

KNOWLEDGE AND VIEWPOINTS ON THE EFFECTS OF CORRUPTION ON HEALTHCARE: A SURVEY CONDUCTED AMONG STUDENTS OF PALERMO UNIVERSITY MEDICAL SCHOOL, ITALY.

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ABSTRACT

Corruption affects healthcare effectiveness and efficiency and limits equity in access to health services. Aim of the survey was to document knowledge and viewpoints on the impact of corruption on healthcare system in a sample of students attending pre-lauream healthcare professional courses at Palermo University Medical school and to evaluate any improvement in their awareness on this topic after a dedicated multidisciplinary educational intervention.

An anonymous questionnaire was administered to students before and after the intervention. Absolute and relative frequency of correct and incorrect answers was computed. Chi-squared test was used to compare answers given before and after the educational intervention.

Approximately less than a quarter of the respondents were able to correctly estimate impact of corruption, inappropriateness and waste in healthcare on NHS.

The study documented how improving students' knowledge of the impact of corruption in the healthcare system could represent a possible strategy to prevent corruption in healthcare.

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1. Introduction

Corruption is the abuse, or complicity in abuse, of entrusted public or private power for private gain [1]. It can be classified as grand, petty and political, depending on the amounts of money lost and the sector where it occurs [2]. However, because of its mutant and complex characteristics, this definition does not describe all aspects related to this social phenomenon, which have to be analysed in a wider context [3].

Transferred in healthcare setting, corruption implies wastage in the public

management, unproductive use of public funds, improper hiring or use of personnel, loss of meritocracy and mortification of professional skills, implementation of inefficient organizational models, and absence of external and independent auditing processes [3]. Corruption affects healthcare effectiveness and efficiency - having potential adverse effects on health outcomes - and limits equity in access to health services [1]. According to the latest data provided by Transparency International, corruption remains a huge challenge across World and Europe: as showed by the Corruption Perceptions Index [4] - a synthetic measure of

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perceived levels of public sector corruption, calculated in 168 countries around the world, in a range between 0 (highly corrupted) to 100 (very clean) – in Europe was documented an average score of 65/100, with 14% of European countries having a score below 50/100. Among these countries, Italy has a score of 44/100, with a global rank of 61/168. Not by chance, the fiscal impact of corruption on the National Health System (NHS) in Italy is estimated at about 6 billion euros, corresponding to about 5% of the annual National Health Fund [5]. According to a survey on the perception of corruption risk of personnel working in a sample of 151 Italian local Health Facilities, the area considered most at risk of corruption was tenders, followed by health facilities building and, in third place, selection of personnel for recruitment and career progression [3]. Recently, the Italian National Anticorruption Authority (ANAC) implemented the National Anti-Corruption Plan 2016 [6], including measures and possible solutions to protect the NHS from the risk of corruptive events and to raise the overall level of integrity, competence and productivity within the health system, starting from the increase of effectiveness and efficiency of every single local health unit. To achieve these objectives investment on training of new specialised figures, such as the health facility responsible for corruption prevention (RPCT), was stressed. [6] Potential interventions to reduce corruption include, also, information campaigns aimed at changing knowledge, attitudes and behaviors about corruption, or at developing skills to prevent and face corruption's effects [1]. Improving knowledge of health professionals, starting from academic education, could change perceptions and reduce motivation to behave corruptly and could also support the implementation of anti-corruption activities in the healthcare field.

The aim of the survey was to document the knowledge and viewpoints about the impact of corruption on healthcare system in a sample of students attending pre-lauream healthcare professional courses at Palermo University Medical school and to evaluate any improvement in their awareness on this topic after a dedicated multidisciplinary informative intervention.

2. Materials and Methods

Study setting, design and population

An anonymous questionnaire was designed by using information and evidences published in the White Paper on corruption in Italy [3]. The questionnaire was structured in two sections (Appendix 1): A) general information section, collecting data on the characteristics of the participants (age, gender, academic course and year attended); B) question section, including 12 between ordinal scale (score 1= minimum; score 10= maximum) or multiple choice questions targeted to university students exploring knowledge and viewpoints about the impact of corruption on healthcare system.

