

# Understanding unethical behaviors at the university level:

## A multiple regression analysis

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## ABSTRACT

Unethical behaviors such as corruption pose an important challenge for students, professors, and other university members. We aimed to clarify students' willingness to engage in corruption in a Spanish public university. In all, 3,475 undergraduate, postgraduate, and PhD students completed an online questionnaire assessing four corruption scenarios: favoritism, bribery, fraud, and embezzlement. Multiple regression analysis suggested that justifiability, risk perception, and perceived corruption played a key role in explaining corrupt intention. Behavioral intention to engage in corruption is a complex phenomenon explained by not only peers' behaviors, but also individuals' justifications of their acts and risk perceptions.

*Keywords:* Unethical behavior; justifiability; risk perception; perceived corruption; multiple regression analysis.

## INTRODUCTION

According to recent empirical research (Transparency International, 2013), nearly 15% of people worldwide admitted to having paid a bribe in an educational setting. Given the nature of corruption, it is estimated that this proportion could be higher because the study did not include other unethical activities such as favoritism or fraud. Moreover, corruption in education is present in not only developing countries, but also in developed countries (Transparency International, 2013). The pervasiveness of corruption in educational settings has become a growing concern among academics, politicians, students, and other stakeholders (Sabic-El-Rayess & Mansur, 2016) due to its harmful consequences (Chapman & Lindner, 2016). Some authors have pointed out that corruption is widespread in schools and universities around the world (Denisova-Schmidt, 2017; Transparency International, 2013).

University corruption is especially damaging because it results in a system that cannot offer good services for students and that lowers expectations of economic, social, and political development (Chapman & Lindner, 2016; Sabic-El-Rayess & Mansur, 2016) due to the harmful consequences for most university members (Chapman & Lindner, 2016). Furthermore, educational corruption is remarkably damaging because it reinforces tolerance toward corrupt acts from an early age (Transparency International, 2013). Heyneman, Anderson, and Nuraliyeva (2008) note that, given that good behavior among young people can be modeled through educational institutions, a corrupt educational system could be costlier than corruption in other areas such as healthcare or in the policeforce. One of the main functions of education is to teach young students how to

behave in the future; so, if the same educational system itself is corrupt, it is logical to expect corrupt citizens in modern societies. Therefore, understanding students' perceptions of corrupt behavior at the university level is useful in (1) in developing a more accurate estimate of the prevalence of corruption, (2) developing specific policies to tackle corruption, (3) fostering innovative research areas related to corruption, and (4) understanding the nature of corrupt practices in the educational system.

Individual difference variables related to corruption in a university context have hardly been analyzed because most research on corruption in educational settings has focused on cross-national evidence (Chapman & Lindner, 2016). Only a few studies have investigated students' variables in relation to corrupt behavior. For example, a survey conducted in Ukraine on 1,588 undergraduates showed that perceptions of corruption among peers were linked to increased willingness to offer a bribe (Shaw et al., 2015). Čábelková & Hanousek (2004) also reached the same conclusion. Studies have also demonstrated people's tolerance of fraud in the educational sector (Gama et al., 2013). In a study conducted of 1,527 Portuguese university students (Gama et al., 2013), researchers sought to determine perceptions of corruption among classmates, specifically with regard to various subtypes of fraud. The results revealed that the vast majority of students recognized the existence of fraudulent practices in their classrooms. Similarly, in a study on 1,541 Chinese students, it was concluded that perceptions of corruption were strongly linked to the likelihood of committing bribery in the future (Liu & Peng, 2015).

## LITERATURE REVIEW

There is strong competition among Spanish universities (Rincón & Barrutia, 2017). According to the Ministry of Education, Culture and Sports, there are 50 public and 34 private universities in Spain (MECD, 2016). For this study, we chose a Spanish public university comprising around 55,000 students and 3,300 academic staff members. Demand for university studies has decreased during the last decade, as reflected in the decrease in the number of students from 1,459,717 in 2004–2005 to 1,361,340 in 2014–2015 (Rincón & Barrutia, 2017). It is important to take into account that Spain spends 1% of its GDP in publically funded higher education (below the national average of the member countries of the Organisation for Economic Co-operation and Development [OECD]). Additionally, 24% of those between the ages of 20 and 29 are enrolled in higher education in Spain (OECD, 2016). As Heyneman (2013) highlighted, “competition for resources, fame and notoriety place extraordinary pressures on higher education institutions. The weaker ones, those with an absence of control or managerial strength, are most prone to corruption” (p. 101).

