Some mentioned feeling of being detached from real life and that they were not the same person they had used to be in the past. They also touched upon losing ability to comprehend or interpret what they had been through due to work overload.

“For the first year, it is not too abnormal that you devote all your concentration there ([the hospital]), that you endeavor to learn, that you try to live all your days fully. But for later it turns out to be a real torture. Because then you realize that everything starts to disassociate from you, you begin to live in another world and are becoming somebody else. I mean, you begin grasping more or less the place where you have come. You will get lonely, you will be left all alone, I mean, soon the only thing you have got will be this hospital.” [FG-I/P-5/Ln. 1228-1233]

2) Damaging effects on physician’s psychology

Almost all participants remarked that P4P affected their mental well-being negatively in various ways. Due to exposure to heavy workload, perceived injustice and intensifying competition, the residents are likely to suffer from anxiety, depressive mood, anger, disappointment, frustration, and burnout. In consequence, the physician’s quality of life would be impaired. P4P also leads to indifference to wrongdoings or hopelessness about a possibility of change, which can be considered the indicators of cynicism.

“I get very demoralized when I see that the satisfaction, I get from saving a patient’s life by sweating blood can in no sense be measured, I mean, determined by the adversary, or rather in terms of points. Perhaps, I would have earned the same number of points by merely prescribing to flu patients during that time. In total, I would have seen twenty-thirty flu patients and thus showed that I work more. While you think that you really went over big, suddenly you realize that you have achieved nothing in terms of points. This causes a big disappointment.” [FG-I/P-5/Ln. 136-142]

3) Physician’s perception of their life in the future

Few participants stated they were still hopeful about their future professional life. However, after P4P most of them started viewing it with pessimistic eyes. Expectation that the further changes would not be positive, and feelings of despair seem to underlay this tendency. Besides, they mentioned not being able to make long-term plans, as they could not foresee what is ahead of them and felt a constant urge to improve themselves to prevent the perceived risk of unemployment.

“If I can be a specialist, if I can finish [the residency], I think it will be better than this. I mean, I hope for that; but I think I’d be constantly worried, I mean I can’t look into the future comfortably. Always, I’ll wonder... Each and every craze of gossip, I mean, expressions such as ‘it’d be like this, like that’ make me anxious. I think it’ll never change for the better. It’s as if each upcoming day would make the running of

things worse for us. After all I've developed anxiety of getting fresh news. I don't want to hear anything new." [FG-II/P-4/Ln. 1203-1208]

4) Physician as a moral subject

According to the participants' statements, the system inclines the physician to performing and/or overlooking unethical practices, such as picking patients who would bring more performance points. Similarly, under P4P the residents tend to comply with performance measures while evaluating the treatment indications rather than with the scientific algorithms.

... especially in surgery, there are not many opportunities to collect points; we can't get enough points over clinical examinations ... Because we can only get them over surgical operations, indications have started to change, our treatments and follow-ups too. ... and that situation increases the number of complications and the surgeon's liability. ... Science already set the standards for that, but the performance system has started to contravene science ... But inasmuch the points sign in your eyes that you become unable to settle the matter." [FG-II/P-3/Ln. 362-376]

Besides, the residents often exhibit inappropriate behaviors while tackling with extensive workload such as turning their duties over subordinates or seeing more than one patient at a time. Moreover, they blamed P4P for transforming their values and priorities, as well as their behaviors and attitudes. Approaching patients as a shopkeeper pleasing their customers and minding quantity rather than quality exemplify this turn.

"Before coming here, I had worked as a general practitioner. Back then I used to rejoice when the weather is cold, when there is a flu outbreak. That meant simple patients, making easy money. You could increase your points fabulously. For instance, while we normally had seventy patients in 24 hours, at times of the epidemic the number hit one hundred and forty. The money, the revenue that I'd get at the end of the month used to increase one and a half times or double in all aspects. Normally I should think of such things: May nobody get sick. Whereas I should aim for people's health, I rub my hands expecting them to get sick so that I can earn more money." [FG-II/P-6/Ln. 915-926]

"I started residency when I was 25, spent 6 years there and I've always continued by losing a part of myself on the way. Perhaps I have gained important knowledge during the plastic surgery training, but I can enunciate that I have always eaten my humanity out, I've lost it. I mean, having no work peace with your colleagues, negative relationships with patients... all these things eroded my humanity. ... I started with different ideas; such things never crossed my mind. I have always been interested and known that it would have led us somewhere, but I have never dreamt that to end up in such a situation, both socially and scientifically." [FG-III/P-5/Ln. 1524-1531]

Habitual repetition of such coping mechanisms might lead to erosion of the physician's morals. They suffer from moral distress, as they cannot do what they believe is the professionally right thing to do.

“You have no strength left to examine another patient. It’s five to five. The one in front of you is the eightieth patient. I mean, the eightieth! Interruptions for showing results have been incalculable. The inappropriate disturbance by personnel too. Then, you had to do other things meantime, the senior professor called you over and lectured you, came down on you, etc. Now, it’s five to five. Would you examine that patient? She brought her mammography test results. There are growths, which ultrasound and mammography cannot catch. I mean, you skip them unless you examine the patient. Right at that moment the conscience starts to speak; should I send this patient away, or not? You feel suffocated. If I examine her, the work will linger.” [FG-III/P-3/Ln. 843-850]

Findings from the survey. Analysis of Section 1 demonstrated the demographic attributes of the participants. 612 females (44.4%) and 766 males (55.6%) validly took part in the survey. Participants’ age varies from 21 to 70 years, 38.6 being the average. Although the majority of the participants were from some major metropolises such as Ankara (n:450, 32.7%), İstanbul (n:175, 12.7%), İzmir (n:103, 7.5%), and Antalya (n:92, 6.7%), responses were received from every city in Turkey (n:81). Specialist doctors (SDs) comprised the biggest group of participants; yet data from a considerable number of general practitioners and family physicians (GPs+FPs), physicians in training (residents), and faculty members (FMs) were collected as well. Participants affiliated with various institutions, most of whom worked at training and research hospitals (TRHs), public hospitals (PubHs), and university hospitals (UHs) (Table 2).

