Dishonesty and Selection into Public Service: Evidence from India

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Abstract

Students in India who cheat on a simple laboratory task are more likely to prefer public sector jobs. This paper shows that cheating on this task predicts corrupt behavior by civil servants, implying that it is a meaningful predictor of future corruption. Students who demonstrate pro-social preferences are less likely to prefer government jobs, while outcomes on an explicit game and attitudinal measures of corruption do not systematically predict job preferences. A screening process that chooses high ability applicants would not alter the average propensity for corruption. The findings imply that differential selection into government may partially contribute to corruption.

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I. INTRODUCTION

Economic theory predicts that civil servants often shirk or take bribes because it is difficult for central governments and citizens to monitor and subsequently punish these bad behaviors (e.g. Banerjee, 1997; Shleifer and Vishny, 1993, Di Tella and Schargrodsky, 2004; and Olken and Pande, 2012). This implies that variation in the ability to monitor or incentivize civil servants may drive the observed differences in corruption across countries, across agencies within a country, or even across the types of tasks for which public servants are responsible. However, not all civil servants engage in the same level of corrupt behavior, even in the same position or role. Besley (2005) and Prendergast (2007) posit that this may be potentially due to different government workers having different preferences over engaging in corruption. As such, it follows that the types of individuals that select into government may help explain variation in corruption levels.

The empirical literature has mostly focused on documenting how monitoring and financial incentives affect public service delivery in developing countries (e.g. Fisman and Miguel, 2007; Olken, 2007; Duflo, Hanna and Ryan, 2012; Niehaus and Sukhtankar, 2013).[2] Much less is known about the type of individuals who select into civil service, whether opportunities for rents in the government sector attract individuals with a high tolerance for engaging in corrupt activities relative to the private sector, and whether screening methods for civil servants could inadvertently screen in more or less "corrupt" individuals.[3] A literature has recently begun to emerge that aims to understand the role of this selection using laboratory experiments. For example, in a sample of 60 Indonesian students, Alatas et al. (2009) find that the outcome of a sequential move game that explicitly frames corruption between players who are government officials versus citizens does not predict job preferences. However, in contrast, in a sample of 74 Indian students, Banerjee, Baul and Rosenblat (2013) find that cheating behavior in a similarly framed laboratory experiment predicts a preference for public sector work.

[2] There is also a related literature that studies how increases in monitoring and information affects elected officials (e.g. Ferraz and Finan, 2008; Banerjee, Kumar, Pande and Su, 2011) and explores similar questions in the selection of politicians (e.g. Besley, 2005; Besley, Pande and Rao, 2005; Caselli and Morelli**,** 2004; Fisman, et al, 2013).
[3] In recent papers, Dal Bó, Finan and Rossi (2013) and Ashraf, Bandiera and Lee (2014) show that selecting in particular types of individuals affects job performance, these papers do not directly address corruption.

In this paper, we aim to contribute to this literature by asking two key questions: First, is there evidence of selection, wherein individuals who apply for government jobs have a higher propensity for corruption? Second, we ask whether the screening process serves to mitigate or exacerbate this problem. We motivate our empirical exercise by examining the decision to apply for a government position given the returns to different characteristics in the public and private sector. India—like many developing countries—employs civil service examinations primarily aimed to screen potential candidates by cognitive ability. The framework demonstrates the conditions under which we will observe high-ability individuals who apply for public service jobs also having higher levels of non-wage benefits (such as corrupt payments or utility from public service) in the government. Thus, if screening primarily on ability, one may inadvertently select individuals who possess these other characteristics.

We then examine these ideas using data from laboratory experiments and surveys with both university students and government workers in India. We conducted a series of laboratory experiments with 669 students in their final year of college at seven different universities. One of our main challenges was devising a meaningful measure of an individual's propensity for corruption given that individuals may not want to reveal this. While the literature offers several clever ways to measure corruption (see Banerjee, Hanna and Mullainathan, 2012), these methods cannot be applied to questions about selection as it is only possible to collect data on corruption for those already in government. Thus, we adapted a method from Fischbacher and Follmi-Heusi (2013) to create a proxy for the tolerance to engage in corruption.[5] Specifically, we asked each student in our sample to roll a standard die 42 times and to report the number of each roll in order to receive a payment that was increasing in the number reported. Thus, while we do not know with certainty if an individual lied, we can observe how far each *individual's distribution* of reports is from the uniform distribution. Note that this measure is appealing in that it does not prime the subject on corruption or dishonesty explicitly and allows them to feel comfortable in knowing that no one can say with certainty that they are cheating.

[5] Other subsequent papers have used a similar technique of having each participant report the outcome of only one roll. See, for example, Gino and Ariely (2012) and Shalvi et al. (2011).

One key contribution of our paper is that we then conducted a validation exercise of this measure using a real measure of corruption. Specifically, we conducted the dice task with 165 government nurses who were part of an experiment conducted by Dhaliwal and Hanna (2013), in which they collected detailed measures of absenteeism through the use of random checks over two years. Thus, we can test whether the dice task outcome predicts fraudulent absenteeism.

In addition to the dice task, we collected other experimental measures to understand what predicts the students' job preferences. Specifically, we conducted a dictator game to measure pro-social behavior (following Camerer, 2003), as well as an experimental message game (Gneezy, 2005) that aims to collect a measure of how much one is willing to lie for private gain. Finally, we also administered non-experimental, attitudinal questions to the students regarding job success and bribes, as these are the types of questions typically used to gauge honestly level. As with the dice task, we validated these attitudinal questions with the government nurses as well.

Turning to our results, those who cheat are more likely to want to enter the government. Specifically, students who had above median dice points (i.e. higher probability of cheating) were 6.2 percent more likely to want a government job. We find no significant difference in the predictive value of the dice task for high-ability students than for low ability students in terms of job preferences. This implies that screening on ability would neither exacerbate nor mitigate the selection problem among government workers in this context. Importantly, we find that nurses with above median dice points were 10.7 percent more likely to be fraudulently absent than those below it. Furthermore, as in the student sample, we do not find any significant heterogeneity in the predictive power of the dice task for nurse absenteeism by ability. This simple fact that the dice task also predicts the corrupt behavior of the government nurses helps validate the interpretation of the student sample.

Turning to the other individual characteristics we collected, we find that students who exhibit lower levels of pro-social behavior are more likely to prefer a government job, even conditional on an individual's outcome on the dice task. This further reinforces the idea that those who care less about resources going to the poor—and thus, may be more likely to steal said resources—are more interested in applying to

government service than the private sector. However, the outcome of the experimental message game does not predict their preferences, consistent with other papers that find that little to no relationship between job preferences and outcomes from games that are very explicit in framing interactions as corrupt (e.g. Alatas et al., 2009).[7] Similarly, the attitudinal questions do not provide clear patterns in predicting job preferences. The fact that these fairly explicit, attitudinal statements also do not predict government nurse absenteeism suggests that these explicitly framed, non-incentivized measures may not be capturing people's actual preferences for dishonesty and that less explicitly framed measures with even small incentives may be a more promising way to capture these preferences (at least in the partial equilibrium).

In sum, we find that dishonest individuals—as measured by the dice task—prefer to enter government service. The fact that the dice task also predicts corrupt behaviors by government workers implies that this measure of dishonesty is a meaningful margin of selection. These findings provide novel evidence highlighting that the variation in the levels of observed corruption may be driven, in part, by who selects into government service. They also imply that recruitment processes may be improved by increasing the emphasis on screening along characteristics other than cognitive ability, as long as the measures are not too explicit to be gamed.

The paper is organized as follows. Section II presents background information and the conceptual framework. Section III describes our data collection, while Section IV provides sample statistics and basic correlations across variables. In Section V, we explore the relationship between the individual characteristics, job preferences, and corrupt behaviors. Section VI concludes.

II. BACKGROUND AND FRAMEWORK

A. Background

[7] See Abbink, Irlenbusch and Renner (2002), Abbink and Schmidt (2006), Barr and Serra (2009) and Cameron et al (2009) for additional examples of explicit laboratory games of corruption.

The setting for this study is India, which employs examinations to screen candidates for government positions. Civil service exams are common in many countries (e.g. Brazil, China, Tanzania, Mongolia), as they are seen as a fair and meritocratic process to choose the highest ability individuals (Bagchi, 2007).

