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Identifying and Prioritizing Causes of Informal Payments for Healthcare in Türkiye

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Abstract

Objective
Understanding the determinants of informal payments can help policymakers identify appropriate policies and increase the effectiveness of health systems. However, very few studies address this topic in Türkiye. This paper aims to identify and prioritize the causes of informal payments for healthcare to provide accurate information for policymaking and resource allocations.

Methods
21 sub-factors were determined and divided into four main factors. Analytical Hierarchy Process was used to determine the relative importance of the factors and sub-factors. Pair-wise comparisons were carried out by eight participants, which consisted of scholars, medical doctors, and health managers.

Results
The most important cause of informal payments was found to be "healthcare provision-related factors". The overall weights of other sub-factors provide evidence that the monopoly power of some doctors, insufficient payment to providers, search for more quality healthcare by patients, and public belief that informal payment is inevitable are prominent determinants of the burden of informal payments. Seeking quality of healthcare and a common belief that informal payment is required to receive desired services are important causes of informal payments.

Conclusion
Policymakers and managers must reconsider the quality and effectiveness of healthcare provision and improve the payments to health staff. Public awareness should be increased to make individuals adopt their health-related rights.

Introduction

Many researchers stated that informal payments are among the major problems in many countries.[1-9] Informal payments can be made to health staff or institutions out of the official payment channels, may be expected or requested by service providers, and can be made directly by patients or their relatives[4,10-13] in cash or gifts.[14] Informal payments are all cash or in-kind payments made by patients directly to an individual or institutional healthcare provider apart from legally determined payments.[15] Informal payments refer to the kind of illegal payment requested or offered outside of officially determined payments or co-payments, including those beyond public or private insurance coverage. It is also known as 'under-the-table payments', 'envelope payments', 'under-the-counter payments', 'gifts', and 'black money'.[16] In some cases, patients make informal bribe-like payments to healthcare providers for healthcare services, while in some cases healthcare professionals demand payment from patients before treatment.[2] Informal payments are hidden and do not take into account the official costs of diseases and therefore can have negative impacts on the efficiency and quality of healthcare and the patient-doctor relationship.[17-22] Informal payments also negatively impact access to health care, equity, and health status, and possibly deter some patients from using health services, and even expose some households to catastrophic health expenditures.[23,24] It can negatively affect the job satisfaction of healthcare providers.[1] Furthermore, the negative effects of informal payments may cause individuals to lose their faith and trust in the health system.[20] Informal payments have various motivations such as increasing access to healthcare or better-quality care, skipping waiting lines, and establishing favorable relationships with healthcare providers.[7] In addition, individuals make informal payments to receive additional services[25], because of the fear of rejection[26], upon the doctor's request[6], and because of the monopoly of the physician[25], as an expression of gratitude or "because everybody does it".[6] A study showed that informal payments can be caused by the low-income level of healthcare professionals, seeking better treatment by patients, financial constraints of healthcare providers, and traditional habits. The researchers also found that the most important conditions for informal payments are the presence of a serious illness, consultation with a famous physician, being satisfied with the successful treatment, the physician's special interest, receiving high-quality service, the value attributed to the person receiving health care, the positive behavior of the employees, receiving fast treatment, having access to better medical equipment and supplies, having enough money, affordability, and being able to get treatment close to home.[3] Patients' practice of making informal payments can be related to social and

cultural causes as well.[21, 27] Cultural reasons include the importance attributed to health, tradition, the inability to say no, and the low awareness of the public about their rights. Quality-related reasons include fear of being treated by medical students, skipping the waiting lines, receiving customized services, and a desire to be well-treated by a well-known physician. Among the legal factors, there are reasons such as the belief that taking legal action is useless. Additionally, there are some healthcare system-related structural factors, moral factors, and individual factors that cause informal payments to be demanded. Besides, the reputation of the service provider, emergency and hospital services, and the monopoly of the service provider are associated with higher informal payment rates.[28] Service providers can use informal payments to increase their low wages.[16] A study revealed the factors affecting informal payments as the tradition of presenting gifts, salaries of health workers, availability of supplies, quality of services, the role of health workers, regulatory framework, and private sector involvement.[2] Similarly, another study classified the related factors as cultural factors such as gift and tipping culture, administrative factors such as demand and supply-side economic factors, lack of control over healthcare workers, and weak legal rules.[16]