Table 2

Frequency of participants’ professional title and affiliation

		Frequency	%
Professional title	General practitioners and family physicians (GPs+FPs)	232	16.8
	Residents	236	17.1
	Specialist doctors (SDs)	689	50.0
	Physicians who are faculty members (FMs)	221	16.0
	Total	1378	100
Affiliation	Training and research hospitals (TRHs)	396	28.7
	University hospitals (UHs)	290	21.0
	Private university hospitals (PUHs)	17	1.2
	Public hospitals (PubHs)	385	27.9
	Private hospitals (PriHs)	85	6.2
	Family health centers (FHCs)	132	9.6
	Public health centers (PHCs)	17	1.2
	Other	56	4.1
	Total	1378	100

The specialties of the participants showed great diversity, including all clinical and basic branches of medicine. General practitioners and family physicians (n=242, 17.6%), psychiatrists (n=135, 9.8%), internal disease specialists (n=80, 5.8%) comprised the three biggest groups. As for marital status, 330 (23.9%) declared to be single, while 988 (77.7%) were married and 60 (4.4%) were divorced. 751 (59%) had children.

Section 2 concerns participants' perceptions about their working conditions. As mentioned earlier, items in this section were grouped into five thematic parts (See Methods/Questionnaire Survey, and Table 3) for each of which a mean value was calculated. Findings demonstrated that the participants think that the time spared for the following is moderately inadequate: Patient examination, medical interventions apart from outpatient clinic tasks, professional education, resting and relaxation, family and social life, and their income. According to the results, the perceived workload over physicians is redundant, off-label medical interventions do exist and are practiced to a moderate degree, negative feelings about one's own professional practices are considerably high, and the perceived quality of one's communication with different parties in daily professional life is slightly below moderate (Table 3).

Table 3

Frequency of participants' perceived evaluation of their working conditions

Part	Content (Section 2)	Items	Valid	Missing	±SD	Median (Min-Max)
1	Amount of income, and the time spared for patient examination, medical interventions apart from polyclinic tasks, professional development, professional education, resting and relaxation, family, and social life	1-11	1378	0	1.68±0.44	1.64 (1-3)
2	Workload	12-15	1378	0	3.66±0.90	3.75 (0-5)
3	Number of off-label medical practices	16-18	1345	33	2.24±1.44	2.00 (0-5)
4	Negative feelings about one's own professional practices	19-21	1371	7	4.17±1.03	4.67 (0-5)
5	Quality of one's communication with different parties in daily professional life	22-24	1367	11	2.28±1.12	2.33 (0-5)

In Section 3 the 4-Likert picks about the effects of P4P were scored respectively as follows: "I totally disagree" 0; "I disagree" 1; "I agree" 2; and "I totally agree" 3. According to EFA, the six-factor solution was considered most appropriate (RMSEA= 0.046, CFI= 0.949, TLI= 0.935). Factor loadings are given in Table 4.

Table 4

Factor Loadings

Item	F1	F2	F3	F4	F5	F6 (Neglected)
U1	0.419					
U11	0.548					
U12	0.792					
U13	0.488					
U14	0.667					
U15	0.800					
U16	0.591					
U17	0.596					
U21	0.424					
U37	0.335					
U2		0.454				
U18		0.638				
U19		0.598				
U20		0.540				
U41		0.491				
U43		0.527				
U51		0.321				
U52		0.796				
U53		0.833				
U54		0.705				
U55		0.584				
U7			0.514			
U10			0.498			
U22			0.476			
U23			0.626			
U24			0.698			
U25			0.493			
U26			0.647			

U27	0.322	
U28	0.781	
U29	0.828	
U30	0.819	
U31	0.909	
U32	0.877	
U33	0.690	
U34	0.813	
U35	0.850	
U36	0.810	
U39	0.477	
U40	0.366	
U48	0.677	
U49	0.703	
U50	0.671	
U3	0.342	
U4	0.860	
U5	0.853	
U6	0.521	
U38	0.441	
U42	0.572	
U44	0.445	
U45	0.654	
U46	0.681	
U47	0.597	
U8		0.590
U9		0.563

A factor was neglected completely since only two items were loaded on it. Cronbach's alphas for F1, F2, F3, F4, and F5 were 0.807, 0.881, 0.918, 0.779, and 0.733, respectively. Eventually Section 3 is composed of 53 items and 5 factors as follows: F1) Estrangement toward the profession; F2) P4P's adverse effects

on the physician's quality of life; F3) Favorable consequences of P4P; F4) Becoming disreputable in the eyes of patients/patient relatives; and F5) Unfavorable consequences of P4P (Table 5).

The frequency analysis of the factors demonstrated that in general the participants think P4P has affected their professional and private lives negatively and caused unfavorable consequences in general for both the healthcare professionals and the organization of healthcare system. Scores of F1 revealed that they have distanced from their patients, tend to prefer easy and/or higher-scored medical interventions, have been gradually losing their faith in their profession and are becoming less self-confident as a physician. They also esteem that P4P has caused competition among colleagues. According to the results of F2, participants think that P4P has influenced their quality of life, health, and psychology negatively. They have found themselves in uncertainty, are less tolerant of their patients and cannot get professional satisfaction. F3 scores demonstrated participants strongly disagree with the perspective that the model has led to positive consequences in terms of income justice, professional security, career guarantee, peace at work, healthy physician-patient relationship, efficient and quality conduct of healthcare services, and solidarity among colleagues. Results concerning F4 showed that physicians think that there is a relation between P4P and their perception of being behaved disrespectfully by patients and their relatives. They also feel to be dealing with the emerging problems in the healthcare system on their own. Lastly, according to the scores of F5 participants mostly agree with that P4P causes physicians to view patients as money or points, harms professional ethics and the physician's independence, and devaluates the physician labor (Table 5).

Table 5

Distribution of items (Section 3) to the factors and frequency of factor points

Factor	Content (Section 3)	Items	±SD	Median (IQR)
1	Estrangement toward the profession	1, 11-17, 21, 37	2.95±0.56	3.00 (1-4)
2	P4P's adverse effects on the physician's quality of life	2, 18-20, 41, 43, 51-55	3.32±0.56	3.36 (1-4)
3	Favorable consequences of P4P	7, 10*, 22, (23-26) *, 27, (28-36) *, 39, 40*, (48-50)*	3.60±0.41	3.73 (1-4)
4	Becoming disreputable in the eyes of patients/patient relatives	3-6	3.49±0.53	3.50 (1-4)
5	Unfavorable consequences of P4P	38, 42, 44-47	3.30±0.54	3.33 (1-4)
6 (Neglected)	None	8, 9	-	-

*: Items coded inversely

Next, differences between the scores of each factor according to the participants' affiliation and title were inquired. Concerning F2 and F4, the results showed no distinction between the scores of those working at different healthcare institutions. As for F1, however, physicians working at PubHs agree more strongly with the expressions suggesting that P4P causes professional estrangement compared to those working at UHs and TRHs. In F3 physicians working at UHs have significantly higher points than those from FPCs. This indicates that the former objects more strongly to the claims that P4P has positively affected the overall organization of the healthcare setting, quality of relationships among different parties, and the distribution of wages to physicians. Similarly, relating to F5 physicians working at UHs more strongly agree that P4P has impaired moral values and ethical practices intrinsic to the profession than those working at FPCs (Table 6).