In India, the Constitution (Article 320) prescribes the Union Public Service Commission (UPSC) to fill civil services posts with a "written examination with or without a viva voce examination or interview to supplement them." According to their 2009-2010 annual report, the UPSC received 15 million applications and conducted 14 examinations for national civil service posts. State-level civil service jobs are filled by each state's public service commission, which employ exams for both general and specialized positions, e.g. engineering, geology and medical services. The written exams test aptitude and knowledge and are often followed by an interview. However, the written component is more strongly weighted in the applicant's final score than the interview: in the general UPSC exam, the interview is worth 13 percent of the total score, while it is only worth 9 percent in the general state exam of Karnataka, the setting of our project.

B. Conceptual Framework

In this section, we present a simple framework to explore the link between one's propensity for corruption, pro-social preferences, and ability with the decision to enter the civil service. This framework is useful in terms of framing the margins through which selection may occur and motivated our data collection efforts.

An individual (denoted by i) can enter the government or the private sector. Wages in the private sector, $f(A_i)$, increase with ability, A_i, i.e. $f'(A_i)>0$ and $f(A_i) \geq 0$ for all A_i; utility is assumed to only be a function of wages.[10] To enter the government, individuals take a civil service exam. In contrast to the private sector, government wages, k, are independent of ability. The implications of the model all still follow if the returns to ability are simply weaker in the government sector than in the public sector. The idea that ability has relatively higher returns in the private sector seems reasonable for India and other

[10] We present a simple one-period model, but the predictions are the same if we consider individuals making a career choice based on the present discounted value of the future stream of benefits.

developing countries, where government wages and promotion are often rigidly determined by tenure and do not vary with job performance (Bagchi, 2007; Ilaiah, 1995). Utility from a government job, $k+g(P_i, C_i)$, depends on more than just the stated wage: individuals also gain utility from public service, P_i, and those with a higher propensity toward cheating (denoted by C_i) can augment their wages through corruption: $\partial g/\partial P>0$ and $\partial g/\partial C>0$ for all P_i and C_i.[11] The inclusion of P_i in the utility that individuals get from public service draws on the growing literature that suggests that intrinsic motivation and social preferences may be important for public service workers (Delfgauuw and Dur, 2008; Francois, 2000; Gregg et al, 2011; Burrman et al, 2012).

For simplicity of notation, we assume that there are no returns to cheating behavior in the private sector. This may or may not be true, as the literature has documented mixed returns to corruption in the private sector (Fisman, 2001; Faccio, 2006; Fisman and Wang, 2012; Fisman and Svensson, 2007). However, the implications of the model hold as long as the non-wage utility gains that are associated with corrupt behavior are greater in the government sector than in the private sector.

Assuming no costs to taking the civil service exam, individuals will do so if and only if:

$$k+g(P_i,C_i)>f(A_i).^{13}$$

High ability individuals will only find government jobs attractive enough to apply for if the utility return from working in a pro-social position and from engaging in corruption is higher than the utility return from their ability in the private market. Thus, the model predicts that within the pool of high-ability applicants for government jobs, we would expect relatively higher levels of pro-social behavior, propensity for corruption, or both. If this prediction holds true, an additional testable prediction follows: if the screening mechanism for government jobs primarily chooses applicants based on ability (e.g. the ability tests that comprise a majority of civil service exams), one may inadvertently hire individuals with both higher pro-

[11] Note that we include pro-social preferences and corruption separately in the model. These are likely correlated, as those who engage in corruption likely have lower pro-social preferences. However, we include them separately as corruption also incorporates dishonesty and illegality, which the pro-social measure may not capture. As an interesting theoretical extension, one could also examine the interaction between pro-social preferences and cheating.

[13] We consider the alternative case where the effort required to prepare for the exam is decreasing in ability in Online Appendix A.

social behaviors, higher propensity for corruption, or both, with the relative mix of characteristics dependent upon the relative utility returns of each characteristic.

III. EXPERIMENTAL PROCEDURES AND DATA COLLECTION

We conducted a series of surveys and lab experiments with both college students and government nurses in India. The procedures are discussed below and further in depth in the Online Appendix B.

A. Student Sample

As we want to examine individual behaviors prior to entering the civil service, our sample is drawn from university students. We recruited seniors from seven large, mid-tier universities in the city of Bangalore in Karnataka, India. We obtained permission from each university to recruit subjects from classrooms and from recruitment booths on campus. We chose to recruit from classes comprised of seniors in majors where both government and private sector jobs were viable options. To maximize power, we avoided majors in which all of the students within the major would enter one sector (public or private). This allows us to make within-major comparisons of career preferences.[14] We informed students that the sessions would explore the "cognitive skills, aspirations, background, and personality characteristics of graduating students," that the sessions would take about one hour and that they would be paid INR 20 (about USD 0.45) upon arrival to the session and up to an additional INR 392 (USD 8.71) depending on the session tasks; the average payment was INR 216 (USD 4.80).[15]

[14] To identify target majors, we conducted polling in classrooms prior to the recruitment stage to ask students whether they preferred government or private sector jobs. In the end, about 80 percent of the survey respondents were in the Commerce Stream, while the remaining were in Science. We did not survey Arts students, as few entered government service.

[15] We designed the financial incentives to be in a range that would appeal to students to participate, but not too large that it would be coercive. For comparison, the price of a ticket to a high end movie theater is about INR 400.

In August and September 2012, 669 students from 7 colleges participated in 28 sessions (Appendix Table 1).[16] While we do not have data on the students who did not attend, we can compare them to the student body population (in Appendix Table 5): the sampled students appear comparable in terms of economic background to those of students in Karnataka as a whole, with the caste distribution nearly identical across both groups. However, the sampled students are less likely to be male (40 percent versus 53 as a whole). And, the students in our sample are more likely to be from the commerce major than a science major, which is an artifact of our sampling strategy. We do not observe any significant heterogeneity in the main findings based on these two factors, suggesting that these characteristics are not driving observed effects in the sample.

The sessions were located in rooms at the university or in restaurants and other event spaces close by, and at any given time, there were up to four separate rooms in use for each session.[18] The subjects filled out the surveys forms on their own (with enumerators providing oral directions for the tasks) and we provided the subjects with cardboard folders as dividers across students to ensure additional privacy as they filled out the survey forms. Since friends often attended the sessions together, we tried to separate them into different survey rooms within the sessions.

The survey questions covered demographics, work experience and post-graduation plans, preferences and expectations. We asked questions covering several psychology measures including locus of control (Rotter 1966). We included some commonly used survey questions to assess attitudes about cheating and corruption, such as what percent of individuals in the classroom would cheat during an exam and whether they thought that most businesses paid bribes. We also inquired about actual corrupt behavior, such as hiring an illegal agent who facilitates bribes to obtain a government service. Finally, we collected

[16] These schools comprise about 3,215 students (Appendix Table 1). We designed the sessions to be close to the university and to not conflict with class times. In total, 1,081 students signed up to attend a session, which implies that 61 percent of those who signed up attended one. As Appendix Table 2 shows, the sessions ranged from 6 to 39 students; the final sessions tended to have lower attendance due to university protests and a city-wide transit strike.
[18] See Online Appendix B for additional details.

extensive contact information for the students, their relatives, and their friends in order to be able to track them in several years in the future to ascertain their ultimate job outcomes.

The crux of the surveys was a series of laboratory experiments designed to measure honesty, pro-social behaviors, and ability. Each experimental measure is outlined below:

The Dice Task: To obtain an individual measure of dishonesty, we asked each participant to privately roll a six-sided die 42 times and to record the outcome of the die after each roll. For each value of 1 reported, we paid the participants INR 0.5; the payment increased by INR 0.5 for each higher value on the die, up to INR 3 for each reported roll of 6. Thus, the minimum possible payment is INR 21 and it occurs if the participant reports rolling all 1's, while the maximum (for all 6's) is INR 126. Appendix Figure 1 provides the directions.

We ensured privacy: in addition to the cardboard folders, we instructed the survey team to either exit or be on the opposite side of the room during this task. Thus, participants could be assured that it would impossible for us to know *for certain* if they lied. However, we can determine how far the distribution of each individual's outcomes is from the uniform distribution.[21] Thus, even though we cannot say with *certainty* who cheated, this provides a measure that is strongly correlated with doing so.

This task is adapted from Fischbacher and Follmi-Heusi (2013). One key difference is that they asked participants to roll the dice only once. This allows them to make statements about the group of individuals in each session they conduct, but not about each individual in the group. Their methodology is well suited to the laboratory context, where one can induce variation in treatments at the group level and the outcomes in lab behavior can be observed at the aggregate level. The innovation in our approach is important in that it allows us to examine the empirical relationship between an individual's revealed levels of dishonesty with real world outcomes and choices.

