## UTILIZATION OF HEALTHCARE SERVICES AND PERCEPTIONS OF CORRUPTION IN ROMANIA

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n Romania, perceptions of corruption in both general practice (GP) services and hospital/specialized care are very high, situating the country in the third place in the EU. In this paper, we set out to explore the association between socioeconomic status, utilization of healthcare, social exclusion on the one hand, and perception of corruption in healthcare services in Romania, on the other hand. We mainly try to understand if perceptions of corruption are dependent on utilization of healthcare, seen as a proxy for personal experience. We use European Quality of Life Survey, the 2016 wave for Romania, and we carry out descriptive and explanatory linear regression analysis in order to shed light on perceptions of corruption in the Romanian medical system. Results show a slightly different picture between perceptions of corruption in primary services and views of the phenomenon in hospital care. Corruption in GP provisions appears to be an educated guess, depending on higher socioeconomic status. Insights on this type of corruption are not dependent on utilization of healthcare. Perceptions of corruption in hospital services are associated with the level of economic resources and are dependent on personal experience.

*Keywords*: perceptions of corruption; utilization of health care corruption in medical services.

## **PERCEPTIONS OF CORRUPTION: PERSONAL EXPERIENCE OR EXOGENEOUS FACTORS?**

Perceptions of corruption in certain institutions can form based on personal experiences, can be the result of media reports, other persons 'accounts, or even develop from generalized perceptions of corruption.

Perceptions of corruption have been widely studied as a way to better understand and address a phenomenon that appears behind closed doors and is difficult to observe and research directly.

Different factors were highlighted in the literature to be associated with perceived corruption based on both aggregate data and single country studies.

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Perceptions of corruption were found (Treisman 2007) to be lower in highly developed countries, in long-established liberal democracies, in societies with a free and widely read press, a high share of women in government, and a history of openness to trade. On the other hand, corruption is perceived to be higher in countries that depend on fuel exports or have intrusive business regulations and unpredictable inflation. Among the factors that shape perceived corruption, the literature also lists (Bohn 2012) the levels of partisanship in certain societies, institutional trust, the nature of the political elite's electoral competition, the role of the media, and the opportunity structure for corruption. Weak institutions and the casuistic implementation of law are too associated with a heightened perception of corruption (Rojas 2020).

Perceived corruption is likely to produce negative effects on economic investment and growth (Aidt 2009; Egger and Winner 2006), on political stability, on public support for the political and economic regimes (Bohn 2012; Moisés 2010; Anderson and Tverdova 2003; Mishler and Rose 2002), on satisfaction with government (Habibov *et al.* 2019), and even on people's satisfaction with life (Rojas 2020).

Perceptions of corruption vary inversely with economic development and the level and duration of democracy. They are lower in countries with greater openness to international trade and a lesser dependence on energy exports, in federal political systems and those with higher percentages of women in government (Dollar *et al.* 2001; Montinola and Jackman 2002; Sandholtz and Koetzle 2000; Sung 2003; Jong-sung and Khagram 2005).

Several individual characteristics, including education, age, income, and employment status affect corruption perceptions over and above experience (Donchev and Ujhelyi 2014).

Perceptions of corruption usually depart from the actual experience of corruption. Corruption perceptions and experience measures are only modestly correlated (Mishler and Rose 2008; Rose and Mishler 2010; Treisman 2007; Donchev and Ujhelyi 2014), and most factors that predict perceived corruption do not correlate with measures of actual corruption experiences (Treisman 2007).

Mishler and Rose (2008) showed in one study that the difference between the number of individuals who perceive that corruption is present in their country and those who report having experienced corruption personally can be very high. They demonstrated that perception of corruption exceeded the experience of paying bribes by 40 times in the case of taxes, and 25 times for the legal system. However, the discrepancy between perceptions and experiences has fallen below 10:1 for the medical system, in this case individuals having the most direct experience with the services. Corruption perceptions and experiences have proved to be rather weakly correlated at the individual level, in comparison to the aggregate level, and "the experience of corruption is less likely to influence perceptions of corruption than perceptions are to bias the recall of corruption experiences" (Mishler and Rose 2008, 5).

In the attempt to understand the relationship between perceptions and actual experiences of corruption, the two authors found that corruption perceptions are heavily influenced by media reports, whereas corruption experiences are rather influenced by individual opportunities and motivations to involve in corrupt behaviours.