In April 2016, the questionnaire was administered to a sample of more than 200 students attending pre-lauream healthcare professional courses at Palermo University during a multi-disciplinary and interactive informative seminar held within the first “Curiamo la corruzione” national Day. The seminar was promoted through academic institutional communication means, social networks and the active involvement of students associations.

Intervention design and content

The informative intervention consisted of lectures followed by an interactive discussion starting from student's questions held by a panel of multidisciplinary experts from the Institute for Ethics Promotion in Health (ISPE-Sanità) together with researchers of Palermo University Medical school. After explaining general concepts and key words to share a common language, the informative intervention focused on the main mechanism generating corruption in healthcare, followed by the presentation of evidence documenting the burden of this phenomenon in Italy and of the strategies and tools adopted to fight it. Improving knowledge and attitudes on the impact of corruption in healthcare was assessed by restricting analysis to the students answering both before and after the informative intervention. According to the number of respondents, the effectiveness of the intervention was estimated in the nurses students only, as the high number of students sampled was considered representative of the general population of students attending the nursing courses during the current academic year.

Data collection and statistical analysis

A database with all the socio-demographic and academic characteristics of the respondents and the answers to the questions was created using Excel 5.0 software. Incomplete questionnaires or questionnaires whose respondent's unicity was unclear, were excluded from the analysis.

Answer scores given to scale questions were categorized in ≤ 5 and ≥ 6 to summarize a negative or a positive agreement to the statements explored by the survey, respectively.

Mean and standard deviation for continuous variables and frequency for categorical variables were calculated as descriptive statistics. Absolute and relative frequency (percentages) of correct and incorrect answers was computed. Chi-squared test and the Fisher's exact test were used to compare answers given before and after the educational intervention. The variation in frequency (%) in scores to answers given between pre- and post-informative intervention was calculated.

Dataset was analysed by using IBM SPSS Software 23 version (IBM Corp., Armonk, NY, USA). All p-values were two-sided and p-value < 0.05 was considered statistically significant.

3. Results

Table 1 reports the characteristics of the overall respondents recruited in the survey: 199 students, with an average age of 23.19 (SD= ± 4.92), n. 123 female (61.8%), answered the questionnaire before the beginning of the seminar. Of these, n. 162 (81.4%) attended the nursing course, n. 13 (6.5%) were medical students, while n. 24 (12.1%) belonged to courses related to other healthcare professions. Students attending the second year courses were represented the most (40.2%).

Frequency of correct and incorrect answers given to the questions in the questionnaire administered before the informative intervention is reported in Table 2. Approximately a quarter of the respondents (24.6%) correctly estimated the economic impact of corruption, inappropriateness and waste in healthcare by the national healthcare service (Q1) of more than 23 billions of euros, while 28.6% of the interviewed students gave the correct answer to the question on the frequency of healthcare corruption cases in the USA detected through assessment procedures and by private, individual complaints, respectively (Q4).

With regard to the question aiming to explore the students' knowledge and viewpoints on the elements placing Italian NHS at the top of the ranking concerning overall health outcomes (Q6) 36.2% of the students correctly indicated the greater life expectancy at birth. One fifth of the respondents (21.6%) properly indicated "services or equipment supplies provided at higher prices than the average" answering the question speculating the highest frequency of irregularities and embezzlements in healthcare management in Italy (Q8), while 58.3% of the students correctly estimated the impact of corruption on the healthcare expenditure (Q9).

With regard to the scale questions, n. 115 (57.8%) respondents did not agree (score: ≤ 5) with the statement affirming that professional competence alone represents a sufficient requirement to avoid bad practices in the management of healthcare facilities (Q2), while n. 48 (24.1%) agreed (score: ≥ 6) in indicating that inefficiency in healthcare caused by violation of ethical principles, without any violation of law, does not constitute corruption (Q3). Within the respondent students n. 123 (61.8%) agreed (score: ≥ 6) that the gap in medical knowledge between patient and medical staff, if excessive, can foster corruption in the healthcare system (Q5). Further, 120 (60.3%) students were concordant (score: ≥ 6) in indicating how any control system implemented after one episode of corruption in healthcare represents the third cost of corruption as well as a drug represents the cost of the care (Q7), while n. 65 (32.7%) did not agree (score: ≤ 5) with the statement highlighting that to modify the role of manager toward its collaborators by implementing coaching methods leads to a reduction in corruption, inappropriateness and waste in healthcare (Q10). About half of the sample (n. 101; 50.8%) stated to agree (score: ≥ 6) on the contribution of the pharmaceutical industry or private for profit sponsorship of structures and/or research activities in guaranteeing a proper delivery of care by the healthcare system (Q11), while n. 141 (70.9%) of respondents were concordant (score: ≥ 6) in indicating that in the healthcare context the pharmaceutical industry or private for profit may affect research and decision-making (Q12).