[21] To detect non-random shifts in the value of the dice rolls per individual, we conducted power calculations using the effect sizes observed in Fischbacher and Föllmi-Heusi (2013), which ranged from 0.7 to 1.5. Using a conservative effect size of 0.7 (corresponding to a shift in the average rolls from 3.5 to 4.2), along with a power level of 0.8 and an alpha equal to 0.05, the one-sided required sample size was 37. We rounded up to 42 as it was evenly divisible by 6.

The Message Game: Another experimental approach to examining lying behavior is to implement a cheap talk sender-receiver game where individuals with private information have the choice of whether to send an honest or dishonest message to another player. We implement a game that was developed by Gneezy (2005) and that has also been used, for example, by Sutter (2009) and Hurkens and Kartik (2009). We present the sender in the game with two possible pay-offs associated with a binary choice made by the receiver (see Appendix Figure 2). The sender then has a choice of two messages to send:

Message 1: "Option A will earn you more money than option B."

Message 2: "Option B will earn you more money than option A."

The sender is told that the receiver will not see the actual pay-offs associated with each choice, but will only see their message. The sender can choose either to send an honest message that indicates the choice that will give the receiver more money and the sender less, or a dishonest message that indicates the opposite. We implement three rounds with variation in the pay-offs as shown in Appendix Table 3. We stressed that neither party will ever know who they were paired with, although they did know that it was someone from within their session and that our enumerators saw their choices.

We are interested in whether the sender chooses to lie during the game. Every participant plays the role of the sender first. This is a slight departure from previous studies where half of the participants are senders and the rest are receivers. Our method ensures that we have outcome data for all subjects, thereby increasing our ability to correlate the key outcome with individual preferences. Later in the session, each participant also plays the role of the receiver, mainly to ensure that the payoffs really correspond to the decisions of another player, as stated.

The Pro-Social Preferences Game: We used a dictator game to measure willingness to give to others (see Camerer, 2003, for an overview). We instructed participants to divide INR 50 between themselves and a charity of their choice from among seven well-known, respected charities (UNICEF, Child Rights and You,

Being Human, Help Age INDIA, CARE India, Red Cross and Save the Children).[22] For each rupee that they donated rather than kept for themselves, the amount given to the charity was doubled. The appropriate charitable donations were subsequently made.

For this measure to be interpreted as a measure of "pro-social behavior," the subjects must believe that the charities are doing good work, rather than being seen as incompetent or a waste of money. India has a well-respected non-profit sector, and according to 2014 data from the Charities Aid Foundation, citizens donate much more to charity than in countries of comparable income levels. Moreover, in order to choose charities with good reputations, we chose the listed charities by asking local students and staff for their opinions on the most respected charities in Bangalore in order.

Cognitive Ability Measures: We employed two incentivized ability tests. First, we administered a digit span memory test in which participants listened to a series of digits and, after ten seconds, were asked to write the number down. We conducted five rounds, where the first round contained 5 digits and each subsequent round increased the number of digits by 2. The students were paid INR 2 for each correct round. Second, we adapted a test of cognitive ability from Ariely, Gneezy, Loewenstein and Mazar (2009). We gave the participants a set of matrices, with 12 numbers displayed in each matrix (Appendix Figure 3). They were asked to identify the two numbers in each matrix that add to 10. Participants were given 12 matrices to solve within 3 minutes and received INR 2 for each correct answer.

B. Nurse Sample

A question that can arise is whether a laboratory task that is intended to measure an aspect of preferences would predict behavior. For example, in the dice task, individuals may feel no remorse stealing from an experimenter at a university (whom they may perceive to be rich or whom they perceive having already

[22] In the classic version of this type of dictator game, player 1 chooses how much of an endowment to keep for themselves or to share with other participants in the session, and the outcome is determined only by player 1's actions. The subsequent adaptation to giving the money to a charity rather than other individuals is also fairly common in the literature (e.g. Eckel and Grossman, 1996; Carpenter, Connolly and Myers, 2008).

allocated the funds to be "stolen" as part of a game), even if they would not necessarily steal from the public at large. To address this question for the dice task, we examined whether the dice predicts corrupt behavior by civil servants. We administered the dice task to government nurses within the context of a broader experiment that is described in detail in Dhaliwal and Hanna (2013), where we had a real measure of corruption. The experiment spanned 333 primary health centers (PHC) across five districts in Karnataka and focused on understanding whether increased attendance monitoring of health care workers through the use of a biometric device improved access to medical services.

We focus on absenteeism, a pervasive form of corruption both in India and in the developing world in general (Chaudhury et al., 2006). Government employees have a particular number of days that they are allowed to be absent and they have to record their absences for these days. If they are absent more than the prescribed number of days, their salary should be deducted for each additional absence, and they can cash out a certain number of their "sick days" if they do not take them. In practice, very few individuals report absence days and many cash out their "sick days," despite *very* high absence rates. Staff often claim that they are missing since they are "in the field" tending to the sick (even when their job responsibility requires them to be in the office). However, most accounts suggest this is not the case: for example, Banerjee, Deaton and Duflo (2004) did a tracer study with *sub-center* nurses who were absent during their random checks and found that they were only in their assigned villages 12 percent of the time that they were absent. The rate is likely to be much lower for staff nurses in our study because sub-center nurses do have job duties in the field while staff nurses do not.

As Banerjee, Hanna, and Mullainathan (2012) point out, absenteeism is an attractive form of corruption to study because one can measure, by cross-checking, whether the civil servant is fraudulently collecting a paycheck for a day not worked and it has real implications on health. Dhaliwal and Hanna (2013) conducted this cross-checking: they implemented 9 rounds (two baseline, 7 post-intervention) of independent random checks of the PHC staff between July 2010 and November 2012. The random checks proceeded as follows: the enumerator conducts a surprise visit to the PHC and records the staff attendance

at the moment of arrival; if the PHC was closed on arrival, everyone is considered absent. Individuals who were transferred or resigned were subsequently dropped from the sample from then on.

Between November 2012 and January 2013, a series of endline surveys were conducted with the health center staff for their experiment. For the staff nurses, we obtained permission from the government to add the dice task and the memory test to their survey. The sample consisted of nurses in the 185 PHCs where the position was filled. Unlike the random checks, we made appointments to ensure that the nurses would be present and conducted revisits when possible if the nurse was absent. We interviewed staff nurses at 165 PHCs; Appendix Table 4, Column 1, shows that there is no significant difference between the attendance rates of nurses at PHCs that we were able to interview and those that we were unable to interview (either because they left the PHC or because we could not secure an appointment with them).[25]

We aimed to design the nurses' tasks to be comparable to those of the students, but there were several differences. Most importantly, we could not pay government workers in cash. Instead, we obtained permission from the government to pay them in *candy* (Appendix Figure 4). One piece of candy is worth about Rs 1, and therefore, we offered double the amount for the nurses for the tasks than for the students, but in candy rather than cash. In addition, the memory test differed from the student test in three ways. First, while the students' test started with a 5 digit sequence, piloting with non-sample nurses informed us that this was already quite difficult. Therefore, we started with a 3 digit sequence for the nurses. Second, we gave the students five rounds of number sequences, but increased it to nine rounds for the nurses in order to increase the measured variation in ability. Third, because the enumerators read out the numbers to the students as a group and then the students individually filled out their forms, the students were asked all five rounds; for the nurses, the test ended as soon as they incorrectly remembered a sequence.

[25] Some larger PHCs had multiple staff nurses; however, for budgetary reasons, we only interviewed one nurse per PHC. We tried to interview the nurses who were typically staffed during the day to correspond to the time when Dhaliwal and Hanna (2013) conducted the random checks. In many cases, the doctor gave us permission as to which nurse we could talk to at his or her PHC. In Appendix Table 4, Column 2, we regress the attendance rate on an indicator variable for being surveyed, PHC fixed effects, and the survey controls. We find no difference in the attendance rates between those nurses that were interviewed with the other nurses within their PHC.

Since we surveyed nurses at work, we had to be cognizant of both time and logistical factors. Thus, we could not administer all of the experimental tasks that we gave to the students. We administered the dice task since it was our key indicator of interest. However, we did not administer the message game because it requires two players and takes a long time to play. Piloting informed us that the nurses found the matrices test too difficult and thus we did not administer it.

Finally, the survey also included questions on the nurses' basic demographic characteristics and on their beliefs on statements such as "It is possible to operate a business in India without bribing" and "Promotions should be based primarily on job performance rather than seniority."

IV. EXPERIMENTAL OUTCOMES AND CORRELATIONS ACROSS MEASURES

In this section, we present summary statistics from the laboratory tasks. Relatively few of these types of tests have been conducted in developing countries and, therefore, it is also interesting to compare the findings from our setting to those from more developed nations. Then, we look at the correlation of the dice task and ability with each other and survey variables to better understand what these measures are capturing.