Due to both health-related and managerial concerns, every country is willing to reduce informal payments in the health system.[5] To be successful, policies need to consider the underlying reasons for informal payments.[21,25] The Turkish health system has been in a transformation since the early 2000s (Health Transformation Program-HTP). Many steps have been taken to ensure financial protection. Different public insurances were combined under the "social security institution", and low-income people were provided with free services. Family medicine services have been covered by the general budget. Reimbursement to hospitals has also been regulated. However, many studies have shown that informal payments are still a significant issue in the Turkish health system.[8,23,29]

Understanding the determinants of informal payments can help policymakers to identify appropriate policies and increase the effectiveness of health reforms.[30] Identifying and prioritizing the causes are very important for the elimination of informal payments from the health system. Although many factors have been identified as influencing informal payments, there is less research on which of these factors are the most important. By prioritizing these factors, one could help direct attention and resources toward the areas where interventions could have the most impact. Therefore, this research aims to prioritize the reasons for informal payments.

Materials and Methods

Analytical Hierarchy Process (AHP) was used in the study. AHP is a multi-criteria problem-solving technique that enables researchers to calculate the relative importance of criteria and weigh them by breaking the criteria down into a hierarchical system. AHP contains the following steps;[31]

- Define the problem and determine the criteria
- Plot the hierarchy from the goal through the criteria
- Construct pairwise comparison matrices
- Normalize matrices
- Calculate relative weights of criteria
- Calculate consistency ratio and use weights of criteria for decision-making

The criteria are compared on a pairwise comparison by experts on a scale of 1-9 to turn subjective judgments into quantitative data. The scale depicts how many times more important one factor is than another factor.[31] The process continues with placing the values obtained from experts for each pair-wise into the matrix and inverting the value in the transpose position. Normalized matrices are obtained and priority vectors are calculated based on the comparison matrix.[32] The consistency ratio (CR) was calculated by dividing the consistency index (CI) by the random index (RI). CR should be <= %10 for acceptable inconsistency.[33]

The goal of the AHP model was "prioritizing causes of informal payments for healthcare services". Firstly, based on the literature, the causes of informal payments were decomposed and a draft structure was developed. The developed structure was evaluated by 2 healthcare management academicians in terms of relevancy, accuracy, and clarity. Several improvements have been made and the final hierarchical structure was designed.

Determining a sufficient and appropriate sample size for AHP studies is a controversial situation. Because there are many groups which affecting and are affected by informal payments, this problem is getting more complicated. Hence, it would be meaningless to calculate a sample size based on generally known formulas. AHP also does not require a large sample size to achieve statistically robust results. Most of the studies with AHP used a sample size ranging from four to nine.[34] Therefore, using purposive sampling is a rationale for AHP studies. Three different professions were aimed to include in the analysis to include different perspectives. The first group is scholars who study informal payments and health economics. The second group is medical doctors who practice in public or university hospitals. The third group is managers of public and university hospitals. 4 scholars were determined and asked for potential participation in the study and 3

of them accepted to participate. Based on the researchers' network, 6 medical doctors (2 of them surgeons) were invited to participate. However, three of them accepted. Two hospital managers were contacted and both of them agreed to participate. Consequently, the pair-wise comparisons were conducted with 8 participants as shown in