Table 6 here

Comparison according to titles showed no difference among GPs and FPs, residents, SDs, and FMs in F5. Their individual scores indicate that they all think P4P has had negative moral consequences. Results of F1 and F2 demonstrated that GPs and FPs, residents, and SDs more strongly concur compared to FMs with the statements implying a relation between professional estrangement and P4P, and that the model has diminished the quality of physicians' lives. Although residents' scores from F3 are significantly higher than the rest of the groups, they all disapprove that P4P has contributed to improving the conduct of the healthcare system. The F4 scores revealed GPs and FPs, residents, and SDs more strongly agree with the claim that P4P has caused physicians to be discredited in the eyes of patients and their relatives than FMs do, even though FMs also agree with this phenomenon. (Table 7).

Table 7 here

Lastly, a Spearman correlation coefficient was calculated among Section 2 (perceptions about working conditions) and Section 3 (consequences and effects of P4P). Cohen's standard was used to evaluate the strength of the relationships, where coefficients between .10 and .29 represent a small association, coefficients between .30 and .49 represent a moderate association, and coefficients above .50 indicate a large association. The results demonstrated a significant association between each part (P) of Section 2 and each factor (F) of Section 3 as follows. There is a significant negative correlation between P1 (the adequacy of time spared for certain aspects of work, and income) and F1 ($r=-0.33$, $p<.001$), F2 ($r=-0.51$, $p<.001$), F3 ($r=-0.41$, $p<.001$), F4 ($r=-0.41$, $p<.001$), and F5 ($r=-0.31$, $p<.001$). The correlation coefficient between P1 and F2 is -0.51, indicating a larger relationship than those between P1 and other factors do. This finding indicates that the greater the adverse effects of P4P on physicians' lives are, they perceive to have less adequate time spared for certain aspects of work and earn less income. There is a significant positive correlation between P2 (perceived workload) and F1 ($r=0.19$, $p<.001$), F2 ($r=0.38$, $p<.001$), F3 ($r=0.27$, $p<.001$), F4 ($r=0.31$, $p<.001$), and F5 ($r=0.14$, $p<.001$). The correlation coefficients between P2 and

F2, and between P2 and F4 are 0.38 and 0.31 respectively both indicating a moderate relationship. This finding indicates that the heavier the perceived workload is, the more physicians think that they are affected by P4P adversely. There is a significant positive correlation between P3 (off-label medical practices) and F1 ($r=0.27, p<.001$), F2 ($r=0.18, p<.001$), F3 ($r=0.14, p<.001$), F4 ($r=0.21, p<.001$), and F5 ($r=0.17, p<.001$), even though the association is small. There is a significant positive correlation between P4 (negative feelings about professional practices) and F1 ($r=0.39, p<.001$), F2 ($r=0.59, p<.001$), F3 ($r=0.39, p<.001$), F4 ($r=0.42, p<.001$), and F5 ($r=0.30, p<.001$). The correlation coefficient between P4 and F2 is 0.59, indicating a large relationship. This finding demonstrates a coexistence of physicians' negative feelings about their professional practices, and their tendency to think that P4P affects their lives adversely. There is a moderate association between P4 and other factors, which is worth mentioning as well. Lastly, there is a significant negative correlation between P5 (quality communication in professional life) and F1 ($r=-0.33, p<.001$), F2 ($r=-0.32, p<.001$), F3 ($r=-0.30, p<.001$), F4 ($r=-0.33, p<.001$), and F5 ($r=-0.24, p<.001$). There is a moderate association between P5 and the first four factors, and a small association between P5 and F5, which indicates overall that when physicians' perception of P4P's negative consequences increases, the quality of their communication with their colleagues, patients and other parties deteriorates. Table 8 presents the results of this analysis.

Table 8

Results of the Spearman correlation coefficient between Section 2 and Section 3

		Section 3					
Section 2 / Parts	N		F1	F2	F3	F4	F5
1	1378	<i>r</i>	-.331	-.506	-.414	-.412	-.310
		<i>p</i>	<0.001	<0.001	<0.001	<0.001	<0.001
2	1378	<i>r</i>	.185	.378	.267	.314	.136
		<i>p</i>	<0.001	<0.001	<0.001	<0.001	<0.001
3	1345	<i>r</i>	.274	.181	.142	.212	.171
		<i>p</i>	<0.001	<0.001	<0.001	<0.001	<0.001
4	1371	<i>r</i>	.388	.594	.386	.427	.303
		<i>p</i>	<0.001	<0.001	<0.001	<0.001	<0.001
5	1367	<i>r</i>	-.333	-.323	-.302	-.331	-.238
		<i>p</i>	<0.001	<0.001	<0.001	<0.001	<0.001

Discussion

The results of this study reveal multifaceted insights into physicians' perception of their moral agency as a professional in deteriorating working conditions under the P4P model. Although closely related, we prefer to discuss the qualitative and quantitative findings separately. We believe our accounts about the initial, which reveal the current nature of physicians' estrangement, would shed light over those about the latter, which provide insights into the underlying factors and help us understand the role of P4P in transforming physicians to estranged professionals.

Physician as estranged labor

The participants of the focus groups explained how P4P contributed to their estrangement as a physician and provided clues about the nature of their experience. As reported in the Results section, P4P is likely to affect nearly all aspects of physicians' professional lives (their working conditions, the quality and organization of the residency training, and their relationship with their colleagues) by imposing a compelling form of healthcare provision. It also influences their family and social relationships negatively. All these contextual factors seem to make the physician feel less self-confident, less independent, more anxious and/or depressed both as a professional and as an individual. As reported elsewhere, physicians lose their faith in their job, and therefore, are indifferent against the perceived problems and errors at the workplace, have become hopeless and/or pessimistic about their future lives and feel guilty or incompetent in terms of doing the morally right thing as a physician (38,48–50).