Eighty-eight (17.9%) of the 491 nurses students attending the nursing study course at University of Palermo answered the questionnaire both before and after informative intervention (Table 1).

Variable	Respondents	
	Pre-informative intervention (overall students) n.199	Pre- and post-informative intervention (nurses students only) n.88
Age in years (mean: \pm SD)	23.19; \pm 4.92	22.94; \pm 4.17
Gender	n (%)	n (%)
- male	76 (38.2%)	25 (28.4%)
- female	123 (61.8%)	63 (71.6%)
Course attended	n (%)	n (%)
- Medicine	13 (6.5%)	-
- Nursing	162 (81.4%)	88 (100.0%)
- Other healthcare professions	24 (12.1%)	-
Year of course	n (%)	n (%)
- I	25 (12.6%)	17 (19.3%)
- II	80 (40.2%)	33 (37.5%)
- III	57 (28.6%)	24 (27.3%)
- IV or more	9 (4.5%)	-
- Missing	28 (14.1%)	14 (15.9%)

Table 1 - Characteristics of the students recruited in the survey (n. 199 overall health professionals students responding to the entry questionnaire; n. 88 nursing students responding before and after the informative intervention).

Question	Correct* answers n (%)	Incorrect answers n (%)
1. In your opinion, what is the estimated economic impact of corruption, inappropriateness and waste in healthcare on national healthcare service? Answers: More than 23 billions euros; Less than 1 billion euros; Approximately 19 million euros; About 8 billion euros	49 (24.6%)	150 (75.4%)
4. In your opinion, what is the frequency of healthcare corruption cases in the USA detected through assessment procedures and by private individuals complaints respectively? Answers: Less than 5% and 40% in the second case; More than 40% and 5%; Less than 1% and 20%; More than 65% and 15%	57 (28.6%)	142 (71.4%)
6. Which of the listed elements place Italian NHS at the top of ranking concerning overall health outcomes? Answers: Greater life expectancy at birth; Government shareholding for family healthcare expenditures (for services provided by individuals); Role of primary care (family doctors, outpatient specialists, health districts); Funding dedicated to health services; Equity in the health provision to citizens	72 (36.2%)	127 (63.8%)
8. In your opinion, which of the following domains documents the highest frequency of irregularities and embezzlements in healthcare management? Answers: Services or equipment supplies provided at higher prices than the average; Poor quality of health services; Inequality in the access to medical care; Not adequate allocation of funds to healthcare	43 (21.6%)	156 (78.4%)
9. How much does corruption influences the healthcare expenditure (except for crimes punished by the penal code)? Answers: 0.5%; 21%; 3%; 40%	116 (58.3%)	83 (41.7%)
*Correct answers to the questions are underscored.		
Question	Score	n (%)
2. Indicate how much do you agree (score 1= minimum; score 10= maximum) with the following sentence: professional competence alone represent a sufficient requirement to avoid bad practices in the management of healthcare facilities.	≤ 5	115 (57.8%)
	≥ 6	84 (42.2%)
3. Indicate how much do you agree (score 1= minimum; score 10= maximum) with the following sentence: inefficiency in healthcare caused by violation of ethical principles, without any violation of law, does not constitute corruption.	≤ 5	150 (75.4%)
	≥ 6	48 (24.1%)
	Missing	1 (0.5%)
5. Indicate how much do you agree (score 1= minimum; score 10= maximum) with the following sentence: the gap in medical knowledge between patient and medical staff, if excessive, can foster corruption in healthcare system.	≤ 5	75 (37.7%)
	≥ 6	123 (61.8%)
	Missing	1 (0.5%)
7. Indicate how much do you agree (score 1= minimum; score 10= maximum) with the following sentence: the control system implemented after one episode of corruption in healthcare, it represents a curative approach adopted after corruption in healthcare has already generated direct (bribes) and indirect costs (lower quality and higher costs in public administration). Therefore, the control system represents the third cost of corruption as well as a drug represents the cost of the care.	≤ 5	77 (38.7%)
	≥ 6	120 (60.3%)
	Missing	2 (1%)
10. Indicate how much do you agree (score 1= minimum; score 10= maximum) with the following sentence: to modify the role of manager toward its collaborators by implementing coaching method (personalized tutoring service supporting a full development and utilization of the subject's potential, in order to achieve targets related to role in the organizational unit) allows to reduce corruption, inappropriateness and waste in healthcare.	≤ 5	65 (32.7%)
	≥ 6	134 (67.3%)
11. Indicate how much do you agree (score 1= minimum; score 10= maximum) with the following sentence: pharmaceutical industry or private for profit sponsorship of structures and/or research activities both contribute to guarantee a proper delivering of care by the healthcare system.	≤ 5	98 (49.2%)
	≥ 6	101 (50.8%)
12. Indicate how much do you agree (score 1= minimum; score 10= maximum) with the following sentence: pharmaceutical industry or private for profit sponsorship of structures and/or research activities both may affect researchers and decision-makers.	≤ 5	58 (29.1%)
	≥ 6	141 (70.9%)