Although academic dishonesty has been studied in Spanish universities (see, for example, Cebrián-Robles, Raposo-Rivas, Cebrián-de-la-Serna, & Sarmiento-Campos, 2018; Comas-Forgas & Sureda-Negre, 2016), students’ willingness to engage in unethical behaviors such as corruption in this context has not been analyzed yet. It is crucial to highlight that the scientific literature on corruption differs from the academic integrity literature (see, e.g., Macfarlane, Zhang & Pun, 2014). Despite being open to different interpretations, academic integrity refers to “multiple forms of academic deviance

including but not limited to test cheating, plagiarism, and inappropriate collaboration” (Kisamore, Stone, & Jawahar, 2007, p. 382). On the other hand, a broad definition of corruption would be “the abuse of entrusted power for private gain” (Transparency International, 2009, p. 14). According to Sabic-El-Rayess and Mansur (2016) “knowing more about typologies of educational corruption and quantifying the corruption or the perception of it is a salient and still evolving research area in education” (p. 20).

Based on these considerations, we aimed to study students’ willingness to engage in corrupt behaviors in a Spanish public university. Following the categorization of corruption in higher education described in previous research (Amundsen, 2000; Hallak & Poisson, 2007; Sabic-El-Rayess & Mansur, 2016), four types of corrupt behaviors were evaluated through a hypothesized model: favoritism, bribery, fraud, and embezzlement. As Hallak and Poisson (2007) stated, favoritism is “a mechanism of power abuse implying privatization and a highly biased distribution of state resources”; bribery is “a payment (in money or in kind) given or taken in a corrupt relationship”; and fraud is “an economic crime that involves some kind of trickery, swindling or deceit”; and embezzlement is “the theft of public resources by public officials.” An example of favoritism in the academic arena is when “a student is admitted, or a faculty member is hired/promoted, based only on his/her personal connections and/or family relations” (Denisova-Schmidt, 2017, p. 3). Given that fraud and bribery can be both financial and nonfinancial in nature (Hallak & Poisson, 2007), they may be perceived differently depending on their manifestation. In the present study, we focused on nonfinancial forms of these corrupt behaviors, because they are highly varied—for example, manipulating students’ marks for personal benefit— (Hallak & Poisson, 2007). Meanwhile, at the

university level, embezzlement often entails substantial proportions of research funding used for purposes other than those stipulated in the research proposal (Denisova-Schmidt, 2017).

Those involved in corrupt activities at the university level can be students, administrators, private suppliers, or teaching staff (Denisova-Schmidt, 2017; Hallak & Poisson, 2007). Considering the range of corrupt practices in the educational arena, it is not only the teaching staff who can exert their authority to achieve personal gain, but also students who can take advantage of certain situations if they believe that they can have better academic opportunities or jobs in the future (Shaw, Katsaiti, & Pecoraro, 2015). In other words, students could offer bribes to bypass official selection processes, obtain better grades, etc. Still, corruption is not restricted to student-teaching staff exchanges; administrators could also be perpetrators of practices such as embezzlement or charging students for free services (Rumyantseva, 2005). Corrupt activities between students and members of the teaching staff can occur in the classroom, during application processes, exams, etc., and can be undertaken both by students and teaching staff members. Students-administrator exchanges are characterized by privileged treatment given to a student in return for money or other kinds of bribery. Exchanges between students and other staff members are similar to student-administrator interactions, but they tend to relate to services offered by the university (e.g., library privileges).

Although corruption entails a wide range of practices (Hallak & Poisson, 2007), empirical research in the educational area has focused primarily on bribery (Denisova-Schmidt, 2013; Liu & Peng, 2015; Shaw et al., 2015) and, to a lesser extent, fraud (Gama, Almeida, Seixas, Peixoto, & Esteves, 2013). With regard to the former, an ambivalent

attitude toward corrupt practices has been linked to greater justifiability of such practices in the future (Denisova-Schmidt, 2013). Moreover, a more frequent perception of corrupt acts predicts engagement in bribery (Liu & Peng, 2015; Shaw et al., 2015). With regard to the latter, it has been shown that academic failure and lack of knowledge of institutional regulations tend to damage students' moral behavior and is linked to a higher probability of participating in fraudulent activities (Gama et al., 2013). However, there is also extensive empirical research concerning "academic integrity" at the university level, such as plagiarism (Curtis & Vardanega, 2016; Jiang, Emmerton, & McKaige, 2013) and cheating (Molnar, 2015; Rettinger & Kramer, 2009).