Table 1. Participants of the study

Participants	Personal Information
Scholar 1	Has been studying on healthcare management for more than 15 years. Has scientific studies on health policy, health systems and informal payments for healthcare in Türkiye.
Scholar 2	Has been studying on health economics, finance and health policy for more than 20 years. Has scientific researches on out-of-pocket payments, informal payments and costs of diseases and healthcare in Türkiye.
Scholar 3	Has 6 years of experience in healthcare management as a lecturer. Has been studying on health policy and public health issues in Türkiye.
Medical Doctor 1	Has been an operating surgeon for more than 15 years. Have worked for public and private hospitals. Has 5 years of experience as deputy chief physician.
Medical Doctor 2	Has worked as cardiologist for more than 15 years in public university hospitals and currently been working in a private hospital for 5 years.
Medical Doctor / Manager	Has more than 20 years of experience in healthcare. Has been a manager as deputy chief physician in a university hospital.
Manager 1	Has managerial experience for 11 years in both public and private hospitals. Has worked in patient services, medical invoicing and marketing departments of hospitals as manager.
Manager 2	Has both managerial and academic experience for more than 10 years in both public and private hospitals and universities. Has worked as a patient relations representative and has been working in business development and marketing departments.

A pairwise questionnaire was developed for data collection and was sent to the experts. Participants were informed about the purpose of the study and how to make rankings of pair-wise comparison questionnaires. After obtaining questionnaires, an analysis was carried out. Ethical approval for the model was obtained from the Tarsus University Social and Humanity Sciences Ethical Committe (2024/14).

Results

Nineteen causes of informal payments were identified and ultimately divided into four main factors; socio-cultural factors (S), economic factors (E), healthcare provision-related factors (H), and factors related to lack of public information on rights [I]

Table 2. Causes of informal payments for healthcare

Main Factor	Cause
Socio-Cultural Factors S	S1-Cultural Norms and Practices of Expressing Gratitude
	S2-Deficiencies in Ethical Awareness and Professional Conduct
	S3-Prioritization of Health Outcomes Over Financial Constraints
	S4-Conflict Avoidance and Compliance Under Pressure
	S5-Escalation in Healthcare Demand Due to Changing Health Profiles
	S6- Normalization of Corrupt Practices and Bribery Within the Healthcare System
	S7-Perceived Correlation Between Request for Informal Payments and Physician Competency
Economic Factors E	E1-Constraints due to Inadequate Funding and Reimbursement Mechanisms
	E2-Inadequate Compensation and Financial Incentives for Healthcare Professionals
	E3-Limited Scope of Specialized Services Under Current Social Insurance Schemes
	E4-Financial Capacity and Willingness to Allocate More Resources for Health
	E5-Extended Reimbursement Timeframes For Hospitals
Healthcare Provision-Related Factors H	H1-Long waiting time/queues
	H2-Disparity in Pricing Structures Between Private and Public Healthcare Facilities
	H3-Seeking for More Quality of Health Service
	H4-Monopolistic Control of Certain Physicians and Providers Over Healthcare Services
	H5-Inadequate Regulatory Oversight and Governance in the Healthcare Sector
	H6-Fear of Future Service Denial or Degradation Absent Informal Payments
Lack of Public Information On Rights I	I1-Deficit in Patient Education and Awareness of Healthcare Rights
	I2-Insufficient Knowledge Regarding Legitimate Healthcare Costs and Payment Structures
	I3-Deficiencies in Information Accessibility and Literacy Regarding Patient Rights

The causes cover a broad range of factors related to individual, systemic, and cultural factors, including patient beliefs and behaviors, health system characteristics, and societal norms. "S" contains seven sub-factors that include feelings and perceptions of the public about infor-

mal payments and the social characteristics that lead to informal payments. "E" consists of five sub-factors and focuses on causes related to payments to hospitals and healthcare workers. Economic factors include sub-dimensions related to the adequacy of payments made to healthcare providers and hospitals, the status of financial incentives to encourage employees, and the resources allocated to healthcare. "H" is with six sub-factors containing different dimensions of healthcare provision; quality, waiting time, and patient-physician-government relationships. By factors related to healthcare provision, we refer to a set of characteristics concerning the medical services obtained from hospitals. These characteristics primarily consist of the time required to access a physician or a hospital, pricing differences between private and public hospitals, the quality of medical services, the role and power of physicians, and issues related to the oversight of services. The monopolistic power of doctors refers to the strong position that physicians, who are specialized in particularly complex and critical cases, have gained due to the high demand. The possibility that individuals who want to receive service from these doctors have more tendency to make informal payments or are required to make informal payments is considered as a factor. "I" contains three sub-factors and focuses on the information level of the public on achieving health rights including official payments. Within this factor, the level of health education and health status awareness, the level of knowledge about health costs and therefore health insurance literacy, and the level of awareness about patient rights were examined. The rationale for establishing these factors emerged from the evaluation of the Turkish health system, features of the society, opinions of the experts, and causes of informal payments in the literature. In addition to causes that have already been stated in the literature, some typical barriers such as the role of the private sector, the public image of physicians, and lack of information and awareness were also addressed.