Table 2 - Results of answers given by 199 overall health professionals students responding to the entry questionnaire.

The average age of the intervention group was 22.94 (SD= ± 4.17). Of these respondents, n. 63 were female (71.6%), while n. 17 (19.3%) attended the first year course, n. 33 (37.5%) the second year and n. 24 (27.3%) the third year. As for the remaining 14 (15.9%) students, their year of course attended was not reported.

Table 3 summarizes results of the comparison between the answers given by n. 88 nursing students before and after the informative intervention. The only statistically significant difference was documented with regard to the question aiming to estimate the economic impact of corruption, inappropriateness and waste in healthcare on national healthcare service (Q1): the correct answer ("more than 23 billion euros") was given by n. 16 (18.2%) nursing students to the entry questionnaire as compared to n. 59 (67.1%) students responding after the informative intervention (p-value: 0.000). An improvement in the frequency of corrected answers given by the respondents between pre- and post-informative intervention was also highlighted for Q6 and Q8, but differences were not statistically significant (p-value: >0.05).

An increase in frequency of positive agreement scores given by nursing students between pre- and post-informative intervention was reported for Q2 (before: 43.2%; after: 45.5%; +2.3), Q3 (before: 26.1%; after: 30.7%; +4.6), Q5 (before: 61.4%; after: 69.3%; +7.9), Q7 (before: 55.7%; after: 69.3%; +13.6), Q10 (before: 64.8%; after: 75.0%; +10.2) and Q11 (before: 53.4%; after: 58.0%; +4.6), but the differences were not statistically significant (p-value: >0.05).