## THEORETICAL BACKGROUND AND HYPOTHESES

### Risk perception and corrupt intention

Some authors have proposed that corrupt intentions—as risk situations—can be partially explained by risk perception; thus, corrupt intentions increase as risk perceptions decrease (Berninghaus et al., 2013). In fact, people's beliefs about the probability of being caught in a corrupt transaction were better predictors than the attitude towards risk activities when explaining the willingness to commit corrupt acts. Similarly, Ryvkin and Serra (2012) showed that people with a lack of information about other people's dishonest activities were more inclined to restrain their participation in corrupt activities. In other words, the absence of information of peers' engagement in corruption helps reduce the occurrence of corruption (Berninghaus et al., 2013). The influence of uncertainty was



especially strong when there were power differences among partners, resulting in a reduction of corrupt behaviors. This situation is particularly common in student–teaching staff exchanges. Moreover, people are not able to accurately estimate risk and believe that the probability of being caught is usually low (Frederick, 2005; Kahneman & Tversky, 1973).

H1: Risk perception will negatively predict corrupt intentions.

#### Perceived corruption and corrupt intention

The prevalence of corruption results in greater persistence of this behavior (Shaw et al., 2015). People’s perceptions about corrupt activities of others influence their decision-making process when facing a corruption scenario (Liu & Peng, 2015; Shaw et al., 2015). The scientific literature (Cialdini, Reno, & Kallgren, 1990; Reno, Cialdini, & Kallgren, 1993) has shown that there are two types of norms: injunctive norms (that inform about the permissibility of a behavior), and descriptive norms (that inform about the engagement of others in a behavior). Because corrupt activities are normally condemned, injunctive norms can foster negative feelings or thoughts in a corruption scenario. However, as Köbis, Van Prooijen, Righetti, and Van Lange (2015) demonstrated, descriptive norms tend to serve as a rationalization for those willing to palliate their feelings when facing a corruption dilemma. In short, thinking that the majority of the people engage in corrupt behavior paves the way for others to behave in the same manner.

H2: Perceived corruption will positively predict corrupt intention.

### Justifiability and corrupt intention

Ethical judgment has been found to influence people's attitudes toward corruption (Jones, 1991). Because many situations are evaluated against a moral framework, people may decide to engage in dishonest behavior—such as corrupt practices—to the extent that they feel their behavior is justified (Gino, Ayal, & Ariely, 2009). Previous research has found that human beings are extremely good at rationalizing dishonest acts if they are benefited by them (Mazar, Amir, & Ariely, 2008). The “self-concept maintenance theory” (Mazar, Amir, & Ariely, 2008) explains that people tend to draw on different mechanisms to align their ethical principles with their dishonest behavior, thus reducing ethical dissonance. One of the most prominent mechanisms to tackle threats to self-concept is self-justification (Shalvi, Gino, Barkan, & Ayal, 2015). Before engaging in corrupt acts, people tend to use moral justifications to reduce ethical dissonance and to maintain a positive self-concept. Some of the *a priori* justifications are *ambiguity*, when people perceive norms or rules as unclear (Schweitzer & Hsee, 2002); *self-serving altruism*, when people believe that a violation is justified because of the mutual benefit derived from the consequences (Erat & Gneezy, 2012); and *moral licensing*, when people feel that they are morally authorized to behave in a corrupt way due to their previous ethical acts over time (Mazar & Zhong, 2010). After engaging in corruption, they use elaborate moral justifications to compensate for harmful consequences (Shalvi et al., 2015). *A posteriori* justifications are *cleansing*, which may be physical (e.g.,

washing hands) o symbolic (following religious guidelines) (Monin & Miller, 2001); *confessing*, when people admit their fault to feel relief (Peer, Acquisti, & Shalvi, 2014); and *distancing*, when people focus on the dishonest actions of others to re-evaluate themselves in a better way (Barkan, Ayal, Gino, & Ariely, 2012).

H3: Justifiability will positively predict corrupt intention.