To our view, this picture corresponds to the Marxist conceptualization of estrangement. According to the theory, human beings can inherently put their life conditioning to the disposal of their will and consciousness. Besides, they also have a natural ability to face the product of their labor both willingly and consciously, which, in return, becomes an essential element of their free and conscious life activity. Estrangement originates from the fact that human beings cannot execute their natural faculties aforementioned above. They lose control over the product of their labor and the production process as they are obliged to sell their labor power by getting into a contractual relationship with the capitalist, which from that moment on transforms them into workers, that is also to say that they are not "free agents" anymore (51) As Wallimann paraphrases ". . . for his continued physical existence, the worker is compelled to repeatedly sell his labor power as one would sell any other commodity. But since labor power cannot in reality be separated from the locus of this power – a human being with distinct qualities and needs– the individual as the locus of labor is also treated as any other commodity." (51, p.27). This statement signifies that the worker waives her command over her/his labor power, which is nothing short of her/his own very self, her enacted being. As her/his labor power has become subject to the owner's will, the worker is treated as a tool, an object, or a means with potentials to carry out particular functions in the service of a will that is alien to her/him. According to the Marx, "[This will result] directly in man's estrangement from himself, from nature, from his species-being, from other men"(51, p.96).

As presented here, estrangement has four dimensions. These pertain to four intertwined relationships that all together cover the entire existence of the human being. Ollmann summarizes how human nature is distorted when her essential bonds with these dimensions are cut as follows (52, p.133-134):

“Man is spoken of as being separated from his work (he plays no part in deciding what to do or how to do it)—a break between the individual and his life activity. Man is said to be separated from his own products (he has no control over what he makes or what becomes of it afterwards)—a break between the individual and the material world. He is also said to be separated from his fellow men (competition and class hostility has rendered to most forms of cooperation impossible)—a break between man and man. In each instance, a relation that distinguishes the human species has disappeared and its constituent elements have been recognized to appear as something else.”

In our case, with the emergence of P4P and marketization of healthcare system in Turkey, residents seem to have become estranged from themselves (their job/their life activity), from their professional environment (their nature/act of production), from their existential capacities (their species-being), and from other people (their sociality/human-human relationships) since they are forced to sell their labor power, which is their medical qualities with all the skills, knowledge and experience they embody. They lose control both over the product they produced, which should be better health for other people and for the whole society; and over the act of production, namely, how healthcare should be provided. A brief analysis of each dimension in relation with P4P seems necessary for clarification.

Physicians being estranged from themselves

According to the P4P model, physicians' labor is quoted on a predefined chart comprising the prices of each medical action they are to perform. This entity has become the main manner of paying physicians over the years. Constant wages are devaluated and become trivial compared to income earned via P4P (38,53). It was shown that physicians working at state hospitals were paid up to six times more than their usual salaries during the first several years of the system (54). Consequently, physicians feel obliged to work intensely and continually to keep their life standards at a certain level. In a survey study conducted with broad participation of physicians in the first years of P4P in Turkey, it was found that while the examination time per patient decreased, the number of recorded medical tests and interventions increased (3). These results were also in line with the figures presented in a comprehensive MoH report published in 2012 (11).

In line with these results, research demonstrates that today physicians feel obliged to work harder than they used to do (55–57). Under P4P, they can achieve certain standards of living only as long as they keep providing healthcare services at a higher pace in an increasingly competitive market. In this sense, “producing” healthcare becomes only means, not the aim, for the physicians to regain their gradually diminishing free time in which they can barely recreate themselves for the next working day. This phenomenon corresponds to the Marxist conceptualization of the “forced labor”, that the labor is involuntary but coerced. The physician's own job has become a production process that is not under her

control anymore. The authority (MoH for state hospitals, the board of trustees for private institutions), on the other hand, “determines the form of labor, its intensity, duration, the kind and number of its products, surrounding conditions and . . . whether or not it will even take place” (52, p.139) . By attaching a point tag on each task, they perform, they standardize the elements of the service they are supposed to provide as a kind of commodity and treat physicians as a tool or a machine to run the business. Consequently, the physician has not only become estranged from her work, but also from herself since, according to Marx, as Wallimann rephrases, “[the worker’s] own active functions, his life activity, are not his but someone else’s.” (51, p.34).

Participants of the FGs repeatedly condemned competition and commercialization as the underlying reasons for the negative consequences of P4P. They stated that money has been perceived a central measure for evaluating success in healthcare provision. Due to not being able to meet the harshly competitive professional requirements, they lose their professional self-confidence and self-esteem and have difficulty protecting their dignity. Besides, they gave many examples to their experiences of work-related depressive mood and burnout. These also seem to have negative projections to the other aspects of their life, such as their relationships outside work and their state of mind.

Physicians being estranged from their professional environment

According to Marx, nature is the inorganic body or the material life of human beings with which they connect by manipulating it according to their will and consciousness for the purpose of producing tools to sustain their physical existence. This connection is broken if the human beings manipulate nature involuntarily for the sake of an alien will, which prevents them “from seeing, through the act of production, nature ‘as [their] work and [their] reality’” (51, p.35).

In line with this conception, physicians’ nature is composed of the processes and procedures that they partake in -often as a part of a team- to provide healthcare. In this sense, the features of their professional environment are closely dependent on the healthcare policy, organizational and administrative structure of the system, their actual working conditions, the organization of tasks and responsibilities, formal and informal rules and regulations, and the quality of their relationships with patients, other healthcare professionals, superiors, and administrators. Due to marketization, healthcare institutions have been directed in much the same way as private company factories are done. Similar to industry employees working under a capitalist, physicians have very little or no authority in steering the management and quality of the services and organization of healthcare provision at hospitals. Physicians do not perceive themselves as independent and free individuals to shape their nature, since channels through which they can have a say in the management of both their institutions and in healthcare policymaking seem to be blocked substantially, if not completely. They cannot offer solutions to the problems at work on a policy/legislative level and/or rearrange their professional environment according to their own perspectives, priorities, and needs.

According to the TMA survey study aforementioned earlier, most physicians think that with the implementation of P4P, competition among healthcare professionals increased dramatically, while the time spared for off-duties, leaves and resting decreased. Almost half of the physicians expressed that they feel to be less motivated at work (3,50,58). The finding that physicians are more reluctant to get together with their colleagues for building a collective struggle (3), for example, within a professional body against perceived issues of management might be an outcome of their disbelief that they can change anything effectively and sustainably. It seems that under P4P, they work harder and mostly involuntarily and are less critical about their worsening working conditions and less active to improve them (59).