The authors showed that perceptions of corruption in particular institutions heavily depend on general perceptions of political and civic corruption, while the actual experience of paying bribes is far less important for these perceptions. Their conclusion was that "Perceptions of corruption in specific institutions are only weakly influenced by experiences with those institutions and are much more influenced by perceived corruption in other institutions in a circular, echo chamber" (Mishler and Rose 2008, 1).

In this case, perceptions can be mainly shaped by cultural stereotypes, media reports, or political narratives, and less or not at all by personal experience. Individual reports (memories) of corruption can be shaped through a process of selective memory, or even perceptions and experiences can both result from the same set of influences, without being causally connected (Mishler and Rose 2008).

## CORRUPTION IN MEDICAL SERVICES: THE OUTSTANDING CASE OF INFORMAL PAYMENTS IN ROMANIA

Various types of corruption can affect the health sector (Vian 2008). Many refer to the structure, management and governance of health care systems, and are related to: the construction and rehabilitation of health facilities, the purchase of equipment and supplies, the distribution and use of drugs and supplies in service delivery, the regulation of quality in products, services, facilities and professionals, the education of health professionals, and the medical research. In Romania, various types of corruption have been identified based on the analysis of files with final convictions on corruption cases received between 2015 and 2017 (DNA 2018). Corruption occurred in public acquisitions, medical services provision, hospital funding, hiring of medical personnel, pharmacies licensing.

However, one type of corruption involves patients, and occurs in the provision of services by medical personnel and other health workers, that of informal payments. They represent a direct contribution, in cash or in-kind, which is made in addition to any formal contribution, by patients or others acting on their behalf, to healthcare providers for services to which patients are entitled (Gaal *et al.* 2006).

It is generally acknowledged that informal payments are substantial and widespread in the Romanian medical system, although their exact magnitude is not fully known (Vlădescu *et al.* 2016; EC 2017; OECD 2018). Various studies advance different figures of the extent of the phenomenon. Most recent survey data, a

Eurobarometer survey in 2019, revealed that the medical system was the most frequently mentioned institution in Romania (48%), where giving and taking of bribes and the abuse of power for personal gain are widespread. Of those who had contact with public healthcare sector during the past year, 12% declared they have been asked or expected to give a gift, a favour or extra money for services received, the highest proportion in the EU countries, with the exception of Hungary (13%) (EC 2020).

A study (Stepurko *et al.* 2013) of informal payments in six Central and Eastern European countries (Bulgaria, Hungary, Lithuania, Poland, Romania and Ukraine) showed that in Romania, in 2010, the proportion of the respondents declaring they ever made informal cash payments to medical personnel was 59%, while the percentage of those who made in kind gifts was 62%, similar to Hungary (58% and 55%, respectively), and the largest among the countries studied. Moreover, 22% of the investigated population declared they were asked by physicians, medical staff or other personnel to pay informally in cash or to give an in-kind gift. One third of the interviewed people considered that informal cash payments and gifts in kind to physicians and medical staff are inevitable because of the low funding of the health care sector.

Another study (Habibov and Cheung 2017) that looked at informal payments in transitional countries showed that in Romania, 44% of those who had contact with medical services during the past year declared they made informal payments. This percentage places Romania again relatively close to Hungary (34%), and further away from countries like Slovenia (2.7%) or Poland (9.6%), where the declared incidence of informal payments is much smaller.

Informal payments were found to be an important feature of healthcare financing in post-communist transitional countries, both in absolute terms (amount) and relative terms (share of informal payments among healthcare users) (Balabanova and McKee 2002; Stepurko *et al.* 2013).

Habibov and Cheung (2017) found that being from a wealthier household, experiencing lower quality of healthcare in the form of long waiting times, lack of medicines, absence of personnel, and disrespectful treatment, and having relatives to help when needed, are associated with a higher odds ratio of informal payments.