## METHOD

### Participants and procedure

The sample comprised 3,473 Spanish university students (response rate = 6%;  $M_{\text{age}} = 23.82$  years,  $SD = 7.86$ ) who answered the questionnaires voluntarily: Of them, 77.1%, 15.3%, and 7.6% were undergraduate, postgraduate, and PhD students. With regard to gender, 68.5% were women, and 31.5% were men (overall, 60% of the students in this university are women). A descriptive analysis showed that only 6.7% of these students were PhD students, whereas 26.3% said they had a job. In addition, on average, the participants had been studying at the university for 3.15 years ( $SD = 2.65$ ).

After approval by the university's vice-chancellor of research, an online questionnaire was sent to all university students through an alumni database during the first academic term in November, 2017. *Google Forms* was the survey platform used to carry out the data collection. Participants' anonymity and confidentiality were guaranteed

during data collection (e.g., students did not need to log in as a user to fill out the survey). After 16 days of data collection, the survey was closed. Taking into account that 55,000 students are normally enrolled in this university, the response rate was around 6%.

## Measures

Corruption is hard to measure because of its secrecy and illegality. Objective and subjective approaches have been used to address this issue, and there are differing opinions about their advantages and disadvantages. Given that perception measures are highly correlated with actual experience—at least in European countries (Charron, 2016)—data were collected based on people’s perceptions of corruption among peers. International organizations such as Transparency International (2016) chose this approach to report their results. Based on previous research (Bai, Liu, & Kou, 2016; Zhao, Zhang, & Xu, 2016), hypothetical scenarios were used to measure behavioral intention of corrupt activities.

### *Corruption scenarios*

Four hypothetical scenarios were used to capture favoritism, bribery, fraud, and embezzlement (see “Appendix” for details). An expert panel from the university where the present study was conducted helped develop scenarios of corrupt activities. Expert assessment involved ratings of the clarity, readability, and realism. Scenarios were revised according to the panel’s suggestions. Once participants had read each scenario,

they answered five questions, with responses ranging from 1 to 5, as recommended by Abad, Olea, Ponsoda, and García (2011). Originally, both the hypothetical scenarios and the questions were written in Spanish.

### *Perceived corruption*

Based on previous research on perceived corruption (Dong, Dulleck, & Torgler, 2012; Transparency International, 2016), a single-item measure was used in this study: “Please mark how often you think this kind of situation occurs in this university?” The responses ranged from 1 (Never) to 5 (Always).

### *Justifiability*

Early research proved that measuring justifiability with a single item produces robust results in comparison with a laboratory experiment (Cummings, Martinez-Vazquez, McKee, & Torgler, 2009). Based on previous corruption research (Dong et al., 2012), a single-item measure was used for the justifiability of corruption: “To what extent would you consider it justifiable to accept a proposal like this one?” The responses ranged from 1 (Unjustifiable) to 5 (Totally justifiable).

### *Risk perception*

Based on the idea that a single question captures risk perception more accurately (Ganzach, Ellis, Pazy, & Ricci-Siag, 2008), and that risk perception predicts corrupt

intention better than does risk attitude (Berninghaus et al., 2013), a single-item measure was used for risk perception: “To what extent do you think that, if you accepted this proposal, your classmates would find out?” The responses ranged from 1 (There is no risk) to 5 (Extreme risk).

### *Corrupt intention*

Different scholars have demonstrated that assessing corrupt intentions is a valid approach in the study of corruption (Dong et al., 2012). Following the same procedure of the other questions, we used the following question to measure corrupt intention: “If this situation happened to you in real life, how likely is it that you would accept this proposal?” The responses ranged from 1 (I would not accept it at all) to 5 (I would certainly accept it).

### Data analysis

Paired t-tests were conducted to compare the means across the four vignettes. A multiple regression analysis was used to test the proposed model. Analyses were carried out using *JASP* (JASP Team, 2019). Assumptions of homoscedasticity (scatterplots, normal probability of the residuals, and variance), autocorrelation (Durbin-Watson), and collinearity (VIF) were checked.

## RESULTS

### Descriptive statistical analysis

Table 1  
*Mean and standard deviation for model's variables*

Variable	Model							
	Favoritism		Bribery		Fraud		Embezzlement	
	M	SD	M	SD	M	SD	M	SD
Perceived corruption	3.11	1.13	2.63	1.05	2.76	1.04	2.62	2.24
Risk perception	3.59	1.07	2.71	1.18	2.84	1.13	3.64	1.15
Justifiability	3.20	1.22	3.09	1.39	3.14	1.23	1.94	1.18
Corrupt intention	3.59	1.19	3.52	1.43	3.34	1.29	2.25	1.35

*Note.* Response scale ranges from 1 to 5 in all measures.