The AHP analysis phase commenced with the pairwise comparison of the four main factors. The arithmetic mean was used to synthesize all evaluations. Calculated weights according to participants' rankings are shown in Table 3.

Table 3. Weights of factors

Participants	Main Factors				CR
	S	E	H	I	
Scholar 1	0.3373	0.0925	0.5293	0.0409	0.082
Scholar 2	0.0961	0.2095	0.6599	0.0373	0.064
Scholar 3	0.1458	0.0579	0.4468	0.3492	0.100
Medical Doctor 1	0.2302	0.1020	0.6134	0.0543	0.081
Medical Doctor 2	0.4641	0.29490	0.1833	0.0574	0.095
Medical Doctor/ Manager	0.0895	0.6636	0.1937	0.053	0.076
Manager 1	0.3824	0.2940	0.2012	0.1222	0.099
Manager 2	0.1035	0.056	0.5371	0.3023	0.099
Overall Weights	0.2311	0.2213	0.4206	0.1270	-

According to the results, among the four main factors, the "Healthcare provision-related factors" have the maximum grade of importance (w= 42 %). Five of the participants ranked healthcare provision-related factors as the most important one. This group (H) was given priority by all scholars, medical doctor 1, and manager 2. Secondly, the important main factor was determined to be "socio-cultural factors" (w= 23%). Socio-cultural factors were seen as the most important by manager 1 and medical doctor 2. "Economic factors" is the third in terms of importance among other factors (w=%22%). Medical doctors/managers ranked economic factors as the most important criteria. Lack of public awareness/information on their rights was determined to be the least important factor in informal payments (w=13%). It ranks fourth in all rankings from experts except for scholar 3 and manager 2. Scholar 3 and Manager 2 evaluated "I" as second in importance level.

In the next step, the weights of sub-factors within the main factors and their overall priority were calculated. The overall weight of each sub-factor was calculated by multiplying the weight of the sub-factor in the main group with the weight of the main group among all factors. This calculation allows researchers to evaluate the effect of each sub-factor on the problem of informal payments separately. Table 4 indicates that the sub-factor with the maximum grade of importance in "H" is "monopolistic control of certain physicians and providers over healthcare services" (w=31.22 %), in "S" is "prioritization of health outcomes over financial constraints" (w= 28.47 %), in "E" is "Inadequate Compensation and Financial Incentives for Healthcare Professionals" (w=31.62 %), in "I" is "Deficit in Patient Education and Awareness of Healthcare Rights" (w=42.20 %).

When considering the overall priority of sub-factors, "monopolistic control of certain physicians and providers over healthcare services" has the most important role

in informal payment with the weight of 13,1 %, followed by "seeking for more quality of health service" with the weight of %9,78. Another important factor which is related to public belief in the importance of informal payments in accessibility to services is also subordination of healthcare provision-related factors. The sub-factor of "fear of future service denial or degradation absent informal payments" has a 7,63 %weight in importance level.

The sub-factor in economic factors with the highest overall priority is "inadequate compensation and financial incentives for healthcare professionals" (7 %). The participants of the study believe that the healthcare workforce has not been sufficiently paid and the coverage of social insurance cannot meet the expectations of patients (limited scope of specialized services under current social insurance schemes = 5.49 %). Other noteworthy factors are the value people give to health and public awareness about their legal rights. The sub-factor (S) "prioritization of health outcomes over financial constraints" has an important overall weight of 6.58 % and the sub-factor (I) deficit in patient education and awareness of healthcare rights" has a 5.36 % overall weight.