Questions	Answer*	Before intervention	After intervention	p-value
1. In your opinion, what is the estimated economic impact of corruption, inappropriateness and waste in healthcare on national healthcare service? Answers: More than 23 billion euros; Less than 1 billion euros; Approximately 19 million euros; About 8 billion euros	Correct n (%)	16 (18.2%)	59 (67.1%)	0.000
	Incorrect n (%)	72 (81.8%)	29 (32.9%)	
4. In your opinion, what is the frequency of healthcare corruption cases in the USA detected through assessment procedures and by private individuals complaints respectively? Answers: Less than 5% and 40% in the second case; More than 40% and 5%; Less than 1% and 20%; More than 65% and 15%	Correct n (%)	33 (37.5%)	33 (37.5%)	1.00
	Incorrect n (%)	55 (62.5%)	55 (62.5%)	
6. Which of the listed elements place Italian NHS at the top ranking concerning overall health outcomes? Answers: Greater life expectancy at birth; Government shareholding for family healthcare expenditures (for services provided by individuals); Role of primary care (family doctors, outpatient specialists, health districts); Funding dedicated to health services; Equity in the health provision to citizens.	Correct n (%)	25 (28.4%)	32 (36.4%)	0.26
	Incorrect n (%)	63 (71.6%)	56 (63.6%)	
8. In your opinion, which of the following domains documents the highest frequency of irregularities and embezzlements in healthcare management? Answers: Services or equipment supplies provided at higher prices than the average; Poor quality of health services; Inequality in the access to medical care; Not adequate allocation of funds to healthcare.	Correct n (%)	16 (18.18%)	17 (19.3%)	0.85
	Incorrect n (%)	72 (81.82%)	71 (80.7%)	
9. How much does corruption influences the healthcare expenditure (except for crimes punished by the penal code)? Answers: 0.5%; 2%; 3%; 40%.	Correct n (%)	61 (69.32%)	51 (57.9%)	0.12
	Incorrect n (%)	27 (30.68%)	37 (42.1%)	
*Correct answers to the questions are underscored.				
Question	Score	n (%)		p-value
2. Indicate how much do you agree (score 1= minimum; score 10= maximum) with the following sentence: professional competence alone represent a sufficient requirement to avoid bad practices in the management of healthcare facilities.	≤5	50 (56.8%)	48 (54.5%)	0.76
	≥6	38 (43.2%)	40 (45.5%)	
	Missing	0	0	
3. Indicate how much do you agree (score 1= minimum; score 10= maximum) with the following sentence: inefficiency in healthcare caused by violation of ethical principles, without any violation of law, does not constitute corruption.	≤5	65 (73.9%)	61 (69.3%)	0.50
	≥6	23 (26.1%)	27 (30.7%)	
	Missing	0	0	
5. Indicate how much do you agree (1 score 1= minimum; score 10= maximum) with the following sentence: the gap in medical knowledge between patient and medical staff, if excessive, can foster corruption in healthcare system.	≤5	33 (37.5%)	27 (30.7%)	0.31
	≥6	54 (61.4%)	61 (69.3%)	
	Missing	1 (1.1%)	0	
7. Indicate how much do you agree (score 1= minimum; score 10= maximum) with the following sentence: the control system implemented after one episode of corruption in healthcare, it represents a curative approach adopted after corruption in healthcare has already generated direct (bribes) and indirect costs (lower quality and higher costs in public administration). Therefore, the control system represents the third cost of corruption as well as a drug represents the cost of the care.	≤5	37 (42.0%)	27 (30.7%)	0.09
	≥6	49 (55.7%)	61 (69.3%)	
	Missing	2 (2.3%)	0	
10. Indicate how much do you agree (score 1= minimum; score 10= maximum) with the following sentence: to modify the role of manager toward its collaborators by implementing coaching method (personalized tutoring service supporting a full development and utilization of the subject's potential, in order to achieve targets related to role in the organizational unit) allows to reduce corruption, inappropriateness and waste in healthcare.	≤5	30 (34.1%)	22 (25.0%)	0.17
	≥6	57 (64.8%)	66 (75.0%)	
	Missing	1 (1.1%)	0	
11. Indicate how much do you agree (score 1= minimum; score 10= maximum) with the following sentence: pharmaceutical industry or private for profit sponsorship of structures and/or research activities both contribute to guarantee a proper delivering of care by the healthcare system.	≤5	40 (45.5%)	36 (40.9%)	0.54
	≥6	47 (53.4%)	51 (58.0%)	
	Missing	1 (1.1%)	1 (1.1%)	
12. Indicate how much do you agree (score 1= minimum; score 10= maximum) with the following sentence: pharmaceutical industry or private for profit sponsorship of structures and/or research activities both may affect researchers and decision-makers.	≤5	25 (28.4%)	25 (28.4%)	1.00
	≥6	63 (71.6%)	63 (71.6%)	

Table 3 - Comparison of the answers given by n.88 nursing students before and after the informative intervention.

4. Discussion

The study aimed to survey knowledge and attitudes about the impact of corruption in the healthcare system in a sample of students attending pre-lauream healthcare professional courses at an Italian University Medical school.