Our FG participants repeatedly touched upon the themes that are in line with the explanation given above. They suffer from professional dissatisfaction and monotonous practices at work. Besides, they explicitly stated that they were losing their faith in and respect for the profession, disassociated from praised professional objectives and that their professional ideals were being eroded gradually. Moreover, as a physician, they lose control over their job. Most strikingly, many expressed that they did not want to practice medicine anymore and would have not become a doctor if they were given a second chance to start all over.

According to our results, under P4P, our participants perceive their professional environment given, something independently functioning, no matter how they are affected by it. Marx postulates that, “the less he ([the worker]) is attracted by the nature of the work and the way in which it has to be accomplished, and the less, therefore, he enjoys it as the free play of his own physical and mental powers, the closer his attention is forced to be.” (60) If this assertion is true, in case the physicians are hopeless and unhappy at work, they might eventually become less motivated to spend any effort to understand and/or analyze their working regime. In short, as a moral subject they become either indifferent, cynical, selfish, or continuously restless probably due to suffering from *cognitive dissonance*^[4] that arises from not being able to put ethical codes into practice and/or for being a part of unethical/immoral interventions.

Physicians being estranged from their existential capacities

On the concept of “species-being” Marx writes that, as quoted by Wallimann, “the fact the need on the part of one can be satisfied by the product of the other, and vice versa, and that the one is capable of producing the object of the other’s need, this proves that each of them reaches beyond his own particular need etc., as a human being and that they relate to one another as human beings; that all know their species nature to be social” (51, p.17). Here, he highlights the existential need to get into mutually enriching relationships with other humans. This need arises from the fact that a person can only stand up for her/himself to guarantee her/his most basic interests only through human-human relationships in which she/he stands up for other people as well. According to the theory, estranged labor prevents persons from reciprocally interacting, as Wallimann claims, “in such a way that ‘the need on the part of

one can be satisfied by the product of the other” (51, p.36). Although the individual, as a member of human species, is inherently a *social being* (61,62), this entity hinders the person’s essential physical and mental capacities to flourish altogether in sociality, as if she is merely an isolated individual. Consequently, it turns the human being’s species-life into means to their physical existence; in other words, their social being into means of their individual life. As Ollman interprets, “work has become a means to stay alive rather than life being an opportunity to do work” (52, p.151-152).

In the literature, there are very few or no studies on the effects of performance-based incentive systems to physicians' relationships with colleagues, other healthcare professionals, patients, and their family members. For example, Rodriguez et al. found that according to the views of patients and medical directors, P4P programs lead to both improvements and setbacks. While emphasis on clinical quality and patient experience is associated with improved care coordination and office staff interaction, greater emphasis on productivity and efficiency was found to be related to poorer physician communication and office staff interaction (63,64). Brody rightly mentions that “when physicians are paid a lot for doing discrete, technical procedures and very little for spending time with and talking to patients, we have the sort of health system we have today, which is long on procedures and short on meaningful relationships” (65). Furthermore, most physicians expressed that professional solidarity and cooperation among healthcare staff were impaired (3,53). This picture might be an indication of the harmful effects of competition among colleagues (66,67). To earn a living, the individual physician working under P4P is inclined to compete with other physicians. For example, she might strive to see more patients than her rivals in a certain period, rather than focusing on the treatment of fewer patients as a part of a healthcare team. In consequence, her entire social interaction at work turns to a means for her survival as an individual. She sacrifices benefits of teamwork (68–71), such as work peace, joint learning, and collegiality at the expense of self-protection. Eventually, she might end up in adopting the attitude of not prioritizing care for other people, but her own personal worries, career plans, so on and so forth.

This process imposes a selfish attitude, seeds tension among colleagues, and eventually makes each of them a “lonely warrior”. Competitive and non-genuine relationships might trigger anxiety by reinforcing the perception of constant threat. Additionally, such relationships diminish or even hinder one’s capacity to enjoy life, fulfill her creative potentials and motivate her intellectual curiosity. Correspondingly, in our study, we found that most participants suffer from insecurity and uneasiness at work due to either the unrest in the healthcare team, lack of respect from patients or being subjected to accusations or complaints frequently. Some explicitly mentioned the increase in physician rivalry as the cause for the impairment of solidarity among colleagues. Consequently, they described their current state with mentions such as lack of joy in life or even being more pessimistic than they used to be. Similarly, some of them stated that they were not as effective in their lives as before. While a few participants experienced a perceived detachment from life, others emphasized having difficulty comprehending the current conditions under which they work and live.

Physicians being estranged from other people

As Wallimann quotes from Marx “An immediate consequence of the fact that man is estranged from the product of his labour, from his life activity, from his species-nature is the *estrangement of man* from *man*. When man confronts himself, he confronts the *other* man. What applies to a man’s relation to his work, to the product of his labour and to himself, also holds of a man’s relation to the other man, and to the other man’s labour and object of labour.” (51, p.37).

The estrangement of physicians from other people can be considered most crucial when their relationship with their patients is at stake since the quality of physician-patient relationship is directly related to the quality of care (72). This dimension of estrangement seems to be experienced as abstaining from patients and losing interest in their unique personal features as human beings. Therefore, the physician might tend to degrade them to an abstract “patient” identity, which might eventually hinder them to provide them with due care, deselect them, leave those who require healthcare alone, cease adequately supporting and/or guiding them, and not spare sufficient time to understand their concerns (73).

Another consequence of this dimension may be physicians being negligent about other people’s problems, either on micro or macroscales. Estrangement from other people can bring along indifference, for example, to both suffering of individuals and people living in poverty and/or being subjected to injustice. The estranged physician might also have difficulty establishing empathy with the vulnerable (e.g., members of disadvantaged groups and communities, such as the disabled or the handicapped).

Our participants’ accounts involved many mentions regarding the fact that under P4P, physicians seem to have become disinterested in other people’s concerns and conflicts, and in healthcare policies. Concordantly, they stated that P4P negatively affected their relationships with their family members, their teammates and colleagues, and patients and their relatives. Most of them agreed that they have become more intolerant and nervous while interacting with people inside and outside of the healthcare setting, which manifests in their increased feeling of anger toward, and distrust in them. Losing their respect for their peers and superiors is another common experience. Nonetheless, they perceive meeting with friends and family members less desirable, whereas they often prefer to rest in solitude and silence. Detaching from people might also contribute to the perceived inclination to viewing patients as performance points or as an opportunity for more income.