Table 4. Weights of sub-factors

Main Factors	Sub-Factors		
	Sub-factors	Priority within the main group %	Overall priority %
Socio-Cultural Factors (S), w= 23.11 %	S1-Cultural Norms and Practices of Expressing Gratitude	18.58	4.29
	S2-Deficiencies in Ethical Awareness and Professional Conduct	5.06	1.17
	S3-Prioritization of Health Outcomes Over Financial Constraints	28.47	6.58
	S4-Conflict Avoidance and Compliance Under Pressure	8.44	1.95
	S5-Escalation in Healthcare Demand Due to Changing Health Profiles	8.73	2.02
	S6- Normalization of Corrupt Practices and Bribery Within the Healthcare System	14.10	3.26
	S7-Perceived Correlation Between Request for Informal Payments and Physician Competency	16.61	3.84
Economic Factors (E), w= 22.13 %	E1-Constraints due to Inadequate Funding and Reimbursement Mechanisms	11.75	2.60
	E2-Inadequate Compensation and Financial Incentives for Healthcare Professionals	31.62	7
	E3-Limited Scope of Specialized Services Under Current Social Insurance Schemes	23.92	5.29
	E4-Financial Capacity and Willingness to Allocate More Resources for Health	18.36	4.06
	E5-Extended Reimbursement Timeframes For Hospitals	14.35	3.18
Healthcare Provision Related Factors (H), w= 42.06%	H1-Long waiting time/queues	10.48	4.45
	H2-Disparity in Pricing Structures Between Private and Public Healthcare Facilities	4.19	1.76
	H3-Seeking for More Quality of Health Service	23.21	9.78
	H4-Monopolistic Control of Certain Physicians and Providers Over Healthcare Services	31.22	13.13
	H5-Inadequate Regulatory Oversight and Governance in the Healthcare Sector	12.87	5.41
	H6-Fear of Future Service Denial or Degradation Absent Informal Payments	18.03	7.63
Lack of Public Information on Rights (I), w= 12.70 %	I1-Deficit in Patient Education and Awareness of Healthcare Rights	42.20	5.36
	I2-Insufficient Knowledge Regarding Legitimate Healthcare Costs and Payment Structures	23	2.92
	I3-Deficiencies in Information Accessibility and Literacy Regarding Patient Rights	34.80	4.42

Discussion and Conclusions

The emergence of informal payments is a clear sign that a healthcare system is failing to provide equitable access to healthcare. This problem cannot be solved unless the leading issues are addressed.[35] However, a few studies focused on the informal payments in Türkiye. A study in 2007 found that 25% of out-of-pocket payments in Türkiye were informal payments. Informal payments were found to be 71.6%, in cash and 27.5% in-kind contributions.[29] This finding shows that informal payments are not caused by gratitude, but are made to receive services. The vast majority of cash payments were made to get more special attention from the doctor. This was followed by establishing good relations with the doctor for future health events. A study conducted in 2010 found that 31% of the participants made informal payments and 69.7% of these payments were in cash. 75% of cash payments were made to physicians. Other important motivations were "to establish a better relationship with the physician for future health events", "tradition" and "to get more careful attention from the doctor". At the same time, the prevalence of informal payments, regardless of insurance coverage and income level, expresses the main factor of the perception that a special fee should be paid for doctor services to receive better/faster care in public institutions.[23] In a recent study, it was determined that approximately 29% of the participants made informal payments, mostly made in cash before the medical procedure and in the form of a gift after the medical procedure. 41% of the participants stated that informal payments are mandatory to receive better health care services, 34% stated that they made it voluntarily, and 26% stated that they made informal payments upon the request of the medical staff. The results of this research show that there is a perception that informal payments are necessary to access higher-quality health services. The study suggested that informal payment is still a common practice in Türkiye and needs the attention of health policymakers as a part of current health reforms.[8]