As Table 1 shows, students perceived favoritism as more widespread than bribery,  $t(3474) = 36.86, p < .001, d = 0.63$ , fraud  $t(3474) = 17.65, p < .001, d = 0.30$ , and embezzlement  $t(3474) = 23.16, p < .001, d = 0.39$ . In regard to responses of justifiability, students believed that it was more justifiable to engage in favoritism than in bribery,  $t(3474) = 4.45, p < .001, d = 0.08$ , fraud,  $t(3474) = 2.68, p < .01, d = 0.05$ , and embezzlement,  $t(3474) = 51.64, p < .001, d = 0.88$ . Students perceived embezzlement as the riskier corrupt behavior than favoritism,  $t(3474) = 2.34, p < .05, d = 0.04$ , bribery,  $t(3474) = 36.97, p < .001, d = 0.63$ , and fraud,  $t(3474) = 34.32, p < .001, d = 0.58$ . Finally, students were more likely to engage in favoritism than in bribery,  $t(3474) = 2.68, p < .01, d = 0.05$ , fraud,  $t(3474) = 11.52, p < .001, d = 0.20$ , or embezzlement,  $t(3474) = 54.60, p < .001, d = 0.93$ . According to squared values of standard deviation (variance), scatterplots and normal probability of the residuals, data was homoscedastic.

Multiple regression analyses

Table 2  
*Summary of multiple regression analyses for variables predicting corrupt intention*

Variables	Fav			Bri			Fra			Emb		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Risk	-	0.01	-	-	0.01	-	-	0.01	-	-	0.01	-
Perceived	0.13		.12***	0.12		.10***	0.10		.09***	0.13		.11***
Justifiability	0.05	0.01	.05***	0.02	0.02	.02	0.03	0.02	.02*	0.01	0.01	.01
	0.63	0.01	.65***	0.70	0.01	.68***	0.74	0.01	.70***	0.82	0.01	.72***
<i>R</i>		.68			.71			.73			.74	
<i>R</i> <sup>2</sup>		.46			.51			.53			.55	
<i>R</i> <sup>2</sup> <sub>Adjusted</sub>		.46			.51			.53			.55	
<i>F</i> (3, 3471)		981.1			1197			1302			1438	
<i>p</i>		<.001			<.001			<.001			<.001	

Note. Risk = Risk perception; Perceived = Perceived corruption; Intention = Corrupt intention; Fav = Favoritism; Bri = Bribery; Fra = Fraud; Emb = Embezzlement.

\**p* < .05. \*\*\**p* < .001.

Table 2 shows that risk perception,  $t(3471) = -9.22$ , perceived corruption,  $t(3471) = 3.64$ , and justifiability,  $t(3471) = 50.71$ , significantly predicted corrupt intention in the favoritism model. Regarding bribery, risk perception,  $t(3471) = -8.28$ , and justifiability,  $t(3471) = 50.39$ , significantly predicted corrupt intention. The model for fraud shows that risk perception,  $t(3471) = -7.52$ , perceived corruption,  $t(3471) = 1.98$ , and justifiability,  $t(3471) = 59.07$ , significantly predicted corrupt intention. In regard to embezzlement, risk perception,  $t(3471) = -9.50$ , and justifiability,  $t(3471) = 62.93$ , significantly predicted corrupt intention.

Corrupt intention decreased as students' risk perception increased in all the corrupt behaviors, supporting the first hypothesis. Students' corrupt intention was higher when their perception of corruption was also high in the favoritism and fraud behaviors, but this relationship was not confirmed in the bribery and embezzlement scenarios. The second hypothesis, therefore, was fully supported in two of the corrupt behavior



scenarios. Corrupt intention increased as students' justifiability increased, thus supporting the third hypothesis in all the corruption models. All the corrupt behavior models showed that justifiability was a highly explanatory variable of corrupt intention, whereas perceived corruption hardly explained corrupt intention. Furthermore, collinearity statistics (VIF) were inspected and there were not issues of multicollinearity.