In transitional countries, informal payments create an important barrier to healthcare utilization, especially for low-income patients. Individuals from low income households often delay seeking help, or do not seek help at all when they are ill because they cannot afford to make informal payments (Belli *et al.* 2004; Habibov *et al.* 2009). Furthermore, informal payments lead to the impoverishment of households and, hence, cause greater levels of poverty and inequality (Wagstaff and Doorslaer 2003). High level and spread of informal payments will prompt individuals from low income households to seek treatment in less specialized

facilities where the scale of this type of payments is relatively lower, while individuals from wealthy households can afford to utilize more advanced and specialized facilities, with better diagnostic equipment and laboratories (Kutzin *et al.* 2010). A large spread of informal payments will prevent or delay healthcare reform, to the extent they create strong incentives for individuals from high-income households to resist attempts at reform (Gaal and McKee 2005). In general, the informal payments will undermine social justice in society, as well as trust in the healthcare system, since individuals must pay extra for services that should either be provided completely for free, or have already been paid for through official outof-pocket or insurance payments (Cherecheş *et al.* 2013; Stepurko *et al.* 2013).

An analysis of the health system in Romania showed that the largely spread informal payments are a source of inequality, preventing especially the poor population who cannot afford these payments to have access to the health services. Moreover, the informal payments have turned into a "de facto incentive" (WB 2011, XIX) for health services providers who are interested in maintaining the *status quo*.

The persistence of informal payments is considered a problem not only because of their cost to users, but because they reflect a lack of concern for patients' rights and the freedom for providers to decide what quality of service to provide to the patients (WB 2011). Official statistics for private expenditures show that only 18 percent of health expenditures are private in Romania, which is very low compared to Bulgaria (41 percent), Poland (28 percent), and other neighbouring countries. It is likely that these figures for Romania underestimate the magnitude of informal payments, but even if higher estimates for private expenditures are used, private expenditures remain comparatively small.

World Bank (2011) estimated informal payments in Romania, in 2004, at over 300 million Euro, representing 41% of all cash payments.

Informal payments have their roots in communist times when, even though the system was universal, it provided services at a low level, which were very often rationed. The system provided good territorial access to services through dispensaries, policlinics and hospitals in all regions of the country, with better concentration of hospitals in large cities. The policy of the regime was to ensure medical personnel through assignments, mainly based on merit, to specific placements in medical facilities, which could not be declined. Medical personnel, especially doctors, enjoyed a high social status, although the assignment policy was largely seen as unfair, while their salaries were not differentiated from those of other higher educated categories. In times of general limited resources in society, it was considered acceptable to offer the medical personnel under the table payments, either as compensation for their poor material situation relative to their status, as gratitude, or as a way to ensure quality of services in austerity circumstances. The payments comprised in kind gifts and cash, and it was very common for patients in rural areas to offer gifts like live chickens, eggs, various vegetables, whereas in urban the gifts consisted more in rare goods, like coffee bags, packs of cigarettes, and bottles of wine or strong drinks. The phenomenon was never regulated and continued during transition. As economic circumstances remained difficult, informal payments endured as means of ensuring quality of services and access to services or complicated procedures.

Today, informal payments are largely a feature of access to medical services, and they might have become a cultural trait that is not easy to dismantle. However, the past two years saw a series of measures, like increasing the salaries in the medical system or installing cameras in hospitals and other medical facilities that might affect the phenomenon in the short, as well as in the long term.

Informal payments are more common and in higher amounts in the case of hospital care, and it was estimated that some senior doctors can receive several times the national average (WB 2011). In 2008, data from the household budget survey showed that, while 63% of the poorest and 88% of the richest quintiles of households made out-of-pocket payments for health care, informal payments (in other words, payments made without official receipts or formal accounts) were made by 57.4% of the entire population.

According to the WB study, almost 60% of people admitted to hospital said that they made informal payments to physicians in 2008, compared to about 30% in 2001. The high costs involved in visiting a clinic/hospital in a large city (for transportation, as well as under-the-table payments) cause most rural people, particularly those over 60 years of age, to refrain from seeking medical care (other than from emergency services), unless they are in the late stages of a disease, which in turn usually means higher costs and a worse prognosis. This seems to be particularly the case with the Roma population, whose access to health services remains low.

In this paper, we aim to understand, according to the theory described above, whether perceptions of corruption in medical services in Romania are associated with socioeconomic status, personal/ immediate experience and feelings of social exclusion. If perceptions of corruption are independent of utilization of healthcare, then people form their insights on corruption in medical system through other mechanisms than the recent direct contact: by deriving them from generalized perceptions of corruption in Romanian society, from narratives of corruption in the media, or perceptions can even originate in more distant, past experiences and cultural traits.