Considering these significant points provided by the literature, this study aimed to contribute to the understanding of informal payments in Türkiye by prioritizing the causes. The most important cause of informal payments was healthcare provision-related factors. Analysis suggested that to mitigate the burden of informal payments, policymakers and managers must reconsider the quality and effectiveness of healthcare provision. These factors have been discussed in numerous previous international studies as well.[28] Of the significant determinants of this phenomenon in the Turkish health system, "monopolistic control of certain physicians and providers over healthcare services" and "seeking for more quality of health service" come to the front. The current study found that experts have a common perception that informal payments mostly occur due to healthcare providers. These findings strongly suggest that the role of service providers (especially medical doctors) in informal payments is prominent. One of the significant reasons behind informal payments seems to be seeking high-quality healthcare and a common belief that informal payment is required to receive desired services. At the same time, there is a strong clue that doctors who are skilled in conducting complex treatments or operations have an asymmetrical power position. However, to retrace the factors that push providers to demand informal payments, socio-cultural and economic factors should be examined in depth. Because the leading factor related to healthcare staff was found to be insufficient payment. This factor has also been mentioned in previous studies.[3,16] In a study, providing incentives to medical staff has been stated as a way of coping with informal payments.[36] At this point, it is proposed that the immediate implementations to reduce informal payments are to ensure a geographically balanced distribution of the healthcare workforce and to improve payments made to health service providers.

In this study, the way people perceive informal payments and the knowledge level of the public was found to be other important determinants of informal payments. Williams and Horodnic (2018) also stated that "informing patients of the costs and risks of making informal payments for healthcare services" can be a significant initiative to reduce institutional asymmetry which has been stated as a prominent determinant of informal payments.[37] The current study comprises many factors which are strongly related to the institutional asymmetry approach. Public perception and belief in the knowledge and skill of medical providers, lack of attention to ethical issues, lack of awareness of legal payments for healthcare, etc. are some of them.[38] Having regard to these important factors, it can be stated that participants believe that people who are not sufficiently informed about the payments in the health system are more likely to suffer from informal payments. However, the "normalization of bribery" comes to the front after the lack of awareness about health rights. Combining public awareness about and belief in informal payments from different perspectives, informing people about legal procedures and their important role in equity in healthcare service can be a significant effort to reduce informal payments. Previous studies also showed that coping with corruption via awareness campaigns can be a strong way to reduce informal payments.[39, 40]

The findings of the current study advocate that legislative measures fostering provider competition can be a strategy to deter informal payments. Therefore, the monopoly held by the service providers can be eliminated. Payments for the healthcare workforce and performance-based systems

should be improved. Also, improving quality standardization, especially in public hospitals may help alleviate concerns related to service quality inconsistency. On the other hand, it is necessary to prevent the abuse of the culturally attributed importance to health. Lastly, improving communication strategies and heightening public awareness are essential steps toward fostering individual recognition and adoption of health-related rights.

Conflict of Interest

The authors declare that there are no potential conflict of interests.