Table 3  
*Correlation matrix of the four questions and four scenarios*

	Fav			Bri			Fra			Emb			
	Rsk	Per	Just	Rsk	Per	Just	Rsk	Per	Just	Rsk	Per	Just	Int
Fav													
Rsk	-.06***	-.19***	-.13***	-.05***	-.13***	-.14***	-.08***	-.08***	-.06***	-.09***	-.19***	-.07***	-.07***
Per	-.24***	-.05***	-.13***	-.05***	-.13***	-.08***	-.24***	-.05***	-.06***	-.19***	-.07***	-.07***	-.07***
Just	-.13***	-.05***	-.13***	-.05***	-.13***	-.08***	-.24***	-.05***	-.06***	-.19***	-.07***	-.07***	-.07***
Bri													
Rsk	.30***	.01	-.13***	-.14***	-.17***	-.17***	.47***	.07***	-.17***	-.17***	-.17***	-.17***	-.17***
Per	.05***	.40***	-.13***	-.08***	-.08***	.08***	-.24***	.05***	-.05***	-.05***	-.05***	-.05***	-.05***
Just	-.10***	-.01	.32***	.29***	.29***	-.24***	.05***	-.05***	-.05***	-.05***	-.05***	-.05***	-.05***
Int	-.13***	-.02	.31***	.39***	.39***	-.27***	.04***	.71***	-.17***	-.17***	-.17***	-.17***	-.17***
Frau													
Rsk	.32***	.01	-.14***	-.17***	-.17***	.47***	.07***	-.17***	-.17***	-.17***	-.17***	-.17***	-.17***
Per	.06***	.43***	-.11***	-.08***	-.08***	.08***	.50***	.05***	-.05***	-.05***	-.05***	-.05***	-.05***
Just	-.12***	-.02	.43***	.39***	.39***	-.16***	-.04*	-.43***	.40***	.40***	.40***	.40***	.40***
Int	-.15	-.03	.37***	.47***	.47***	-.17***	-.03	.33***	.48***	.48***	.48***	.48***	.48***
Emb													
Rsk	.19***	-.09***	.01	-.04*	.20***	.20***	-.04*	-.04*	.01	.27***	-.03	-.01	-.02
Per	.07***	.45***	-.14***	-.10***	.03	.41***	.03	.41***	-.04*	.06***	.47***	-.03	-.15***
Just	-.11***	-.04*	.29***	.29***	-.05**	-.05**	-.05**	-.01	.22***	-.07***	.01	.32***	-.14***
Int	-.13***	-.02	.27***	.36***	-.08***	-.08***	-.01	.19***	.29***	-.11***	.01	.29***	.35***
													-.01
													-.74***

Note. Rsk = Risk perception; Per = Perceived corruption; Just = Justifiability; Int = Corrupt intention; Fav = Favoritism; Bri = Bribery; Fra = Fraud; Emb = Embezzlement.  

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Table 3 shows the correlations between the four vignettes. When answering an item in a vignette, students decided to choose an answer in the same direction when facing the same item in a different vignette (e.g., those who saw favoritism as highly justifiable also tended to see bribery, fraud and embezzlement as highly justifiable). These results support our hypotheses. Additionally, the correlations among the responses to the same measure across the four vignettes are moderate and suggest that people vary in their tendencies to endorse those measures regardless of the vignette or the context.

## DISCUSSION

Our study focused on analyzing students' willingness to engage in unethical behaviors such as corruption in a Spanish public university. Specifically, a model was tested based on four common corrupt behaviors: favoritism, bribery, fraud, and embezzlement (Hallak & Poisson, 2007). According to Johnsen and Mason (2013), corrupt intention should be evaluated through its different forms, as was done in our study. A university sample was recruited in order to study academic corruption. To maximize external validity and coherence between the sample and variables, realistic and credible hypothetical scenarios were used (Denisova-Schmidt, 2017).

### Theoretical and practical implications

Regarding favoritism and fraud, results confirmed all of our hypotheses. Analyses showed that risk perception negatively predicted corrupt intention, consistent with

previous findings (Berninghaus et al., 2013; Slovic, Finucane, Peters, & MacGregor, 2004). When observing dishonesty in others, people tend to underestimate their own probabilities of being caught and subsequently change their views about social norms (Cialdini et al., 1990).