Model 1 analyses whether socioeconomic status is associated with perceptions of corruption in both primary healthcare and hospital services. Model 2 aims to analyse if utilization of healthcare predicts perceptions of corruption, while controlling for socioeconomic factors. Finally, we add the index of social exclusion to the third model, in order to understand if feelings of social exclusion contribute to higher perceptions of corruption.

#### METHODS

In this paper, we set out to explore the association between socioeconomic status, utilization of healthcare, social exclusion on one hand, and perception of corruption in healthcare services in Romania on the other hand. For this purpose, we carry out descriptive and explanatory analyses. First, we try to understand the level of perceptions of corruption in two types of medical services: primary healthcare and hospital provisions. We furthermore explore whether there are significant differences in perceptions by socioeconomic status, social exclusion and utilization of healthcare. Finally, two linear regression analyses were carried out: one for perceptions of corruption in primary healthcare services and one for perceptions of corruption in hospital or medical specialist healthcare services.

Data come from the fourth wave of European Quality of Life Survey (2016)<sup>2</sup>. This research is a pan-European survey, conducted every four to five years, since 2003, by the European Foundation for the Improvement of Living and Working Conditions. EQLS is a survey focused on quality of life and contains indicators on many dimensions of quality of life, both objective and subjective. The fourth wave had a specific focus on public services, with many new indicators about healthcare services, long-term care services and childcare services. The survey covered 33 countries, including the 28 EU Member States and the five candidate countries (Albania, the former Yugoslav Republic of Macedonia, Montenegro, Serbia and Turkey). The weight used in the analysis is WCalib, according to the technical report, and verifying the results using EQLS interactive data visualisation tool<sup>3</sup>.

#### **DEPENDENT VARIABLES**

The two dependent variables in the study are perceptions of corruption in primary healthcare services and perceptions of corruption in hospital services. Respondents were asked about their agreement or disagreement regarding the statement 'Corruption is common in these services in my area' in 'GP, family doctor or health centre services in your area' and in 'hospital or medical specialist services'. The answers are on a scale of 1 to 10, where 1 means completely disagree and 10 means completely agree.

<sup>&</sup>lt;sup>2</sup> European Foundation for the Improvement of Living and Working Conditions. (2018). European Quality of Life Survey Integrated Data File, 2003-2016. [data collection]. 3rd Edition. UK Data Service. SN: 7348, http://doi.org/10.5255/UKDA-SN-7348-3.

<sup>&</sup>lt;sup>3</sup> https://www.eurofound.europa.eu/data/european-quality-of-life-survey.

## **INDEPENDENT VARIABLES**

In our analysis, the independent variables are socioeconomic status (gender, age, residence, employment status, education, household size, deprivation), utilization of healthcare services during last 12 months, and feelings of social exclusion.

The gender variable was coded as dummy: 1 for male and 0 for female.

Age takes values between 18 and 95 years and was recoded in a variable with three categories: 18–34 years, 35–64 years and over 65 years. Then it was recoded in dummy variables, using the category over 65+ years as reference.

In the EQLS survey (2016), the original variable measuring urbanity was: 'Would you consider the area in which you live to be...?, the answering categories were: '1. The open countryside; 2. A village/small town; 3. A medium to large town; 4. A city or city suburb'. A dummy variable was created for residence: 1 for urban, by recoding categories 3 and 4 and 0 for rural, by recoding categories 1 and 2.

Employment status was originally measured as: 1. At work as employee or employer/self-employed; 2. Employed, on childcare leave; 3. Employed, on other special leave (e.g. sickness; not holiday); 4. In receipt of retirement pension and at work as employee or employer/self-employed (only separated in 4th EQLS); 5. At work as relative assisting on family business or farm; 6. Unemployed less than 12 months; 7. Unemployed 12 months or more; 8. Unable to work due to long-term illness or disability; 9. Retired; 10. Full-time homemaker/ fulfilling domestic tasks; 11. In education (at school, university, etc.) / student; 12. Other (not asked). In our analysis, we were interested in the active/non-active status of respondents and the employment variable was recoded as dummy, with value 1 for active and 0 for non-active.

Household size was used as a continuous variable in this analysis. The respondents were asked to answer the question: 'I'd like to start by asking you a few questions about your household. Including yourself, can you please tell me how many people usually live in this household?'. The variable takes values between 1 and 11 (11 is also the code for more than 11 members of the household).