A. Laboratory Test Outcomes

Tables 1A and 1B provide descriptive statistics for the experimental measures, as well as the key outcome variables.[26] In Figures 1 and 2, we graph the distribution of the experimental outcomes.

In the dice game, which measured one's propensity for corruption, the students reported a mean of 168 points in the dice task (Table 1A). As shown in Panel A of Figure 1, cheating was rampant among the

[26]In Appendix Table 5, we provide descriptive statistics on the demographic characteristics of both the students and nurses. Forty percent of the students are male, about half come from a minority category, and 81 percent are commerce majors (Panel A). Ninety-five percent of the nurses are female, they had been in the government for on average 8.6 years, and they had been at their current PHC for on average 4.7 years (Panel B). Panels C and D provide aggregate statistics from the All India Survey of Education (2011-2012) on college students in Karnataka and India, respectively. Our student sample is very similar to the rest of the state in terms of distribution of caste, but differs in terms of its gender and major composition as we discuss above.

students: the median points reported by students was 164, which corresponds to the 95 percentile of the probability density function of the theoretical distribution, where the theoretical median is 147; in fact, 34.2 percent of students reported points that were at or above the 99th percentile of the theoretical distribution (or 173 points). The nurses also cheated, but to a much lesser extent than the students: their median number of points was 152, and 9.4 percent of them reported points above the 99th percentile of the theoretical distribution (Figure 1, Panel B).[28]

As many (e.g. Levitt and List, 2007) have pointed out, the differences in design features that need to be made when testing students in a laboratory setting versus testing individuals in real-world settings may result in different outcomes. These features may, in part, explain why the nurses cheated less than the students in the dice task. First, the incentives were in candy rather than money since we could *not* give the government workers cash. If the nurses valued the candy less than the students valued the cash, their incentive to cheat would have been weaker. Second, while we held the student sessions at the university or in event spaces nearby, we interviewed the nurses at work.[29] Although we ensured privacy, the location may have led the nurses to feel less comfortable cheating than the students. However, the nurses did feel comfortable answering non-experimental questions relating to bribes (Table 1B).

The high level of cheating that we observe in this task is also observed in a study of Swiss students by Fischbacher and Föllmi-Heusi (2013). In their baseline experiment, they find that students reported that 35 percent of rolls resulted in the highest number on the die and 62 percent in the highest two. In comparison, as Appendix Figure 5 shows, almost 45 percent of rolls resulted in the highest two numbers for students and 34 percent for nurses in India.[31]

[28] This finding has also been observed in other contexts. For example, playing a three-person, sequential-move game, Alatas, et al (2009) find that public servants have a lower tolerance for corruption than students in Indonesia.

[29] Armantier and Boly (2008) conduct a lab experiment on corruption with students in Canada and one with individuals recruited for the same task in Burkina Faso who did not know it was an experiment. In the control setting, the students were more likely to cheat, but the rate was similar when both were offered a large enough bribe. This may differ from our setting in that the individuals were recruited to work on a one-time task, whereas the government nurses may be more concerned about being labeled a cheater in their long-term workplace.

In the pro-social preferences game, students chose to keep a greater percentage of the funds rather than donate to charity. On average, students chose to keep Rs 29.3, or 59 percent of their endowment (Table 1A); because their donation to the charities would be doubled, the students' choice of giving up Rs 20.7 implies that the charity received about Rs 41.4. We observe that 13 percent of the students kept less than one-fifth of the endowment (Figure 2, Panel A).

In existing literature, the average donation rate has varied across different contexts and by the game set-up: for example, studying 69 medical and nursing students in Tanzania, Kolstad and Lindkvist (2013) found an average donation of 1153 TSH (or about 12 percent of their endowment). Eckel and Grossman (1996) find that the donation rate in the United States increases from 38 percent to 73 percent when the transfer goes to a legitimate charity rather than to an anonymous individual in the room. Benz and Meier (2008) show that almost 80 percent of students at the University of Zurich donate when the funds are designated to the university social funds and about 65 percent donate to a general charity. Note that Benz and Meier (2008) and Cárdenas, Chong and Ñopo (2013) show that this type of measure is highly correlated with real charitable behavior, suggesting that it provides a meaningful proxy for pro-social preferences.

In the message game, there was considerable variation in the number of lies (Figure 2, Panel B). On average, the senders lied 1.71 times out of 3, with about 19 percent never lying and 30 percent lying all three times.[32] These numbers are similar to previous studies: studying 450 students in Israel, Gneezy (2005) finds between 17 to 52 percent of senders lie, with the variation determined by the financial gains associated with lying. Hurkens and Kartik (2009) find that between 38 to 47 percent of their sample in Spain lies, and 35 to 59 percent of the sample lie in a study in Germany by Sutter (2009).

In terms of the ability measures, students scored, on average, 1.68 out of 5 on the memory test and 2.25 out of 12 in the matrices test, while the nurses scored 2.66 out of 9 on the memory test (see Appendix Figure 6 for the distributions). These measures predict a real-world proxy for ability: students who are above median ability on the average of both tests have a significantly higher college GPA (Appendix Table

[32] Following the choice of messages to send, we ask the students whether they expect the receivers to believe them. The vast majority, 82.2 percent, expect to be believed. Gneezy (2005) observes a similar percentage.

6, Column 1). Moreover, the matrices and memory tests are correlated with one another (Columns 2 and 3).

B. Correlations Between the Dice Task, Ability and Other Characteristics

In Table 2, we explore what factors are correlated with the dice task and ability. One of the contributions of this paper is to apply the dice task to obtain an individual measure of dishonesty, and therefore, these correlations help provide an understanding of what this measure captures.

The first two columns of Table 2 provide the results for the students, while the second two show them for the nurses. In Columns 1 and 3, the dependent variable is dice points (divided by 10) and the regressions are estimated by OLS; in Columns 2 and 4, it is an indicator for above-median ability where ability is measured using a weighted average of the z-scores from the memory test and the math matrices for the students' sample and measured with the memory test for the nurses' sample. The coefficients presented are the probit marginal effects evaluated at the sample mean.

We do not observe a significant relationship between dice points and ability for either the student or nurse samples (Columns 1 – 4). However, the standard errors are fairly large, so the 95% confidence interval for the coefficients on high ability is -0.44 to 0.44 for students and -0.28 to 0.89 for nurses, and for the coefficients on dice points is -0.03 to 0.03 for students and -0.04 to 0.16 for nurses. As shown in Column 1, students who appear less pro-social tend to be significantly more likely to cheat in the dice task (higher score), while always lying in the message game is also positively correlated with cheating on the dice task but this is not significant at the standard levels where the 95% confidence interval is -0.13 to 0.50. However, neither of these measures appears to be significantly related to ability; the 95% confidence interval on the amount kept in the pro-social preferences game is -0.002 to 0.006 and on the indicator for always lying in the message game is -0.12 to 0.02 (Column 2).

We also explore the relationships between personality measures, survey questions designed to measure dishonesty, and demographic characteristics with both the dice task outcome and ability. Starting with the students, we examined external locus of control (which has been found to be positively correlated

with unethical behavior in a laboratory game involving making kickbacks to other players as in Hegarty and Sims (1978)), survey questions that typically to gauge how morally costly individuals believe corruption is, and gender. The locus of control is not predictive of dice points; the 95% confidence interval is -0.11 to 0.13. Moreover, the survey measures do not have a consistent predictive pattern either, neither for students nor nurses.[35] Males in the student sample appear to cheat significantly more in the dice task and score higher in ability, but there is no relationship between gender and the outcomes in the nurse sample (but, there are also very few male nurses). The corresponding confidence intervals are -0.76 to 0.35 and -2.31 to 0.32, respectively. In the student sample, older students tend to have significantly lower ability, and to cheat more on the dice task (but the latter estimate is not precisely estimated). There are positive and concave relationships between age and both ability and cheating behavior in the dice task, but the estimates are only significant for the cheating measure at the 10% level and imprecisely estimated for ability. The students' major is not significantly related to either ability or dice points; the corresponding confidence intervals are -0.10 to 0.14 and -0.77 to 0.71, respectively. Nurses with more tenure are significantly less likely to cheat on the dice task, and less likely to have high ability but the latter estimate is not significant at the standard levels.