Approximately less than a quarter of the respondents were able to correctly estimate the impact of corruption, inappropriateness and waste in healthcare on NHS as well as to properly indicate the causes explaining the increasing of irregularities and embezzlements in healthcare management documented by national reports on the topic [3]. Conversely, the majority of the study sample indicated that any control system implemented after one episode of corruption in healthcare could represent the third cost of

corruption in the same way administered drugs contribute to the cost of the care.

These evidences highlighted an educational demand that should be addressed to universities and policy makers. However, the majority of the students recruited in the survey were able to identify the gap in medical knowledge between patient and medical staff as a potential driver of corruption in the healthcare system and they agreed with the statement that to modify the role of manager toward its collaborators by implementing coaching methods can play a role in reducing the impact of corruption, inappropriateness and waste in healthcare.

Education programmes dedicated to health professionals have been already demonstrated to be effective on innovative health topics [7,8] or target populations [9-11] both in Italy and Europe [12,13]. In the same direction, with regard to measures and possible solutions to protect the Italian NHS from the risk of corruptive events and to raise the overall level of integrity, competence and productivity within the health system, the National Anti-Corruption Plan 2016 [6] emphasized the importance to invest on the specific training of health professionals and to promote the implementation within local health agencies of specialised figures responsible for corruption prevention plan and strategies [6]. In fact, it has been reported how changes in attitudes could reduce motivation to behave corruptly and motivate anti-corruption activities [1].

Interestingly, on one side, about half of the sample recognized the role of the pharmaceutical industry or private for profit sponsorship in supporting health research activities as having a positive impact in guaranteeing a proper delivery of care by the healthcare system; while, on the other side, the majority of responding students were concordant to state that the pharmaceutical industry or private for profit may affect research and decision-making in the healthcare context. These answers probably reflect the attention paid by academics in transferring knowledge of the influence of the private sector on health research and clinical management to students of professions in healthcare during classes [14,15].

Interpretation of results of the comparison between answers given by the sample restricted to nurse students at entry and exit questionnaires supported the effectiveness of the informative intervention: an overall improvement in the frequency both of corrected answers and positive agreements to the proper statements reported by the respondents after the seminar was documented, despite the fact that a significant difference was highlighted in estimating the economic impact of corruption, inappropriateness and waste in healthcare on NHS, only. Even if it is not easy to quantify the impact of corruption in the health sector due to the number of causes and grey areas, estimates from around the world point to a high level of corruption [1]. As noted by the Global Corruption Report in 2006, although money lost directly to corruption is the most obvious and immediate cost, the negative effects of corruption in terms of quality of government and well-being of a population are appreciable in a longer term. It is crucial to study ways of reducing corruption, not only to reduce the loss of resources, but also to address the adverse effects of corruption on the health system and society [1], as demonstrated by the ongoing debate on effects of corruption in terms of increasing waiting time and lists to access public healthcare facilities, with the consequence being to address the health demand from public to private sector or, even worse, to contribute to the spread of vote trading phenomenon.

The potential gains from fighting corruption - such as more and better healthcare, stronger judiciaries and legitimate politics - are immense [2].

That's why anti-corruption interventions have been increasingly promoted in recent years in Europe and in Italy in order to be implemented within hospitals and local health agencies [16].

The main limits of this study are due to the cross-sectional design and to the impossibility of sampling a group representative of the entire Medical School population, except for nursing students. Therefore, a potential selection bias has to be considered.

Despite the previous structural limitations, to our knowledge, this survey is one of the first studies in Italy attempting to document knowledge and viewpoints on the impact of corruption on the healthcare system in a sample of students attending pre-lauream healthcare professional courses at an Italian University Medical school. Also, effectiveness of the informative intervention was highlighted in a restricted group of nursing students.

As the importance of the implementation of specific informative or educational interventions targeted to both pre- and post-lauream students has been previously documented in the health sector [17-21], we can conclude that improving knowledge, skills and competencies to prevent and identify corruption events, above all among future health professionals and NHS workers, could represent as well a possible strategy to act against corruption in healthcare [1]. To this end, further studies on larger samples have to be implemented in the field.