Underlying contextual factors and the prevalence of physician estrangement

The qualitative part (FGs) of this study helped us gain insight into various dimensions and probable consequences of the estrangement phenomenon that residents face under P4P. The quantitative part (the questionnaire survey), on the other hand, presented the prevalence of physicians’ P4P experiences along with its correlations with healthcare professionals’ altered working conditions. In other words, we tested

our interpretations based on the findings from the initial, with those from the latter. Eventually, we have had a holistic picture of the contextual factors leading to physician estrangement.

According to the demographic results, genders were represented fairly in the study. Similarly, we collected data from all parts of the country, all healthcare sectors, and all specialty branches. Respondents were mostly SDs, the group who, we assume, is grossly affected by P4P together with the residents. Although valid responses compose a relatively smaller percentage of this sum, our results can be accepted as a significant indicator of P4P's impact on physicians.

The findings suggest that physicians' working conditions deteriorated by the implementation of P4P. They think that the time spared for the physicians' professional/educational, private, and social lives diminished, and their total income (incl. extra payments) has become inadequate. Furthermore, most of them stated that they could find almost no time for resting in working days, and the frequency and duration of periodic leaves were very low. Additionally, they complain about unnecessary workload, suffer from fatigue, stress, and lack of motivation in clinics and do not have quality communication with people at work. Similar findings have been reported in several studies conducted in different countries (74–78).

The factors emerged from EFA (Table 5) are compatible with the thematic results of the FGs. The overall frequency values of these factors are also in line with the main premise of this study that physicians think that P4P negatively affects physicians' lives in multiple ways and contributes to the deterioration of the healthcare system.

There are slight but statistically significant differences between the scores of some factors according to the respondents' affiliation and title (Table 6, 7). For instance, physicians working at PubHs have higher F1 scores than other groups, suggesting that they coincide more strongly with the assertion that P4P underlay professional estrangement. Because P4P was launched at PubHs several years earlier than other institutions, physicians working there might have been subjected to its influence longer. During that period, high revenues paid to them in the beginning as an incentive have gradually melted down to smaller premiums while the workload has increased. Moreover, they might have been suffered from harsher oppression by PubHs administrators who were in the charge of the initial execution of the transformation (38).

With regards to F3 and F5, physicians working at UHs have higher scores than those working at FPCs. This finding highlights the former's stronger disagreement with the claims that P4P has had positive consequences, and their stronger subscription to the idea that P4P impairs one's commitment to the professional ethical values and principles. These results might be related to these two cohorts' diverse working conditions. Since UH physicians work as a team, they might have been more liable to the effects of sharpened hierarchy, the unjust distribution of wages and responsibilities, and worsening relationships among the team members than FPs do. Additionally, they might have witnessed or been compelled to apply medical decisions formerly considered unethical. On the other hand, FPs usually work alone or as a part of smaller teams of which they are the leader. Therefore, as they are naturally in the charge of

implementing P4P requirements, it is probable that they are more inclined to overlook or even partake in questionable practices albeit sometimes indirectly.

The finding that FMs have lower F1 and F2 scores than others suggests that they are less likely to agree with the conception that P4P contributes to professional estrangement and diminished the quality of physicians' lives. Similarly, compared to the other groups, they less strongly favor the idea that P4P underlay the fact that physicians are subject to disrespectful behavior by patients and their relatives (Table 7). Since the very beginning, FMs have been in a privileged position especially in terms of the amount of income they receive under P4P. At UHs, for example, with the implementation of P4P the income gap between the residents and their superiors widened. At many institutions, the additional payments given to FMs are calculated based on the points collected by the residents and junior specialists. Similarly, it is widely believed that the payments are not distributed equitably between physicians and other healthcare professionals (79–81). In this context, UH physicians may have been affected by P4P-related income problems more intensely than FMs.

Taken separately, scores of each factor reveal strongly shared perceptions of our respondents. F1 results suggest that physicians suffer from low self-esteem as a professional, along with its possible causes such as increased competition, and its manifestations such as losing faith in the profession. These results confirm the premise that P4P significantly and prevalently contributes to physician estrangement.

The results of our study suggest that physicians cannot concentrate on their time- and attention-demanding dimensions of their profession, they feel less satisfied at work, and they perceive themselves incompetent and/or ineffective in understanding and influencing the organization and conduct of healthcare services. They also stated that with the implementation of the P4P system, they perceive to have become disreputable in the eyes of patients and their relatives and were exposed to violence at the workplace increasingly. Finally, younger physicians think that they could not get adequate support from their superiors when they had difficulties regarding the conduct of healthcare services. Such experiences may cause physicians to feel victimized in their daily professional processes and ultimately to feel worthless and lonely. Not feeling to be professionally active might lead to perceptions of a lack of self-confidence and a sense of uselessness and worthlessness in working life. Self-confidence refers to fulfilling one's perceived creative/productive potentials successfully and dealing with various situations effectively (82–84). It has also been reported that competition and heavy workload impair physicians' professional satisfaction and cause them to feel useless. In this respect, P4P seems to hinder physicians to identify themselves with their job and realize themselves competent professionals.

Performance-based incentive systems fuel competition to increase productivity (85,86). In terms of cost/quality assessment, competition between institutions (e.g. hospitals) is well studied (87–91). However, its multifaceted impact on individuals (physicians) has often been overlooked. Common to all types P4P models is that competition occurs at the macro, mezzo and microlevels. The intensified competition among institutions and departments leads administrators and superiors put pressure on physicians to force them to work harder and at a higher pace (92,93); while competition between

individuals may lead to deterioration of work peace, decrease in solidarity among the team members, and isolation of physicians (70,94).

The results suggest that a substantial proportion of Turkish physicians have lost their faith in medicine. As members of a profession historically regarded to be responsible for protecting human life and dignity, they state that they cannot act in accordance with this understanding today. At this point, the fact that they sense that the priorities in healthcare service delivery have been determined by the commercialization process and that they are regarded as tools for this purpose may be important factors underlying their detachment from the profession (95–98). They probably see that the P4P system accelerates and deepens the detachment and although they do not adopt it, they suffer from despair as they are to continue to act within the boundaries of the system. They may also hold the awareness that the current state of medicine prevents them from being seen as respected professionals. Not being able to practice the core values of their profession neither in the eyes of service users nor of themselves as healthcare providers may have reinforced their sense of meaninglessness.