V. PREDICTIONS FOR PREFERENCES AND CORRUPTION OUTCOMES

A. Do Lab Measures of Dishonesty Predict Selection into Government and Real Corruption Outcomes?

We begin by testing whether there is a relationship between honesty, as measured by the dice task, and the real world outcomes: student preferences for government jobs and nurse absenteeism. Table 3A displays the marginal effects from the probit relationship between the individuals' total points in the dice task and the main outcomes of interest.[36] In Columns 1 and 2, the sample refers to the students and the outcome is

[35] Appendix Table 15 shows the correlations across the points on the dice task and survey questions on dishonesty and corruptions. The correlations across these measures are not very high.
[36] Appendix Table 7A and 7B replicate these tables using OLS rather than a probit. The results are similar.

an indicator variable for whether they expressed a preference for a government job.[37] For these regressions, we include a number of control variables. We include gender and caste due to quotas in public sector jobs, a quadratic in age as preferences may change over time, and a dummy variable for major (commerce versus science) as differences in educational background may shape preferences. In addition, in case there are differences in how enumerators elicit responses, we include enumerator fixed effects. Finally, we cluster on session to account for potential common shocks that affect responses within session.[38]

In Columns 3 and 4, the sample refers to the nurses and the dependent variable is an indicator for whether the nurse was present during the random check. We aimed to include controls that are equivalent to the student specifications: as with the student sample we include controls for gender and a quadratic in age, as well as enumerator fixed effects. However, there are important differences. First, we did not include educational background as in the student sample since all the nurses essentially have the same nursing degree. We also did not include caste because we could not collect it as part of the surveys with the government. Second, we included the experimental conditions for the underlying study from which these data were collected in (treatment status and treatment status * post), as well as the various timing of the random checks (time of day, month and survey round) as these may determine some of the variation in attendance. Finally, we include a quadratic in nurse tenure. This is important to include because increased exposure to a government job may change how one feels towards dishonesty and corruption; thus, we wanted to observe how the dice task predicted attendance, holding constant tenure.[39]

Students who scored higher on the dice task (i.e. are more dishonest in this task) prefer government jobs. A one standard deviation increase in dice points reported corresponds to a 4.4 percentage point

[37] Appendix Table 8 shows that the results are robust to alternative definitions of the dependent variable. The standard definition used in the main regressions categorizes an NGO as a non-government job and includes government enterprises as a government job.

[38] In Appendix Table 9, we show the results from Table 3A for students (Columns 1 and 2) without any demographic controls (Panel A) and additionally with college fixed effects (Panel B). The results are very similar in terms of magnitude across all specifications, but we lose some power when we additionally include college fixed effects in addition to all of the other demographic controls.

[39] In Appendix Table 10, we show the results for nurses (Table 3A, Columns 3 and 4) without any demographic or tenure controls (Panel A) and additionally with district fixed effects (Panel B). The results are similar across all of the specifications.

increase in the probability of preferring a government job (Column 1). This is significant at the 1 percent level. In Column 2, we also examine a binary variable of whether the total points were above the sample median, which corresponds to the 95 percentile of the theoretical distribution. Those with total points above the median are 6.2 percentage points more likely to want a government job than those below the median (significant at the 10 percent level). Overall, the results underscore the idea that corruption may be exacerbated by the types of individuals who want to enter into public service.

Next, we test whether one's performance on the dice task predicts corrupt practices of civil servants. The government nurses who reported points above the sample median were 10.7 percentage points more likely to be fraudulently absent from work than those who scored below (Column 4). As shown in Column 3, dice points are negatively correlated with attendance. A standard deviation increase in the score on the dice task decreases attendance by 4.6 percentage points and this relationship is significant at the 5 percent level. Thus, it appears that dishonesty as measured by the dice game predicts the real-world behaviors of civil servants. This form of corruption has a real cost, as Dhaliwal and Hanna (2013) show, where experimentally increasing nurse attendance has a real and positive impact on the birth weights of babies.

As we discussed in Section III, there may be cases where within the pool of high-ability applicants for government jobs, we might expect greater propensity for corruption. Therefore, in Table 3B, we first test whether dishonesty is still predictive of job choice conditional on ability (Panel A) and then test whether we observe higher levels of cheating among high-ability individuals who prefer a government job (Panel B). In addition to job choice, we also test whether the dice measure differentially predicts fraudulent absenteeism of government workers by ability. To measure ability, we construct a variable that equals one if the individual scores above median on the memory test for the nurses and above median on the average of the memory and the matrices tests for the students.

We do not observe a significant relationship between ability, dishonesty, and the outcomes. The coefficients on the dice outcomes are virtually unchanged when controlling for ability for both samples. With 95% confidence intervals ranging from -0.09 to 0.12 for students and from -0.14 to 0.05 for nurses, the ability measures themselves are not significantly correlated with either job preferences or absenteeism

(Panel A). In the student sample, the coefficients on the interaction are imprecisely estimated but not significantly different from zero (Panel B), which may imply that the relative wage returns to ability in the private sector may be offset by the relative returns to ability in the public sector. The nurse sample tells a consistent story: while nurses that are more dishonest in the dice task are also more likely to be absent from work, this relationship does not vary significantly based their ability (Columns 3 and 4 of Panel B). However, it is important to note that the standard errors on the interactions tend to be fairly large.

We next explore whether the outcomes from the pro-social preferences game and the message game are correlated with whether students prefer civil service jobs in Table 4A.[41] As our framework discusses, there is a potential for the utility from engaging in pro-social behavior to matter, even independently of the returns to corruption, in determining job preferences. As above, the estimates are marginal effects from the probit estimation, include controls as above, and are clustered at the session level.[42] As Column 1 in Panel A shows, a one standard deviation increase in the amount that individuals keep for themselves, rather than donate to charity, corresponds with a 4 percentage point increase in the likelihood of preferring a government job (significant at 5 percent level). Thus, the students with higher demonstrated levels of pro-social preferences prefer private sector jobs over government ones.

In contrast, lying consistently during the message game appears to be not significantly correlated with job preferences with a 95% confidence interval of -0.07 to 0.09 (Column 2). This result differs from that of both the pro-social and dice task measures. One possible reason for the difference is that the measures reflect different consequences: for example, the students are stealing from the experimenters in the dice task but explicitly stealing from other students in the message game. Similar, it may be more distasteful to steal from other students who are in the room in the message game than not to donate to non-present charities in the pro-social task. A second possibility is that the outcomes are more public in the

[41] In Appendix Table 11, we also explore the relationship between the experimental measures and the expected wages of the students for their first job. Those who report high points on the dice task have a higher reported expected wage (Column 1), even conditional on their pro-social preferences and lying in the message game (Column 4). Pro-social preferences and the outcomes of the message game do not predict one's stated expected wage.

[42] Appendix Tables 12A and B show that the results of Table 4A and B are unchanged when using OLS.

message game than in the other tasks, with enumerators able to observe whether a student explicitly lied. In contrast, for example, there is no way to identify with certainty if someone lied in the dice task. A third possibility is that the students did not fully understand how to play the message game, given that it is more complex than the dice or pro-social preferences task. However, this seems unlikely: we observe students engaging in behavior that increases their payments in the message game, and 80 percent of the students lie at least once.

In Column 3, we include all three experimental measures in one regression and in Column 4, we include an anti-social index that averages the z-scores of all three experimental measures. In Column 3, the dice measure and the pro-social preferences remain significant and the magnitudes of the coefficients do not change much. Lying behavior in the message game remains insignificant with little change to the confidence interval. Thus, the results suggest that students who exhibit more dishonesty on the dice task prefer government jobs and that people with greater social preferences do not want a government job. While the model suggested that either returns to corruption or utility from social preferences may drive selection into government, the data indicate that both the gains from corruption and from social preferences affect the pool of students that apply for government jobs in India.

In Table 4B, we explore the interactions of these measures of pro-social behavior and honesty with ability for the students. We find that the effects of these measures do not appear to significantly vary by ability either individually (Columns 1 and 2 of Panel B) or when considered jointly (the p-value for the three interactions in Panel B, Column 3 is 0.956). In the specification including all of the interactions, the 95% confidence interval on the interaction between ability and amount kept in the prosocial preferences game is -0.01 to 0.01, on the interaction between ability and lying in the message game is -0.16 to 0.11 and on the interaction between ability and the dice score is -0.04 to 0.04. To improve power, we also examine the anti-social index that is the averages the z-scores of all three measures, and its interaction with ability in Column 4. While the coefficient on the anti-social index is positive and significant at the 1% level, the interaction with ability remains insignificant. The 95% confidence interval ranges from -0.13 to 0.13.

Overall, the analysis in this section suggests that those who display a tendency for dishonesty in the tasks and a lower level of pro-social behavior are more likely to want to enter government service. Furthermore, screening based on ability neither exacerbates nor mitigates the problem of negative selection into government.