Education level was recoded from the original variable in the questionnaire measuring 8 ISCED levels, into three categories: ISCED 0–1, primary education, ISCED 2–4 secondary education and ISCED 5–8 tertiary education. Our analysis takes primary education as the reference category.

Deprivation Index (number of items that people cannot afford) was used in order to measure economic resources. The index takes values between 0 and 6, being based on the question: 'There are some things that many people cannot afford, even if they would like them. For each of the following things on this list, can I just check whether your household can afford it if you want it? a. Keeping your home adequately warm; b. Paying for a week's annual holiday away from home (not staying with relatives); c. Replacing any worn-out furniture; d. A meal with meat, chicken, fish every second day if you wanted it; e. Buying new, rather than second-hand, clothes; f. Having friends or family for a drink or meal at least once a month.' The response categories were: 1. Yes, can afford it if want; 2. No, cannot afford it; 98. Don't know; 99. Refusal.

The use of healthcare services was measured with the question 'Have you or someone else in your household used any of the following services in the last 12 months?' a. GP, family doctor or health centre services; b. Emergency healthcare; c. Hospital or medical specialist services; d. Ordering prescriptions online or by telephone; e. Medical consultation online or by telephone. In the questionnaire, the answering categories were: '1. I; 2. Someone else in your household; 3. Nobody'.

For variables about the utilization of GP, family doctor or health centre services, and the utilization of hospital or medical specialist services, two dummy variables were created: utilization of GP, family doctor or health centre services in your area (the respondent, somebody in the household, and both used GP, family doctor or health centre services in the last 12 months), and utilization of hospital or medical specialist services (the respondent, somebody in the household, and both used hospital or medical specialist services in the last 12 months). We use this variable as a proxy for personal/immediate experience with healthcare.

For feelings of social exclusion, we used the social exclusion index average based on the following set of questions: 'To what extent do you agree or disagree with the following statements? a. I feel left out of society; b. Life has become so complicated today that I almost can't find my way; c. I feel that the value of what I do is not recognised by others; d. Some people look down on me because of my job situation or income'. The answering categories are: 1. Strongly agree; 2. Agree; 3. Neither agree nor disagree; 4. Disagree; 5. Strongly disagree.

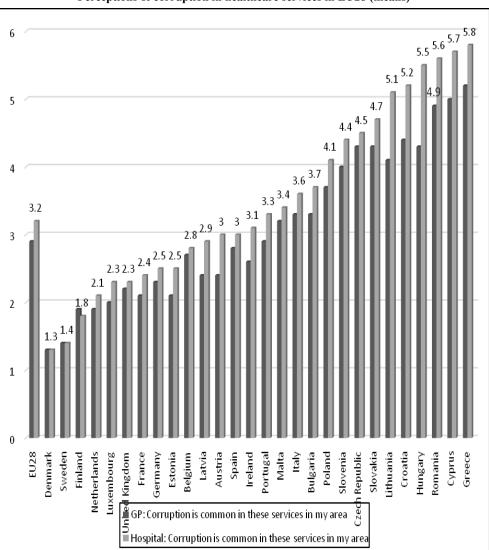
#### **RESULTS**

Descriptive analysis (*Figure 1*) shows that Romania is the third country in the EU with the highest level of perceptions of corruption in healthcare services, far above the EU28 mean. The level of corruption in hospital provisions is perceived to be higher than in primary services.

There are significant differences in perceptions of corruption for both primary and hospital services, by residence, employment status, age and education. (*Table no. 1*). There is a weak but significant correlation between feelings of exclusion and perceptions of corruption in primary health services (*Table no. 2*).



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Source: EQLS (2016). Authors' calculation.

Q63b To what extent do you agree or disagree with the following about GP, family doctor or health centre services in your area? Please tell me on a scale of 1 to 10, where 1 means completely disagree and 10 means completely agree. Corruption is common in these services in my area.

Q66b To what extent do you agree or disagree with the following statements about hospital or medical specialist services in your area? Please tell me on a scale of 1 to 10, where 1 means completely disagree and 10 means completely agree. Corruption is common in these services in my area.