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References

1. Stringhini S, Thomas S, Bidwell P, Mtui T, Mwisongo A. Understanding informal payments in health care: motivation of health workers in Tanzania. Hum Resour Health 2009;7.53-62. https://doi.org/10.1186/1478-4491-7-53.
2. Thompson R, Witter S. Informal payments in transitional economies: implications for health sector reform. Int J Health Plann Manage. 2000;15:169-187. https://doi.org/10.1002/1099-1751(200007/09)15:3.
3. Balabanova D, McKee M. Understanding informal payments for health care: the example of Bulgaria. Health Policy. 2002;62:243-273. https://doi.org/10.1016/S0168-8510(02)00035-0.
4. Belli P, Shahriari H. Qualitative study on informal payments for health services in Georgia. Washington, DC: World Bank; 2002.
5. Vian T, Burak LJ. Beliefs about informal payments in Albania. Health Policy and Plan 2006;21:392-401. https://doi.org/10.1093/heapol/czl022.
6. Liaropoulos L. Informal payments in public hospitals in Greece. Health Policy. 2008;87:72–81. https://doi.org/10.1016/j.healthpol.2007.12.005.
7. Lewis M. Informal payments and the financing of health care in developing and transition countries. Health Affairs. 2007;26(4):984-997. https://doi.org/10.1377/hlthaff.26.4.984.
8. Tengilimoğlu D, Güzel A, Toygar A, Akinci F, Dziegielewski SF. Informal payments in health systems: purpose and occurrences in Turkey. J Soc Serv Res. 2015;41(5):684-696. https://doi.org/10.1080/01488376.2015.1058880.
9. Stepurko T, Pavlova M, Gryga I, Groot W. To pay or not to pay? A multicountry study on informal payments for health-care services and consumers' perceptions. Health Expectations. 2015;18(6):2978-2993.
10. Stepurko T, Pavlova M, Gryga I, Groot W. Empirical studies on informal patient payments for health care services: a systematic and critical review of research methods and instruments. BMC Health Serv Res. 2010;10(1):1-13. https://doi.org/10.1186/1472-6963-10-273.
11. Liu T, Sun M. Informal payments in developing countries' public health sectors. Pac Econ Rev. 2012;17(4):514-524. https://doi.org/10.1111/j.1468-0106.2012.00597.x.
12. Riklikiene O, Jarasiunaite G, Starkiene L. Informal patient payments in publicly financed healthcare facilities in Lithuania. Scand J Public Health. 2014;42(6):488-496. https://doi.org/10.1177/1403494814538125.
13. Stepurko T, Pavlova M, Gryga I, Murauskiene L, Groot W. Informal payments for health care services: the case of Lithuania, Poland and Ukraine. J Eurasian Stud. 2015;6(1):46-58. https://doi.org/10.1016/j.euras.2014.11.002.
14. Doshmangir L, Sajadi HS, Ghiasipour M, Aboutorabi A, Gordeev VS. Informal payments for inpatient health care in post-health transformation plan period: evidence from Iran. BMC Public Health. 2020;20(1):1-14. https://doi.org/10.1186/s12889-020-8432-3.
15. Belli P, Gotsadze G, Shahriari H. Out-of-pocket and informal payments in health sector: evidence from Georgia. Health Policy. 2004;70:109–123. https://doi.org/10.1016/j.healthpol.2004.03.007.
16. Tomini S, Maarse H. How do patient characteristics influence informal payments for inpatient and outpatient health care in Albania: results of logit and OLS models using Albanian LSMS 2005. BMC Public Health. 2011;11(1):1-9. https://doi.org/10.1186/1471-2458-11-375.
17. Meskarpour-Amiri M, Assari A, Bahadori M, Ravangard R, Hosseini-Shokouh SM. Informal payments for health care in Iran, IJHG. 2018;23:20-21. https://doi.org/10.1108/IJHG-02-2018-0007.
18. Hasanpoor E, Janati A, Salehi A, Sokhanvar M, Ebrahimzadeh J. Under the table in health care system: A case report in Iran. Int J Hospital Res. 2014;3(3):155-8.
19. Gaal P, McKee M. Fee-for-service or donation? Hungarian perspectives on informal payment for health care. Soc Sci Med. 2005;60:1445–57.
20. Akashi H, Yamada T, Huot E, Kanal K, Sugimoto T. User fees at a public hospital in Cambodia: effects on

hospital performance and provider attitudes. Soc Sci Med. 2004;58:553–64. https://doi.org/10.1016/S0277-9536(03)00240-5.