B. Are Survey Measures Predictive of Student Preferences and the Real-World Behaviors of Nurses?

Survey measures that ask about one's beliefs on the level of corruption in the world are commonly used to measure preferences towards corruption. Thus, an interesting exercise explores how these measures (described above in the discussion of Table 2) perform in predicting job preferences and corruption relative to the experimental measures. It is important to note that these types of questions, which are about one's beliefs about the extent of corruption and the importance of corruption, may reflect other factors than ones' willingness to engage in corruption. However, given that individuals have a large incentive to lie if asked about their own engagement in corruption, these types of measures are typically used instead to gauge individuals' tolerance towards corruption.

In addition, we explore the outcomes from a measure that was developed to test the extent to which individuals believe that they have control over the events in their lives—the "locus of control." We include this measure because, as we discussed above, it has had predictive power in laboratory games of "bad" behaviors and it is not as explicit as the survey questions on corruption.

Table 5 provides these results.[43] The first four columns include data from the student sample, while Column 5 is from the nurse sample. For comparability to the earlier results on dice task, we include the same control variables as described above. We do not include the dice task as a control because we want to understand whether these measures on their own have predictive power. However, in Appendix Table 14, we also include the outcomes of the dice task and ability measures, finding the conclusions unchanged.

[43] The corresponding OLS estimates are presented in Appendix Table 13.

Having a higher external locus of control (i.e. believing that outcomes are more likely to be determined by forces out of ones' control) corresponds with a 3.4 percentage point higher preference for a public sector position with a 95% confidence interval ranging from 1 to 5.8 percentage points (Column 1). This is consistent with prior studies that have suggested that an external locus of control is positively correlated with unethical behavior (e.g. Hegarty and Sims 1978) and is unchanged, even when including other control variables (Column 4).

Next, we explore two types of survey questions regarding corruption and cheating.[44] First, we ask whether the respondent has previously used an agent—an illegal helper who facilitates bribes — to receive a public service. As this is a very direct question about illegal behavior, some may not want to answer honestly. Thus, we also asked less direct questions: the percentage of their classmates who would cheat on an exam with the professor in the room, as well as if the professor left the room due to an emergency; the variable "Classroom Cheating" is an average of both responses. These types of questions presume that individuals who are more likely to cheat would also assume that people cheat in general. Students that report having used an illegal agent are 6.4 percentage points more likely to prefer a government job and this is significant at the 10 percent level. The coefficient on the share of classmates who would cheat on an exam is negative and significant at the 10 percent level (Column 2). Note that the sign is the opposite of the results of what one would expect, suggesting that the presumption that individuals' beliefs regarding cheating are positively correlated with behavior is false or the students were not answering honestly.

In Column 3, we examine four attitudinal questions about job success and bribery. Students who believed that networks are necessary for success were 5.6 percentage points *more* likely to prefer public service positions. However, students who believed bribes are necessary to operate a business in India were 4.5 percentage points *less* likely to prefer government work. Both of these estimates are significant at the 95% level. The beliefs about promotions being based on seniority and that bribes are common are not

[44] The correlations across these measures are shown in Appendix Table 15, and are not generally very high. Thus, it is unlikely that the insignificance of the results is driven by strong correlations across these measures.

significant at the standard levels with 95% confidence intervals of -0.03 to 0.03 and -0.05 to 0.06, respectively.

Finally, in Column 5, we explore whether the same attitudinal questions regarding corruption that we asked the students also predict fraudulent nurse absenteeism. None of the measures are significantly related to their attendance; while the confidence intervals are large, in general, the results suggest that the survey measures would not predict real-world corruption.

In short, we find that a non-explicit measure of one's character (locus of control) predicts behavior, while the explicit, non-experimental elicitations of preferences for corruption have less predictive power for detecting real-world fraudulent behavior. This helps reconcile our findings with other work, such as Alatas et al. (2009), which finds no power of explicit measures of corruption in predicting job choices between the public and private sector.

VI. CONCLUSION

We offer evidence that the college students in India who cheat on a simple task and those with lower pro-social preferences are more likely to prefer to enter government service after graduation. This relationship does not appear to vary significantly by ability, suggesting that screening on ability does not change the level of honesty of those chosen for government service among the pool of applicants.

We show that cheating on this task is also predictive of fraudulent behaviors by real government officials in India, which implies that the measure captures a meaningful propensity towards corruption. Given that the existing methods of measuring corruption only apply for those who are already entrenched in the bureaucracy, our validation of a measure of cheating against real-world corruption outcomes offers an important tool for future research on selection and corruption.

These findings are important because they demonstrate that the variation in the levels of observed corruption in developing countries may, in part, be driven by selection. More specifically, this paper demonstrates that the variation we observe in corruption levels, even under the same context and incentives, could be driven by differences in individuals' propensity for dishonesty.

Our results offer key insights that suggest a direction for future work in this area. First, the recruitment and screening process for public sector employees may be improved by increasing the emphasis on characteristics other than ability. This is not to say that screening and selection are more important than the incentives and monitoring of public sector employees once they are in office, but rather that screening can be an additional tool in the arsenal to fight corruption. And, it can be a potentially cost effective one: while monitoring and incentive programs tend to be costly and challenging to implement, if simple screening tools for dishonesty can be incorporated into existing screening methods, it can potentially be a cheap way to enact change. Of course, individuals may not want to reveal their true characteristics, especially their propensity for dishonesty, so the method of measurement will also matter. The simple, experimental measure we employed predicted the corrupt behaviors of the government employees, but the game in which lying was explicitly framed and the commonly used attitudinal questions had little predictive value. Therefore, thinking about—and then testing—how we can incorporate these types of tools in screening mechanisms, limiting gaming of the tools, is an important direction for future research.

Second, while this paper demonstrates that selection can be an important determinant of corrupt behavior, even conditional on the same incentive structures, natural follow-up questions are how different social norms and incentive structures across similar jobs affects the types of people who apply. Specifically, this study took place in India, where corruption is relatively high. The context may matter where we might expect the types of individuals who select into public jobs to be different in places where corruption is low and the institutional structure is different. Thus, understanding how changes in social norms about corruption or other forms of anti-corruption programs affects selection is also key for future research.

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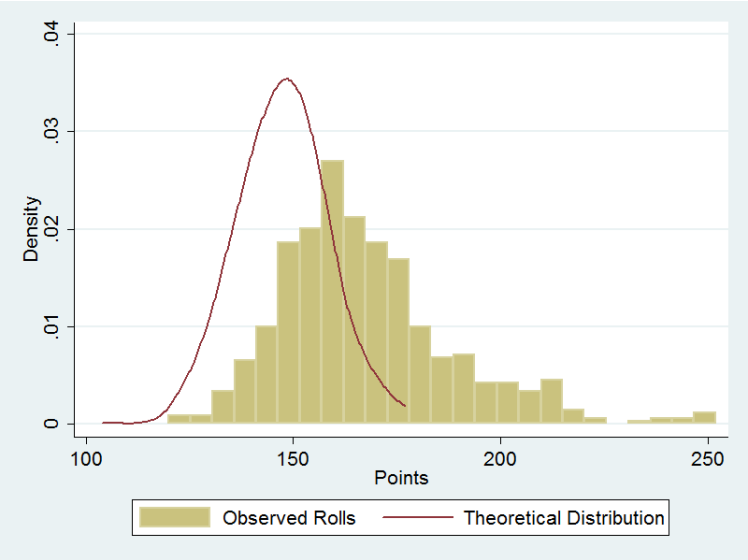
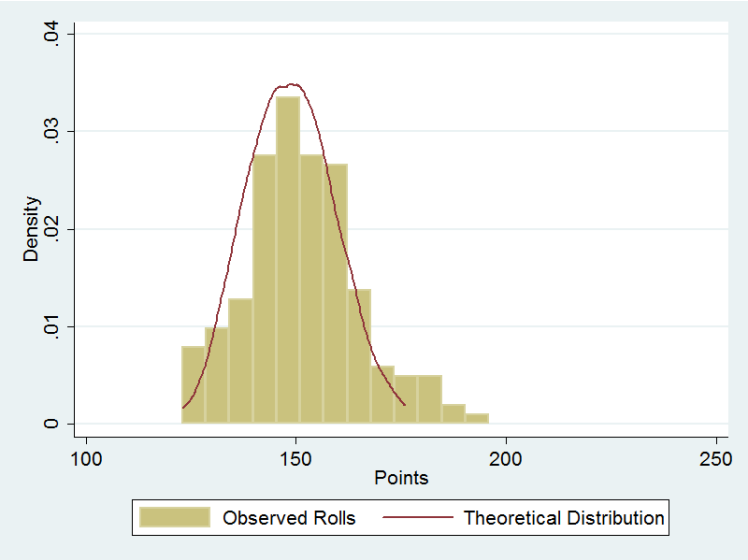
Figure 1: Total Points in Dice Task