#### Table no. 1

		GP: Corruption is	Hospital: Corruption
		common in these	is common in these
		services in my area	services in my area
		Mean	Mean
Gender	Female	4.8	5.5
Gender	Male	4.9	5.6
Residence	Rural	4.6	5.3
Kesidence	Urban	5.2*	5.9*
Employment status	Non active	4.5	5.3
Employment status	Active	5.2**	5.8*
Education, three estacories	Primary 3.9		4.6
Education: three categories – primary, secondary, tertiary	Secondary	4.8	5.6
primary, secondary, tertiary	Tertiary	5.5	5.6
	18-34 years	5.3	5.3
Age groups – three categories	35-64 years	4.9	5.8
	65+ years	4.1	5.1
Used GP, family doctor or health	No	5.3	5.4
centre services (respondent,			
somebody in the household or both)	Yes	4.7*	5.6
Used hospital and medical or	No	4.7	5.4
surgical specialist (respondent,			
somebody in the household or both)	Yes	5.2	5.9*

#### Perceptions of corruption by socioeconomic status variables (means)

Source: EQLS (2016). Authors' calculation.

Notes: The T test revealed statistically significant differences\* (p<0.05); \*\*(p<0.001) between rural/ urban, active/ non-active, and between users and non-users of healthcare services.

A one-way ANOVA was conducted to examine whether there were statistically significant differences among the three education categories and age categories. Post-hoc tests Games-Howell revealed statistically significant differences between primary and secondary (\*), primary and tertiary (\*\*), and secondary and tertiary in regard of perception of corruption in GP services. Post-hoc tests Scheffe showed statistically significant differences between primary and secondary (\*) and primary and tertiary (\*) in regard of perception of corruption in hospital or medical specialist services. Post-hoc tests Scheffe showed statistically significant differences between categories of 18-34 years and over 65 years and 34-64 years and over 65 years (\*) in regard to perception of corruption in GP services. Post-hoc tests Scheffe revealed statistically significant differences between categories 34-64 years and over 65 years (\*) in regard to perception of corruption in hospital or medical specialist services.

Table no. 2

#### Correlations between perception of corruption in GP and hospital services and some variables included in the analysis

	GP: Corruption is common in these services in my area $(1-10)$	Hospital: Corruption is common in these services in my area (0-10)
Household size (continuous)	062	03
Social exclusion index $(1-5)$	.191**	.022
Deprivation: number of items not afforded	021	.045

Source: EQLS (2016). Authors' calculation.

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

Perceptions of corruption in GP services vary by socioeconomic status, as proven by model 1 in *Table no. 3*. Urban residence, younger ages, higher education contribute to a heightened perception of corruption in primary services, while this perception is independent of the level of deprivation. Higher household size is negatively associated with the dependent variable. Model 1 proves that this type of corruption can be considered a rather *educated guess*, with more educated, younger, and living in urban people having higher perceptions of the phenomenon. Since perceptions are stratified, we can consider that corruption is not deemed uniformly in society as generalised, and it is likely that the level of awareness, knowledge of the various facets of the phenomenon and interest in it vary significantly.

Model 2 shows that perceptions of corruption in GP services are independent of the utilization of these medical provisions, when controlling for socioeconomic factors. It is possible that perceptions are formed in this case in the long term, and are not the outcome of a rather recent, past year experience. People usually have contact with GP services more frequently and develop personal relations with their medical personnel to the extent they become familiar with the acceptable behaviours (negative or positive).

Model 3 proves that social exclusion is associated with perceptions of corruption, when all other factors are kept under control. People who feel socially excluded are more likely to deem the medical services as corrupt, the implications being that they might choose not to access these services, with negative consequences on their health status.

Perceptions of corruption in hospital services draw a slightly different picture from those in the primary services. Model 1 in *Table no. 4* shows that urban residence, education, as well as deprivation are associated with perceptions of corruption in hospital provisions. In this case, corruption seems less like an *educated guess* and appears to be dependent on the level of economic resources.

Regression model 2 proves that perceptions of corruption are associated with utilization of healthcare, when controlling for socioeconomic factors. Utilization of hospital services over the past year is a key factor in explaining the variation in perceptions. The analysis suggests that insights of heightened corruption might stem from the very experience that people have with the hospital system.

The nature of corruption in hospitals is different that the one in primary services as it might involve situations of life and death that encompass complicated medical procedures and a high level of medical skills.