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Appendix 1 - Questionnaire

SURVEY ON KNOWLEDGE AND VIEWPOINTS CONCERNING THE IMPACT OF CORRUPTION IN HEALTHCARE

The following questionnaire has been designed to be administered before and after the informative seminar entitled "Curiamo la corruzione", taking place at Palermo University on April the 4th, 2016 (You are kindly asked to sign both the entry and exit versions). Both versions of the questionnaire have to be completed and signed in order to certify participation. Results of the survey will be used exclusively for research purposes. Data will be analyzed and presented in aggregate form, thus preserving anonymity.

SECTION A

ENTRY QUESTIONNAIRE
 EXIT QUESTIONNAIRE

Age (years) _____ Gender M F

Tax Code: _____

Alternatively, enter below the initials of the first and last name (two letters) followed by date of birth (8 numbers: dd/mm/yyyy)(8 numbers: e.g.: 01/07/1991):

Status
 Student*
 Graduated in _____

* Course attended _____

Attending the _____ year of course

SECTION B - QUESTIONS

Please answer by placing a X in correspondence of the chosen answer.

- In your opinion, what is the estimated economic impact of corruption, inappropriateness and waste in healthcare on national healthcare service?
 - More than 23 billions euros
 - Less than 1 billion euros
 - Approximately 19 million euros
 - About 8 billion euros

- Indicate how much you agree (1= minimum; 10= maximum) with the following sentence:

Professional competence alone represents a sufficient requirement to avoid bad practices in the management of healthcare facilities.

1	2	3	4	5	6	7	8	9	10

Not at all

Highly

- Indicate how much you agree (1= minimum; 10= maximum) with the following sentence:

Inefficiency in healthcare caused by violation of ethical principles, without any violation of law, does not constitute corruption.

1	2	3	4	5	6	7	8	9	10

Not at all

Highly

- In your opinion, what is the frequency of healthcare corruption cases in the USA detected by assessment procedures and by private, individual complaints, respectively?

- Less than 5% and 40%
- More than 40% and 5%
- Less than 1% and 20%
- More than 65% and 15%

- Indicate how much you agree (1= minimum; 10= maximum) with the following sentence:

The gap in medical knowledge between patient and medical staff, if excessive, can foster corruption in healthcare system.

1	2	3	4	5	6	7	8	9	10

Not at all

Highly

- Which of the listed elements place Italian NHS at the top of the ranking concerning overall health outcomes? More than one answer is possible.

- Greater life expectancy at birth
- Government shareholding for family healthcare expenditures (for services provided by individuals)
- Role of primary care (family doctors, outpatient specialists, health districts)
- Funding dedicated to health services
- Equity in the health provision to citizens

- Indicate how much you agree (1= minimum; 10= maximum) with the following sentence:

The control system implemented after one episode of corruption in healthcare, it represents a curative approach adopted after corruption in healthcare has already generated direct (bribes) and indirect costs (lower quality and higher costs in public administration). Therefore, the control system represents the third cost of corruption as well as a drug represents the cost of the care.

1	2	3	4	5	6	7	8	9	10

Not at all

Highly

- In your opinion, which of the following domains documents the highest frequency of irregularities and embezzlements in healthcare management?

- Services or equipment supplies provided at higher prices than the average
- Poor quality of health services
- Inequality in the access to medical care
- Not adequate allocation of funds to healthcare

- How much does corruption influence the healthcare expenditure (except for crimes punished by the penal code)?

- 0,5%
- 21%
- 3%
- 40%

- Indicate how much you agree (1= minimum; 10= maximum) with the following sentence:

To modify the role of manager toward its collaborators by implementing coaching methods (personalized tutoring services supporting a full development and utilization of the subject's potential, in order to achieve targets related to a role in the organizational unit) leads to a reduction in corruption, inappropriateness and waste in healthcare.

1	2	3	4	5	6	7	8	9	10

Not at all

Highly

- Indicate how much you agree (1= minimum; 10= maximum) with the following sentence:

Pharmaceutical industry, or, private for profit sponsorship of structures and/or research activities, both contribute to guarantee a proper delivery of care by the healthcare system.

1	2	3	4	5	6	7	8	9	10

Not at all

Highly

- Indicate how much you agree (1= minimum; 10= maximum) with the following sentence:

The pharmaceutical industry, or, private for profit sponsorship of structures and/or research activities, may affect both researchers and decision-makers.

1	2	3	4	5	6	7	8	9	10

Not at all

Highly