F2 scores suggest P4P is perceived to impair physicians' quality of life as well as their mental and physical health. Items under this factor question perceptions of uncertainty about the future, fear of losing one's own health, affected work and family lives, and decrease in professional satisfaction. The findings suggest that the physicians think that the effect of P4P is not limited to their professional life, but also spreads to their private and social lives. Several studies and reports from Turkey have revealed similar findings (3,35,39,57). For example, Erdem and Atalay found that residents perceive that the time they can spare for social activities, friends and family members has been restricted severely due to excessive workload because of health transformation policies in Turkey (39). As known, the medical profession permeates all layers of one's life, and the values intrinsic to the medicine practice are combined with the person's moral stance. The structural transformation and the corresponding value shift experienced in healthcare services seem to directly affect the professionals' quality of life outside of work as well as how they perceive it. This phenomenon may have two conclusions: Firstly, P4P is such a comprehensive intervention with the organization of healthcare delivery that it fundamentally redefines the foundations of the medical profession and the way it is practiced. Secondly, this restructuring of the payment system causes physicians who spend most of their time in the hospital to feel unhappier, anxious, and unhealthy not only during working hours but also at other times.

According to the F3 scores, almost all survey participants think that P4P has no favorable consequences concerning physicians' personal rights as an employee, their relationship with patients and colleagues, and the management of the healthcare system. Our results are in line with those of many other studies and observations demonstrating that P4P limits physicians' personal rights, makes income distribution unfair and reduces their job security (99,100). It has been revealed elsewhere that physicians and other healthcare professionals think that piece-rate payment systems harm relationships in the workplace, and thus, disrupts work peace and harmony and reduces solidarity among colleagues (97,98). Research on the effect of the system on service quality has revealed ambiguous and/or contradictory results. Many studies indicate that P4P does not significantly improve the quality and efficiency of service delivery, or in

some cases reduces them, contrary to what is claimed by its defendants (103–106). In our study, the vast majority of physicians stated that they could not see any positive effect of P4P. A small portion of them, however, pointed out that it could increase service efficiency and physician income as a positive outcome. This view may be related to higher wages paid to healthcare workers when P4P was first implemented. Nevertheless, when both the findings of this study and similar results in the literature are considered together, it can be claimed that P4P causes physician labor to become cheaper. Even if the decrease in income is not clear, longer working hours, and the intensification of the service they are supposed provide per unit time suggest the physician exploitation. This fact seems compatible with the limitation the personal rights of workers by the policies of commercialization in healthcare. Under these conditions, it is probable that physicians will experience limitations in their professional independence.

Parallel to the points highlighted above, F4 scores suggest that P4P contributed to physicians' perception of being exposed to disrespectful behavior from patients and/or patient relatives, and that they are expected to deal with healthcare system-related problems on their own. The quality of the physician-patient relationship in Turkey has been gradually declining and the tension between the two stakeholders has been increasing for almost two decades (107). There are also reports on physicians being discredited in the eyes of the public (108–110). As it has been brought to the public agenda in recent years, this situation has even taken the form of brutal violence against physicians (111,112). The existence of a similar phenomenon has been pointed out in the world, especially in countries where steps have been taken to commercialize public health practices (113–119). Our results are remarkable in terms of the fact that according to the majority of the physicians in Turkey, the P4P model may contribute to this process. Naturally, patients and their relatives are the people that physicians come into contact most frequently in the workplace. Therefore, it can be assumed that when their medical knowledge and skills are disregarded, physicians would experience difficulty in establishing trustworthy relationships with them.

Additionally, according to our results, with the emergence of P4P, physicians are left alone without institutional and/or managerial support in their attempts to solve problems arising in the provision of health services. Simultaneously, being the representative of the healthcare sector in the eyes of the general public may confuse their responsibility to care for patients with their obligations to run the system, which they cannot be held fully responsible for. This situation may also be a reason for the service users' unfavorable reactions to them (120). Working at the forefront of an unstable, problem-generating system without neither getting adequate respect for their professional competency, nor receiving organizational support when needed can negatively affect physicians' motivation to pursue professional integrity.

Physicians mostly agree that, according to the F5 scores, P4P harmed the ethics and morals of the profession and degraded physicians' labor. We attach importance to these results in the sense that they mention a crucial dilemma that physicians experience as a moral subject under P4P. Previous studies reported the corruption of professional values and physician independence due to policies prioritizing a profitability-based productivity increase (121,122). A major underlying factor may be that physicians constantly feel the irreconcilable tension between their demands for certain living standards and the

system's requirements that prevent them from being met. Under P4P, physicians must work at a higher speed and with a higher work volume compared to the past. Strikingly, physician labor has been morally discredited almost simultaneously with the decrease in the price of their labor-power (ie. the amount of the allowance per working hour). It is argued that the current organization of healthcare services threaten physicians' occupational safety, professional security, their right to work in a peaceful environment and the minimal conditions required for establishing professional relationships both with their patients and other members of the healthcare team (3,123). The immediate outcome of this picture may be that physicians tend to abstain from medical interventions likely to result in ethical problems or dilemmas or try obscuring a morally controversial case instead of making an effort to solve it. The increase in malpractice cases can be considered a manifestation of this phenomenon (74). In consequence, Turkish physicians may perceive themselves powerless, discontent and/or incompetent in terms of their "professional right-doings", and by time they may become insensitive toward their patients. This entity, eventually, prevents them to be satisfied in their professional lives and find themselves in a depressive mood caused by burnout syndrome (57,124).

Lastly, the results of our study obtained from Spearman correlation analysis clearly reveal the relationship between physicians' evaluations of their working conditions and their perceptions of P4P. Accordingly, it can be concluded that factors such as time constraints, income adequacy, and heavy workload are either exacerbated simultaneously with the emergence of P4P, or that such factors make physicians more vulnerable to the effects of the new payment system. Physicians also declared that extra-regular practices such as prescribing off-label drugs and/or attempting off-label treatment interventions increased during that period. Furthermore, according to our results, the strong correlation between physicians' perceptions of the negative effects of P4P on their lives and feelings of lack of motivation, exhaustion, and reluctance at work gives a strong idea about the possible factors underlying their estrangement experience. Finally, these findings also reveal that physicians see a clear parallel between the communication difficulties they experience with both their patients and colleagues and the perceived negative effects of P4P.

It is known that wherever performance-based payment systems (and the marketization policies of which it is a part) are applied, it causes deterioration in the working conditions of physicians (40,41,98). Similarly, in certain examples, it has been revealed that incentive systems built on performance-based additional payments may lead to an increase in malpractice cases (72,103). The results of our study confirm these facts. Additionally, we think that our study presents important clues about the causes of professional estrangement experienced by physicians. Although we have primarily focused on physicians' perceptions of P4P in this study, we think that it would be more appropriate to discuss their views within the boarder scale of the current healthcare system.