Model 3 in *Table no.* 4 shows, in a similar way to corruption in primary services, that feelings of social exclusion contribute to higher perceptions of corruption in hospitals.

#### Table no. 3

					_							
	Model 1					Mod			Model 3			
	В	β	Sig.	SE	В	β	Sig.	SE	В	β	Sig.	SE
(Constant)	3.63		**	0.53	3.75		**	0.54	1.55		**	0.57
Gender $(0 = \text{female},$												
1 = male)	-0.30	-0.05		0.23	-0.31	-0.05		0.23	-0.34	-0.05		0.22
Residence $(0 = rural,$												
1 = urban)	0.73	0.11	**	0.24	0.73	0.11	**	0.24	0.55	0.09	*	0.23
Employment status												
(0 = non active, 1 = active)	0.35	0.05		0.28	0.35	0.06		0.28	0.10	0.02		0.27
Household size												
(continuous)	-0.20	-0.09	*	0.08	-0.19	-0.09	*	0.08	-0.25	-0.12	**	0.08
Respondent age (ref. group	o = ove	er 65 y	ears)									
Age 18-34 dummy	0.90	0.13	*	0.41	0.86	0.12	*	0.41	0.85	0.12	*	0.39
Age 35-64 dummy	0.61	0.10	#	0.36	0.57	0.09		0.37	0.67	0.11	*	0.35
Education (ref. group = Pr	imary)											
Secondary education	0.79	0.11	#	0.42	0.82	0.11	*	0.42	1.01	0.14	**	0.40
Tertiary education	1.25	0.14	*	0.55	1.28	0.14	*	0.55	1.73	0.19	**	0.52
Deprivation: number of												
items not afforded	0.09	0.06		0.06	0.10	0.06		0.06	-0.04	-0.03		0.06
Used GP, family doctor												
or health centre services												
(respondent, somebody												
in the household or both)					-0.22	-0.03		0.24	-0.24	-0.04		0.23
Social exclusion index									1.13	0.32	**	0.13
Social exclusion much									1.15	0.52		0.15

# Summary of the regression analysis for variables predicting perception of corruption in GP, family doctor or health centre services in your area (N=781)

*Notes*: \*\* p < .01, \* p < .05, # p < .10; SE= Standard Error.

#### Table no. 4

Summary of the regression analysis for variables predicting perception of corruption in hospital or medical specialist services (N=764)

	Model 1				liist sei	Mode		/	Model 3			
	В	β	Sig.	SE	В	β	Sig.	SE	В	β	Sig.	SE
(Constant)	3.50		**	0.51	3.33		**	0.51	2.48		**	0.55
Gender ( $0 =$ female, 1 = male)	-0.17	-0.03		0.22	-0.15	-0.03		0.22	-0.14	-0.02		0.21
Residence (0 = rural, 1 = urban)	0.77	0.13	**	0.23	0.77	0.13	**	0.23	0.69	0.11	**	0.23
Employment status $(0 = \text{non active},$												
1 = active)	0.26	0.04		0.27	0.25	0.04		0.27	0.16	0.03		0.27
Household size (continuous)	-0.04	-0.02		0.08	-0.04	-0.02		0.08	-0.07	-0.03		0.08
Respondent age (ref. group = over 65 years)												
Age 18-34 dummy	-0.02	0.00		0.38	-0.01	0.00		0.38	-0.01	0.00		0.38
Age 35-64 dummy	0.48	0.08		0.34	0.53	0.09		0.34	0.56	0.09	#	0.34

Education (ref. group = )	Primar	y)										
Secondary education	1.42	0.21	**	0.41	1.40	0.20	**	0.41	1.44	0.21	**	0.40
Tertiary education	1.42	0.17	**	0.52	1.46	0.17	**	0.52	1.58	0.19	**	0.52
Deprivation: number of items not afforded	0.19	0.13	**	0.06	0.17	0.12	**	0.06	0.11	0.07	#	0.06
	1											
Used hospital and												
medical or surgical												
specialist (respondent,												
somebody in the												
household or both)					0.54	0.08	*	0.24	0.48	0.07	*	0.24
G 1 1 1 1 1 1	I			r				1	0.47	0.1.4	**	0.12
Social exclusion index									0.47	0.14	~~	0.13

Table no. 4 (continued)

*Notes*: **\*\*** p < .01, **\*** p < .05, **#** p < .10; SE= Standard Error.