(a) Student Sample



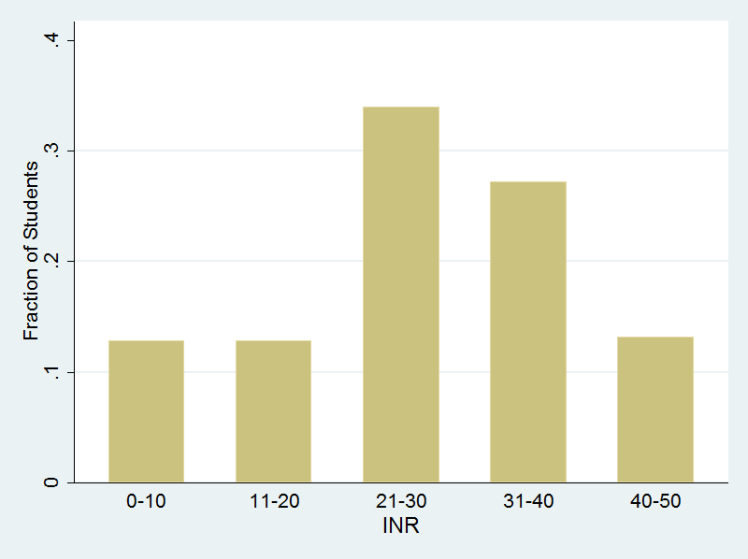
(b) Nurse Sample



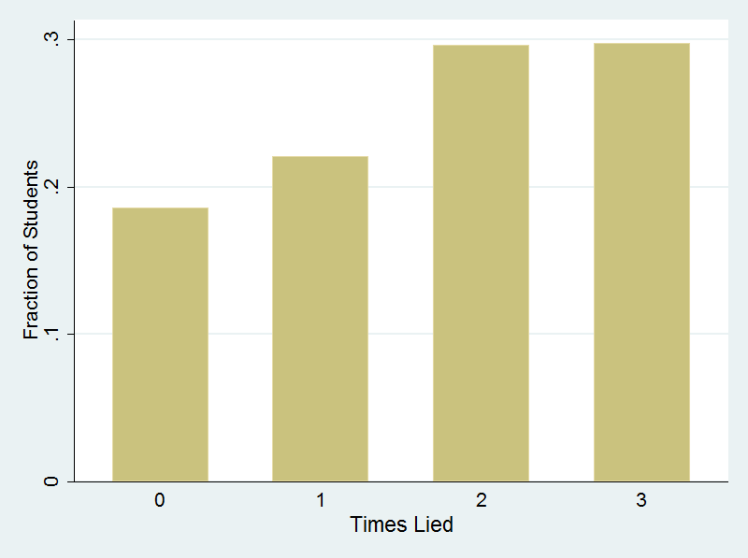
These figures provide the distribution of outcomes across from the dice task for the student (Panel A) and nurse (Panel B) samples. The bars present the outcomes reported by the participants while the lines present the theoretical distribution.

Figure 2: Distribution of Outcomes from Experimental Measures, Student Sample

(a) INR Kept (out of 50) in Pro-Social Preferences Game



(b) Number of Times Lied (out of 3) in Message Game



These figures provide the distribution of outcomes from the Pro-Social Preferences Game (Panel A) and the Message Game (Panel B) from the student sample.

Table 1A: Descriptive Statistics, Student Sample

	Mean	SD	N
Panel A: Experimental Measures			
Points in Dice Task	167.59	21.04	661
INR Kept in Pro-Social Preferences Game	29.31	13.01	662
Always Lied in Message Game	0.30	0.46	662
Panel B: Ability Measures			
Correct Answers in Matrices Test	2.25	2.22	660
Correct Answers in Memory Test	1.68	0.89	661
Panel C: Personality Measures and Survey Measures of Corruption			
Used an Agent	0.28	0.45	637
Classroom Cheating With Prof in Room	0.34	0.26	658
Classroom Cheating With Prof Out of Room	0.62	0.29	658
Promotions Should be Based on Seniority (% Agree)	0.08	0.27	660
Success Requires Contacts (% Agree)	0.62	0.49	657
Bribes are Common (% Agree)	0.85	0.36	658
Bribes are Necessary (% Agree)	0.53	0.50	655
Panel D: Student Career Preferences			
Wants Government Job	0.43	0.50	660

This table provides sample statistics from the student sample. In Panel C, the second-to-last and third-to-last last variables provide the percent of students who agree or strongly agree to two questions ("Success is determined more by 'who you know' than by 'what you know'" and "most businesses use bribes to get government contracts"), while the last and fourth-to-last variables provide the percent of students who disagree or strongly disagree to two questions ("Promotions should be based primarily on job performance rather than seniority" and "it is possible to operate a business in India without bribing"

Table 1B: Descriptive Statistics, Nurse Sample

	Mean	SD	N
Panel A: Experimental Measures			
Points in Dice Task	151.84	13.46	165
Panel B: Ability Measures			
Number Correct in Memory Test	2.66	1.26	165
Panel C: Attendance Measures			
Presence	0.49	0.50	720
Panel D: Non-Experimental Measures of Corruption			
Promotions Should be Based on Seniority (% Agree)	0.14	0.35	152
Success Requires Contacts (% Agree)	0.97	0.18	150
Bribes are Common (% Agree)	0.42	0.49	144
Bribes are Necessary (% Agree)	0.54	0.50	148

This table provides sample statistics from the nurse sample. In Panel A, the dice task replicates the task given to the students, but is paid in chocolate rather than money. In Panel C, the attendance measures comes from periodic random checks by independent enumerators as reported in Dhaliwal and Hanna (2013). We exclude nurses who are permanently transferred or resigned or who are working temporarily at another facility. In Panel D, the second and third variables provide the percent of nurses who agree or strongly agree to two questions ("Success is determined more by 'who you know' than by 'what you know'" and "most businesses use bribes to get government contracts"), while the first and fourth variables provide the percent of nurses who disagree or strongly disagree to two questions ("Promotions should be based primarily on job performance rather than seniority" and "it is possible to operate a business in India without bribing").

Table 2: What Predicts Dishonesty in the Dice Task and Ability?

	Student Sample		Nurse Sample	
	(1) Dice Points/10	(2) High Ability	(3) Dice Points/10	(4) High Ability
High Ability	0.003		0.310	
	(0.221)		(0.296)	
Dice Points/10		0.000		0.063
		(0.013)		(0.054)
INR Kept in Pro-Social Preferences Game	0.025	0.002		
	(0.008)	(0.002)		
Always Lied in Message Game	0.188	−0.048		
	(0.161)	(0.035)		
External Locus of Control	0.013	−0.004		
	(0.062)	(0.016)		
Student Has Used an Agent	−0.059	−0.099		
	(0.187)	(0.050)		
Classroom Cheating	−0.117	0.023		
	(0.357)	(0.094)		
Promotions Based on Seniority	−0.111	−0.008	−0.183	0.130
	(0.080)	(0.022)	(0.141)	(0.067)
Success Requires Contacts	−0.012	−0.069	0.117	−0.000
	(0.083)	(0.021)	(0.140)	(0.060)
Bribes are Common	−0.042	−0.017	−0.010	0.144
	(0.093)	(0.028)	(0.151)	(0.074)
Bribes are Necessary	−0.213	0.012	−0.045	−0.182
	(0.100)	(0.027)	(0.154)	(0.074)
Male	0.629	0.114	−0.994	−0.201
	(0.298)	(0.054)	(0.672)	(0.283)
Age	1.569	−1.161	0.407	0.044
	(1.427)	(0.591)	(0.227)	(0.128)
Age^2	−0.037	0.028	−0.006	−0.000
	(0.036)	(0.015)	(0.003)	(0.002)
Commerce Major	−0.034	0.019		
	(0.379)	(0.062)		
Tenure			−0.198	−0.062
			(0.073)	(0.042)
$Tenure^2$			0.010	0.002
			(0.003)	(0.002)
P-value: Joint Significance of Caste FE	0.746	0.102		
P-value: Survey + Enumerator FE	0.000	0.000	0.000	0.088
Dependent Variable Mean	16.74	0.428	15.19	0.504
Observations	622	622	141	115

This table explores correlations between dice points and ability with individual characteristics. For students, high ability refers to everyone above the median of the average of the z-scores from the memory and matrices test; for nurses, it is based on the memory test. In Columns 1 and 3, the coefficients are from OLS regressions; in Columns 2 and 4, they are marginal effects evaluated at the means from probit regressions. In the student sample, the regressions include indicators for enumerator, and caste and are clustered at the session level. Classroom cheating is the average of the percentage of students the respondent thinks will cheat if the professor is in the room, and the percentage of students the respondent thinks will cheat if the professor is not in the room. In the nurse session, we control for enumerators and experimental treatment; we report robust standard errors. The corruption beliefs index is the average of the z-scores for the four questions reported in Panel D of Table 1B, where z-scores are normalized such that a positive score indicates a higher perception of corruption.