Results also showed that as students' perceptions of corruption increased, their corrupt intentions also increased, which was also supported by previous literature (Dong et al., 2012). Once people perceive their environment as highly corrupt, they are more prone to committing such behaviors because of a "contagion effect" (Gino et al., 2009). Overall, perceived corruption among peers reduces perceived costs of being caught, increases ethical rethinking about one's own beliefs about dishonesty, generates social distrust, destroys intrinsic honesty, distorts perceptions of descriptive norms, and provides incentives to carry out illegal/unethical actions (Cialdini et al., 1990; Gino et al., 2009).

Our results provide evidence for the role of justifiability, which positively predicted corrupt intention. This could be attributed to the fact that once people develop justifications for their unethical actions, they will be more inclined to engage in such behaviors (Gino et al., 2009). Justifications reduce one's moral harm when acting immorally (Shalvi et al., 2015). Taking into account that people's tendency to engage in corruption is affected by ethics, it is logical that corrupt intention would be modified to the extent that ethical concerns allow moral justifications for corrupt intention (Shalvi et al., 2015). As stated by Cialdini et al. (1995), people seek to create an everyday consistency in their attitudes and behavior in order to reduce cognitive dissonance and preserve a positive self-concept (Mazar et al., 2008). These results are consistent with

previous scientific literature on corruption (Dong et al., 2012). In addition, if a dishonest behavior is perceived as a salient issue, there will be a tendency to evaluate it using strict ethical criteria and attend more to it, which may result in reduced willingness to engage in dishonest activities in the future.

In response to bribery and embezzlement, the results confirm all the proposed hypotheses, except for the second one. The current results indicate the presence of a weak relationship between perceived corruption and corrupt intention, which means that widespread corruption among peers does not necessarily predict corrupt intention. It is not essential to perceive widespread corruption among students or professors in order to behave in the same way. In fact, some authors (Köbis et al., 2015) have shown that a highly corrupt setting does not differ from the control condition –e.g., a setting in which frequency of corruption was neither high nor low– if the corrupt behavior is seen as a common practice.

Previous research has highlighted that perceived corruption among peers is a fundamental variable in explaining corruption (Čábelková & Hanousek, 2004; Dong et al., 2012; Gama et al., 2013; Liu & Peng, 2015; Shaw et al., 2015). However, little has been done to explain corrupt intention through ethical mechanisms and different manifestations of corrupt behavior (Sabic-El-Rayess & Mansur, 2016). Our study showed that students' decision to engage in corruption was largely based on how justifiable a corrupt behavior was, demonstrating that students' conceptualization of corruption is also based on the type of corrupt practices. Although perceived corruption among peers was considered by students, the weight they gave to this factor in their decision-making was

considerably lower than the weight demonstrated in previous literature on corruption. This is a novel result in academic research on unethical behaviors.

Regarding practical implications, the present results indicate that ethical training programs could be a helpful tool to teach students, staff members, and administrators how to avoid future corrupt activities. As it has been shown, extra efforts must be made to reeducate university members about what behaviors are considered corrupt and, therefore, harmful to the rest of the academic community. It may be interesting to highlight the negative consequences of deeply embedded practices such as favoritism. Additionally, Ayal, Gino, Barkan, and Ariely (2015) have shown that underscoring ethical cues could increase the moral salience of certain behaviors and deter people from justifying dishonesty. On the other hand, increasing transparency and clarity in administrative procedures would help increase the risk perception of engaging in corruption and, therefore, reduce its prevalence. To achieve this goal, anonymous whistle-blowing channels are needed to encourage reports of corruption at universities. Put differently, there must be an establishment of actions to increase visibility, limit anonymity, and bolster peer monitoring (Ayal et al., 2015). With regard to perceptions of corruption among peers, anti-corruption measures must take into account the powerful effect of reminding people that most of their peers do not behave in a corrupt way in order to deter them from engaging in corrupt practices. Reminders and prompts could be useful to reduce corrupt practices, “especially in contexts in which people do not have first-hand experience and/or falsely believe that a high proportion engages in corruption” (Köbis et al, 2015, p. 11). Nevertheless, reminders must be short, intuitive, and easy to understand in order to be effective (Ayal et al., 2015).

## Limitations and future directions

The present research has some limitations. First, although hypothetical scenarios allow researchers to gain external validity in their conclusions, they are highly specific to a context. Thus, future studies should analyze these relationships using a methodology that allows the generalization of its results, but keeping in mind that specific corrupt behaviors should also be represented to understand further mechanisms of their prevention. Second, we only analyzed students' perspectives regarding academic corruption, but we did not consider those of administrators, private suppliers, and teaching staff, as previous research has suggested (Denisova-Schmidt, 2017; Hallak & Poisson, 2007). Future studies could take into account the different perspectives of these stakeholders to provide a better understanding of corruption mechanisms, undertake evidence-based reforms at the university level, and discover new trends in the development of dishonest practices.