Limitations

Our study has several limitations. The data collection phase of the questionnaire survey took a long time and continued intermittently. Although a large number of physicians was reached by this means, we cannot claim that this phase of the study is precisely “cross-sectional”. At least, the section is temporally wider than usual since, between 2012 and 2018, there had been structural or legal changes in the P4P system, as well as a transformation in the demographics of the participant sample. Nevertheless, the subject matter of P4P system and its basic elements, such as the inadequacy of the ratio of the additional payment to the fixed salary, remained the same. This study concerns not how the “amendments” have improved the system, but the ideology on which the system as a whole is based, and the effects of its application in one form or another on physicians. Therefore, we think that changes in the system over time will not constitute a serious constraint on the validity of our study's design and the results as long as the system continues to exist. A second limitation worth noting is that the survey data were collected majorly through social media such as physicians’ Facebook groups. We have two main justifications for this choice. First, it seemed rational to use the existing digital opportunities to reach out such a large body of physicians. Secondly, considering the general attitude of the MoH in previous studies on healthcare services in Turkey, we by-passed a possible obstruction by the Ministry in the permit application process. However, important downside of this preference is that we could not eliminate the risk as to whether the respondents were really physicians. As reported above, the questionnaire data were refined to overcome this constraint to a certain degree (See. Analysis of the survey). After a careful implementation of that stage, we concluded that the data obtained was largely reliable. Despite the limitations, our research has been the most comprehensive study on the physicians’ perceptions of P4P-related issues in Turkey. Moreover, it stands originally by focusing on the multidimensional transformation of physicians whose working conditions have changed almost completely by the new market-oriented payment system, as has no other study done before.

Conclusion

In this study, the multidimensional effects of the P4P model on Turkish physicians were examined. The model was put into practice as a branch of HTP that restructured the public-based healthcare system according to the free-market dynamics in Turkey. It has brought about drastic changes in their work regimen, which completely redefines the essential features of healthcare delivery. Due to the inclusive nature of the values attributed to the profession and the intense and demanding working conditions, the physician's labor permeates her entire life. For this reason, P4P system has -often negatively- affected not only physicians’ professional lives but also their moral attitudes and private lives. One important outcome of these multiple effects is the estrangement of physicians from their profession and inability to realize themselves as moral subjects who are supposed to practice their profession according to professional values and principles.

This phenomenon, which emerged in our study, is quite striking from another perspective as well. In Turkey and in other countries, where a similar process is experienced, physicians are presented by the

authorities and/or media as the main responsible group of professionals for the deterioration of the quality of the healthcare service delivery. Both governments and those who receive healthcare sometimes claim that physicians do not act according to professional values. For example, in the recent COVID-19 outbreak, it is still fresh in the minds that physicians and other healthcare professionals are accused of not providing appropriate healthcare services, and therefore, are occasionally subjected to violence, despite their dedication to service (126–128). However, it should not be forgotten that the P4P system has multiplied physicians' workload. Our study strongly integrates with the existing research demonstrating the negative effects of the worsening working conditions on physicians. According to Maslow, in order for one to realize herself, to develop specific moral attitudes, and to establish a unique personal identity (growth needs), her most basic needs such as security, esteem and safety (deficiency needs) should be met before (129). However, Turkish physicians can hardly meet their basic needs as human beings. Moreover, they are actually deprived of full occupational security, life security, and endowment insurance. They are also on the verge of burnout syndrome. In this context, it would not be realistic to expect physicians to work in full compliance with professional values and principles, while ignoring the impact of the marketization on healthcare workers.

It is possible to eliminate or alleviate physician estrangement. For this purpose, as a first step, the negative consequences of the marketization mechanisms in healthcare, including P4P, and the pressure they put on employees should not be ignored, but they should be brought to the public agenda to openly discuss possible solutions. Moreover, active participation of physicians and other health professionals in the making of healthcare policies should be ensured. Last but not least, managerial initiatives should be developed to improve the working conditions of physicians, and to raise their living standards primarily by increasing their income, regulating the daily patient flow rationally and diminishing physicians' exposition to competition in the healthcare setting.

Abbreviations

CFI: Comparative Fit Index

EFA: Exploratory factor analysis

F: Factor

FMs: Faculty members

FPCs: Family physician centers

FPs: Family physicians

FGs: Focus groups

GPs: General practitioners

HTP: Health Transformation Program

MoH: Ministry of Health

P: Part

P4P: Pay for performance system

PriHs: Private hospitals

PubHs: Public hospitals

RMSEA: Root Mean Square Error of Approximation

SSI: Social Security Institution

SDs: Specialist doctors

TDA: Turkish Dental Association

TLI: Tucker Lewis Index

TMA: Turkish Medical Association

TRHs: Training and research hospitals

UHs: University hospitals

Declarations

Ethics approval and consent to participate

The study was approved by the Ankara University Ethics Committee on 02.03.2012 in accordance with the decision number 111/445.

All methods were performed in accordance with the relevant guidelines and regulations including the Declaration of Helsinki.

Written informed consent was obtained from FG participants.

The questionnaire was delivered online. A detailed explanation of the aim of the study and the nature of the questionnaire was present at the beginning (in the first page) of the tool. Thus, those who agreed to participate in the questionnaire survey were considered that they had consented to submit their entries as they needed to click “forward” after reading the explanation. In that section, personal information was not required; the raw data were anonymized.

Consent for publication

All subjects (both the FG participants and the questionnaire respondents) consented for publication of the findings based on the data they provided.

Availability of data and materials

The datasets generated and/or analyzed during the current study are available in the Open Science Framework repository:

https://osf.io/v5h29/?view_only=84e69d3f3db74d43985dbeb4fab5ce79

Competing interests

The authors declare that they have no conflict of interest.

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Authors' contributions

MVK developed the main conception and the design of the study. He vastly contributed to both of the data collection processes (FGs and questionnaire survey), the data analyses, and discussing the results. He took part in the writing of the manuscript majorly.

HT made significant contributions to the conception and design of the study. He took part in the data collection processes and discussing the results. He was also involved in drafting and revising the manuscript critically.

GS conducted a systematic literature review and took part in interpreting the results and writing the discussion section. She was also involved in drafting and revising the manuscript critically.

AHE contributed to developing the questionnaire tool. He majorly conducted the statistical analysis and partook in discussing the results. He was also involved in drafting and revising the manuscript critically.

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Tables

Table 6 and 7 are only available as a download in the Supplemental Files section.

Supplementary Files

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