## CONCLUSIONS

In Romania, perceptions of corruption in the medical system are among the highest in the European Union, with hospital care being considered more corrupt than the primary services. It is possible that this pattern, which is also shown in most of the EU countries, independent of the level of corruption perceived, to emerge because informal payments are more spread and in higher amounts in the case of hospital care (WB 2011). However, even if corruption in primary medical provisions involves smaller payments, it is possible that people perceive their *gifts* as more ordinary and less as corruption, as patients develop long term relationships with their medical providers, and the payments become more natural.

Corruption in primary and in hospital services are differently perceived. The views of corruption in primary medical services are an *educated guess* as they are dependent on higher socioeconomic status, proving that perceptions are not uniformly distributed across social strata. Economic resources do not have a bearing on perceptions, but feelings of social exclusion contribute to higher perceptions of corruption. This highlights the risk for those feeling socially excluded to avoid getting the medical help needed, with negative consequences on their health status.

Perceptions of corruption in GP services are independent of personal/ immediate experience in Romania. It is possible they are derived from exogeneous factors, like media reports, other people experiences, generalized perceptions of corruption. However, with the phenomenon going back for decades in Romania, is it also likely that these insights come from past personal occurrences, and it is difficult to appreciate whether an echo chamber phenomenon is involved in these perceptions.

The insights of corruption in hospital care are dependent on economic resources, since this type of corruption involves the use of higher material resources on the part of persons and households, as usually hospital services are more sophisticated and expensive, and the cost posed by corruption in hospitals is a higher burden to more deprived households. These perceptions seem less *an educated guess* in comparison to views of corruption in primary services, but they share a similar pattern where feelings of exclusion contribute to perceptions of corruption.

Most importantly, utilization of healthcare contributes to perception of corruption in hospitals, unlike the case of primary care. Perceptions reflect thus personal/ immediate experiences, most probably being a valid and reliable measure of corruption in the medical system and mirroring an accurate image of corruption.

The high level of perceived corruption in both types of services analyzed here, the specific stratification of perceptions and the relationship between personal/ immediate experience and views of corruption in hospitals and specialized medical care create a picture where corruption is generally perceived as innate to healthcare.

While it is not easy to disentangle the multiple mechanisms involved in perceptions of corruption, it is clear that personal/ immediate experience contribute to higher perceptions of hospital corruption, which makes it less likely that higher perceptions of corruption to stem from exogeneous factors like media reports, other people experiences, generalized perceptions of corruption. While some efforts were made in Romania that might address the problem indirectly through the increase of salaries for medical personnel and installing cameras in medical facilities, it is also needed to address the problem directly and tackle corruption that plagues the experience of laypersons with the medical system.

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🖍 România, percepția asupra corupției în serviciile de medicină generală și în cele spitalicești/specializate este foarte ridicată, poziționând țara noastră pe al treilea loc în Uniunea Europeană. În acest articol, ne-am propus să explorăm asocierea dintre statutul socioeconomic, utilizarea serviciilor de îngrijire a sănătății și excluziunea socială, pe de o parte, și percepția corupției în serviciile de îngrijire a sănătății în România, pe de altă parte. În principal, am încercat să înțelegem dacă percepțiile asupra corupției sunt dependente de utilizarea serviciilor de sănătate, aceasta din urmă fiind considerată ca o măsură proxy a experienței personale. În acest scop, am utilizat European Quality of Life Survey, datele cercetării din 2016 pentru România și am realizat o analiză descriptivă și o analiză de regresie liniară explicativă pentru a evidenția percepțiile asupra corupției în sistemul medical din România. Rezultatele arată o imagine ușor diferită asupra percepțiilor corupției în serviciile de medicină primară și cele ale fenomenului din îngrijirea spitalicească.Percepția corupției în furnizarea serviciilor de medicină generală este dependentă de un statut socioeconomic mai ridicat și este independentă de utilizarea serviciilor de sănătate. Percepțiile asupra corupției în serviciile spitalicești sunt asociate cu nivelul resurselor economice și sunt dependente de experiența personală.

*Cuvinte-cheie*: percepția asupra corupției; utilizarea serviciilor de sănătate; corupția în serviciile de sănătate.

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