Our present sample mainly comprised women, and the literature on corruption shows that women tend to be less corrupt (Chaudhuri, 2012). Another issue is that external variables may have affected the results in the present study, such as social desirability or participants' experience with corrupt activities. Characteristics of the Spanish university system must also be considered when drawing conclusions from the current evidence, since corruption is strongly influenced by sociocultural factors—in both the national and regional context—and the specific organizational dynamics at work (Charron, 2016; Rincón & Barrutia, 2017). Moreover, conducting experimental studies to establish causality between variables and analyzing actual corrupt behavior are two essential recommendations for improving knowledge about academic

corruption, as previous research has pointed out (Denisova-Schmidt, 2017). Finally, we recognize that there may be a methodological weakness regarding our analytic approach.

This study's contributions to the empirical research on corruption are multiple. First, analyzing different types of corrupt behavior has been one of the main recommendations for advancing corruption research (Johnsøn & Mason, 2013; Sabic-El-Rayess & Mansur, 2016). As Köbis, Van Prooijen, Righetti, and Van Lange (2016) have suggested "lumping together of various distinct forms of corrupt behaviors undermines scientific progress and hinders the understanding of the causes of corruption because the prospective processes involved in different forms of corruption vary substantially" (p. 71). Second, the use of university students and realistic hypothetical scenarios of corruption in higher education makes it possible to gain external validity in the conclusions. With regard to hypothetical scenarios, this methodology allows researchers to assess corruption (Rettinger & Kramer, 2009). Third, our findings reinforce the idea that students take ethical issues into account when deciding to engage in a corrupt behavior, a finding that complements previous research on corruption, which mainly focused on peers' behaviors and their influence over one's willingness to participate in corrupt activities. Finally, there are hardly any empirical research studies focused on corruption at the university level, and the few that exist have studied the effects of a particular type of corrupt behavior: bribery (see, e.g., Gama et al., 2013; Liu & Peng, 2015; Shaw et al., 2015). Therefore, the present study expands the literature on



corruption—concretely, at the university level—by analyzing common sources of corruption such as favoritism and embezzlement activities.

#### DISCLOSURE STATEMENT

No potential conflict of interest was reported by the authors.

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## APPENDIX

### Description of the hypothetical scenarios

Next, you will see a hypothetical situation based on real experience. Imagine that you are the one who has to make the decision, and then answer the following questions. (This introduction was presented at the beginning of each scenario)

#### *Scenario 1 (favoritism)*

You recently finished your university degree, and you are collaborating with a professor on a research project. One day, your professor tells you that there will be a public job in the project you are working on. Your professor tells you that he/she has thought of you for that job because you work really well. He/she asks you not to talk about this issue with your teammates while going through the formal selection process, but you will be chosen in the end.

#### *Scenario 2 (bribery)*

You are asking for a university scholarship. However, your grade average has gone down because of a subject in which you did not do well on the exam. After the exam, you go for a tutorial session because you want to know how to improve your grade. You describe your poor economic situation to your professor and you ask him/her to raise your grade because you really need that scholarship. After thinking carefully, your professor tells you to do some research work for him/her in exchange for the grade. He/she warns you that you cannot say anything about it to your classmates because it is an exceptional situation that he/she cannot offer everyone.

#### *Scenario 3 (fraud)*

You have just finished your degree and you want to enroll in a postgraduate degree. You find a good one and very prestigious, but it is difficult to be accepted. Moreover, you find out that one of your degree professors teaches a subject in the postgraduate degree. You decide to tell him/her that you are really interested in being admitted to the postgraduate degree program. He/she mentions that he/she knows the selection committee members. He assures you that he/she is able to facilitate your admission. In return, he/she asks you to collaborate on a research project in which you are not interested.

#### *Scenario 4 (embezzlement)*

After a few months of collaborating on a research project with a professor, the opportunity arises to attend a conference in the USA for 2 days in the summer. Although the conference hardly focuses on your research interests, your professor proposes spending public teaching funds to pay the expenses for both of you during the two days of the conference, plus a stay lasting more 8 days.