21. Nekoeimoghadam M, Esfandiari A, Ramezani F, Amiresmaili M. Informal payments in healthcare: a case study of Kerman province in Iran. IJHPM. 2013;1(2):157. https://doi.org/10.15171/ijhpm.2013.28
22. Zarei E, Palesh M, Khodakarim S, Nikkhah A. Informal payments for ınpatient services and related factors: a cross-sectional study in Tehran, Iran. Health Scope. 2018;7:62319. 10.5812/jhealthscope.62319
23. Özgen H, Şahin B, Belli P, Tatar M, Berman P. Predictors of informal health payments: the example from Turkey. J Med Syst. 2010;34(3):387-396. https://doi.org/10.1007/s10916-008-9251-8
24. Szende A, Culyer, AJ. The inequity of informal payments for health care: the case of Hungary. Health Policy. 2006;75(3):262-271. https://doi.org/10.1016/j.healthpol.2005.04.001.
25. Ensor T. Informal payments for health care in transition economies. Soc Sci Med. 2004;58:237–46. https://doi.org/10.1016/S0277-9536(03)00007-8.
26. Vian T, Grybosk K, Sinoimeri Z, Hall R. Informal payments in government health facilities in Albania: results of a qualitative study. Soc Sci Med. 2006;62(4):877-887. https://doi.org/10.1016/j.socscimed.2005.07.005.
27. Chiu YC, Smith KC, Morlock L, Wissow L. Gifts, bribes and solicitions: print media and the social construction of informal payments to doctors in Taiwan. Soc Sci Med. 2007;64(3):521-530. https://doi.org/10.1016/j.socscimed.2006.09.018.
28. Giannouchos TV, Vozikis A, Koufopoulou P, Fawkes L, Souliotis K. Informal out-of-pocket payments for healthcare services in Greece. Health Policy. 2020;124(7):758-764. https://doi.org/10.1016/j.healthpol.2020.04.005.
29. Tatar M, Ozgen H, Sahin B, Belli P, Berman P. Informal payments in the health sector: a case study from Turkey. Health Affairs. 2007;26(4):1029-1039. DOI 10.1377/hlthaff.26.4.1029.
30. Amiri MM., Bahadori M, Motaghed Z, Ravangard R. Factors affecting informal patient payments: a systematic literature review. IJHG. 2019;23. DOI 10.1108/IJHG-01-2019-0006.
31. Saaty TL. Decision making with the analytic hierarchy process. Int J Serv Sci. 2008;1(1):83-98.
32. Sharma MJ, Moon I, Bae H. Analytic hierarchy process to assess and optimize distribution network. Appl Math Comput. 2008;202(1):256-265. https://doi.org/10.1016/j.amc.2008.02.008
33. Ahmadi H, Rad MS, Nazari M, Nilashi M, Ibrahim O. Evaluating the factors affecting the implementation of hospital information system (HIS) using AHP method. Life Sci. 2014;11(3):202-207.
34. Amos D, Albert P, Chuen C, et. al. Review of application of analytic hierarchy process (AHP) in construction, Int J Constr Manag. 2019;19:436-452. https://doi.org/10.1080/15623599.2018.1452098.
35. Incaltarau C, Horodnic AV, Williams CC, Oprea L. Institutional determinants of ınformal payments for health services: an exploratory analysis across 117 countries. Int J Environ Res. 2021;18(23):12421. https://doi.org/10.3390/ijerph182312421.
36. Williams CC, Horodnic IA, Horodnic AV. Who is making informal payments for public healthcare in East-Central Europe? An evaluation of socio-economic and spatial variations. East J Eur Stud. 2016;7(1):49.
37. Williams CC, Horodnic AV. Explaining informal payments for health services in Central and Eastern Europe: An institutional asymmetry perspective. Post-Communist Econ. 2018;30(4):440-458.https://doi.org/10.1080/14631377.2018.1442051.
38. Williams CC, Horodnic AV. Rethinking informal payments by patients in Europe: An institutional approach. Health Policy. 2017;121(10):1053-1062. https://doi.org/10.1016/j.healthpol.2017.08.007.
39. Stepurko T, Pavlova M, Gryga I, Groot W. Informal payments for health care services – Corruption or gratitude? A study on public attitudes, perceptions and opinions in six Central and Eastern European countries. Communist Post-Communist Stud. 2013;46(4):419–431.
40. Danyliv A, Pavlova M, Gryga I, Groot W. Preferences for physician services in Ukraine: A discrete choice experiment. Int J Health Plann Manage. 2015;30(4):346–365. https://doi.org/10.1002/hpm.2239.

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