Table 3A: Does Dishonesty in the Dice Task Predict Job Preferences and Worker Attendance?

	Student Sample		Nurse Sample	
	Wants Government Job		Attendance	
	(1)	(2)	(3)	(4)
Dice Points/10	0.021		−0.034	
	(0.008)		(0.016)	
High Dice Score		0.062		−0.107
		(0.037)		(0.043)
Dependent Variable Mean	0.427	0.427	0.488	0.488
Observations	637	637	719	719

Columns 1 and 2 explore the relationship between the students' outcome on the dice task and their preferences to enter government service. The coefficients are marginal effects evaluated at the means from a probit regression, controlling for enumerator fixed effects, major, gender, caste and a quadratic in age. Standard errors clustered at the session level are in parentheses. A high dice score is a score above the respective median scores for students and nurses. Columns 3 and 4 provide the relationship between the outcome on the dice task and attendance for the nurse sample. The dependent variable is a binary variable equal to one if a nurse was present during a given survey round. We control for gender, a quadratic in age and in tenure, survey factors (survey round, month of the year, time of day, enumerator) and experimental treatments (treatment and the interaction of treatment with a dummy indicating that the survey was conducted post-treatment). Standard errors clustered at the nurse level are in parentheses. See Dhaliwal and Hanna (2013) for a more detailed description of the data.

Table 3B: Does the Relationship Between Dishonesty and Outcomes Vary by Ability?

	Student Sample		Nurse Sample	
	Wants Government Job		Attendance	
	(1)	(2)	(3)	(4)
Panel A: Control for Ability				
Dice Points/10	0.021		−0.033	
	(0.008)		(0.016)	
High Dice Score		0.060		−0.105
		(0.037)		(0.043)
High Ability	0.009	0.012	−0.045	−0.044
	(0.053)	(0.052)	(0.046)	(0.045)
Panel B: Control for Ability Interaction				
Dice Points/10	0.023		−0.040	
	(0.011)		(0.022)	
High Dice Score		0.092		−0.127
		(0.045)		(0.071)
High Ability	0.077	0.049	−0.260	−0.064
	(0.335)	(0.080)	(0.418)	(0.059)
High Ability x Dice Points/10	−0.004		0.014	
	(0.020)		(0.028)	
High Ability x High Dice Score		−0.073		0.040
		(0.110)		(0.088)
Dependent Variable Mean	0.426	0.426	0.488	0.488
Observations	636	636	719	719

This table explores the relationship between dishonesty in the dice task, ability and the outcomes. For the students, "high ability" is computed by taking the average of the z-scores from the memory and matrices test, and assigning everyone who is above the median as high; for the nurses, it is defined based on the memory test. The sample and regression set-up is similar to Table 3A. In Panel A, we additionally include the high ability indicator variable. In Panel B, we then additionally include the interaction of the dice outcomes with the high ability indicator variable.

Table 4A: The Relationship Between Pro-Social Preferences and Dishonesty and Wanting a Government Job, Student Sample

	(1)	(2)	(3)	(4)
INR Kept in Pro-Social Preferences Game	0.003		0.003	
	(0.002)		(0.002)	
Always Lied in Message Game		0.011	0.001	
		(0.040)	(0.041)	
Dice Points/10			0.018	
			(0.008)	
Anti-Social Index				0.078
				(0.021)
Dependent Variable Mean	0.427	0.427	0.427	0.427
Observations	637	637	637	637

This table explores the relationship between the experimental measures of dishonesty and pro-social behaviors with a preference for government service within the student sample. In all regressions, the outcome variable is an indicator for a preference for a government job, the coefficients are marginal effects evaluated at the means from a probit regression, the regression equation includes enumerator fixed effects, major, indicators for gender and caste, and a quadratic in age, and the standard errors are clustered by session. In Column 1, the variable of interest is the amount kept in the pro-social preferences game, while it is lying all three times in the message game in Column 2. In Column 3, we include all three experimental measures in a single regression. In Column 4, the anti-social index is an average of the z-scores of all three experimental measures.

Table 4B: The Relationship Between Pro-Social Preferences, Dishonesty, and Ability and Wanting a Government Job - Student Sample

	(1)	(2)	(3)	
Panel A: Control for Ability				
INR Kept in Pro-Social Preferences Game	0.003		0.003	
	(0.002)		(0.002)	
Always Lied in Message Game		0.007	−0.002	
		(0.040)	(0.040)	
Dice Points/10			0.018	
			(0.008)	
High Ability	0.006	0.012	0.005	0.008
	(0.053)	(0.053)	(0.052)	(0.053)
Anti-Social Index				0.076
				(0.021)
Panel B: Control for Ability Interaction				
INR Kept in Pro-Social Preferences Game	0.003		0.002	
	(0.002)		(0.002)	
Always Lied in Message Game		0.021	0.009	
		(0.046)	(0.046)	
Dice Points/10			0.020	
			(0.012)	
High Ability	−0.026	0.021	0.030	0.008
	(0.116)	(0.055)	(0.331)	(0.052)
Anti-Social Index				0.078
				(0.030)
High Ability x INR Kept	0.001		0.001	
	(0.003)		(0.004)	
High Ability x Always Lied		−0.032	−0.027	
		(0.068)	(0.068)	
High Ability x Dice Points/10			−0.003	
			(0.019)	
High Ability x Anti-Social Index				−0.004
				(0.066)
Joint Wald Test Statistic			0.320	
P-Value (Interactions Only)			0.956	
Dependent Variable Mean	0.426	0.426	0.426	0.426
Observations	636	636	636	636

This table explores the relationship between dishonesty, pro-social preferences, ability and the students' employment preferences. High ability is computed by taking the average of the z-scores from the memory and matrices test, and assigning everyone who is above the median as high. The sample and regression set-up is similar to Table 4A. In Panel A, we additionally include the high ability indicator variable and report the Wald statistic and associated p-value of the null hypothesis that the three displayed coefficients are equal to zero. In Panel B, we then additionally include the interaction of the variables with the high ability indicator variable. In Column 3, we report the joint test of the null hypothesis that the interactions of ability with dishonesty and pro-social preferences are equal to zero. In Column 4, the anti-social index is an average of the z-scores of all three experimental measures.

Table 5: Do Other Measures and Corruption Beliefs Predict Job Preferences and Worker Attendance?

	Student Sample				Nurse Sample
	Wants Government Job				Attendance
	(1)	(2)	(3)	(4)	(5)
External Locus of Control	0.034			0.040	
	(0.012)			(0.013)	
Student Has Used Agent		0.064		0.051	
		(0.036)		(0.039)	
Classroom Cheating		−0.148		−0.151	
		(0.079)		(0.075)	
Promotions Based on Seniority			−0.010	−0.005	−0.015
			(0.021)	(0.020)	(0.028)
Success Requires Contacts			0.056	0.047	−0.009
			(0.022)	(0.023)	(0.025)
Bribes are Common			0.003	0.014	−0.018
			(0.027)	(0.026)	(0.026)
Bribes are Necessary			−0.045	−0.049	0.017
			(0.021)	(0.021)	(0.027)
Joint Wald Test Statistic		5.592	11.417	23.472	1.073
P-Value		0.061	0.022	0.001	0.899
Dependent Variable Mean	0.428	0.422	0.428	0.423	0.491
Observations	635	609	629	601	609

Columns 1 -4 explore the relationship between the students' personality measures and corruption beliefs and their preferences to enter government service. The coefficients are marginal effects evaluated at means from a probit regression, controlling for enumerator fixed effects, major, indicators for gender and caste, and a quadratic in age. Standard errors clustered at the session level are in parentheses. See Table 1A for more details on the measures. Column 5 provides the relationship between corruption beliefs and attendance for the nurse sample. The dependent variable is a binary variable equal to one if a nurse was present during a given survey round. We control for a quadratic in age and in tenure, gender, survey factors (survey round, month of the year, time of day, enumerator) and experimental treatments (treatment and the interaction of treatment with a dummy indicating that the survey was conducted post-treatment). Standard errors clustered at the nurse level are in parentheses. See Dhaliwal and Hanna (2013) for a more detailed description of the data, and the notes for Table 1B for the full description of how the beliefs were measured.