Fostering Institutional Trust and Organ Donation: Evidence from a Randomized Informational Intervention in Tunisia*

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Abstract

Organ transplantation saves lives and improves the quality of life of patients who would otherwise depend on costly and invasive treatments. The technology is becoming available in low- and middle-income countries, but the gap between the demand for and the supply of organ transplants remains large. In a randomized controlled trial at a Tunisian university, we evaluate an expert-led intervention designed to inform about organ donation and strengthen trust in medical institutions. The intervention consists of a short video testimonial from a heart transplant survivor, a presentation led by a medical doctor and a short Q&A session. We find that the intervention significantly increases deceased donor registration, with suggestive evidence of positive spillover effects on the control group. The survey data provides little support for changes in attitudes and social expectations as potential mechanisms. Instead, it reveals large and statistically significant increases in medical and legal knowledge, religious beliefs supportive of donation, and institutional trust among treated students. Finally, we show that treatment effects on organ donor registration are driven by male students and those whose families likely support organ donation. Targeting older segments of the population may further increase the impact and cost-effectiveness of this intervention.

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1 Introduction

Organ transplantation is a cost-effective way to treat organ failure due to genetic conditions, infections such as hepatitis, or chronic diseases such as diabetes (Olawade et al.; 2025). The infrastructure and medical expertise necessary to harvest, store and transplant organs is available in many countries, including an increasing number of low- and middle-income countries (LMICs) (GODT; 2024). Due to ethical and legal concerns, there is no regular competitive market for organs.[1] Unsurprisingly, the demand for donated organs tends to exceed the supply by far. Patients with organ failure face a significantly reduced life expectancy (Stokes; 2011), and if alternative treatments, such as hemodialysis, are possible, they tend to be intrusive and painful for the patient, and costly for health systems. In most cases, patients in need of a transplant die if the transplant is not available on time (HDSA; 2024). The number of deceased organ donors is particularly low in LMICs (GODT; 2024). Based on qualitative and quantitative evidence from Tunisia, we conjectured that a general lack of awareness, religious misperceptions, and low institutional trust contribute to this organ transplant shortage. This study asks whether an expert-led informational intervention can correct misperceptions, foster institutional trust, and ultimately increase the number of deceased organ donor registrations.

Economists have designed and evaluated different policies to increase the supply of donated organs. Nobel Prize laureate Alvin Roth and co-authors' research on kidney exchange (Roth et al., 2004; Roth et al., 2005) and non-directed deceased donor chains (Rees et al., 2009; Anderson et al., 2015) has contributed to the establishment of a formal kidney exchange in the United States. Another policy that has been investigated in the laboratory (Kessler and Roth, 2012; Herr and Normann, 2016) and successfully implemented in Israel, is giving priority to registered donors and their families (Stoler et al.; 2016). Other studies have focused on price mechanisms and tested under which conditions organ markets may be socially acceptable in the United States (Becker and Elías, 2007; Elías et al., 2015; Elías et al., 2019; Becker et al., 2022). In continental Europe, "presumed consent" has proven to be successful in increasing the supply of donated organs (Johnson and Goldstein, 2003; Abadie and Gay, 2006; Steffel et al., 2019). Presumed consent makes being a donor the default option: an individual is considered a potential donor *unless* they have actively opted

[1] The sale of organs is illegal in most countries, with the notable exception of Iran, which allows for kidney sales among its citizens (Moghaddasi and Sgroi; 2024). All other health systems rely on organ donation and, to a lesser degree, on kidney exchange (Roth et al.; 2004).

out of the system by declaring themselves a non-donor. However, the success of this policy relies on high levels of institutional trust (Shepherd et al.; 2014). It is thus unlikely to be a solution in many LMICs, where trust in institutions tends to be low (e.g. Algan and Cahuc; 2010). Similarly, granting priority to registered donors and setting up kidney exchanges require substantial institutional capacity, and will therefore be viable policy options only in the long run.

Certain constraints to organ donation are likely to be more pronounced in LMICs. Our quantitative and qualitative research in Tunisia revealed a general lack of awareness, institutional mistrust and widespread fear of organ trafficking. In a national survey, Aissi et al. (2024) find that 73% of Tunisian adults believe that there is organ trafficking in Tunisia. Some people expressed the fear that organ donation may conflict with their religion. In reality, religious scholars across the Muslim world agree that Islam encourages organ donation, with reproductive organs being the only exception.[2] These context-specific constraints and misperceptions have not been sufficiently addressed by the previous literature. A lack of research on which policies work in non-Western countries may lead to the adoption of inefficient policies, harming patients and societies at large. At the same time, providing new information and correcting misperceptions can be a very cost-efficient intervention in many contexts — without requiring institutional change (Jensen, 2010; Dupas, 2011; Wiswall and Zafar, 2014; Dupas et al., 2018; Bursztyn et al., 2020; Banerjee et al., 2024a).

To address the general lack of awareness about organ transplantation and fear of organ trafficking among Tunisian adults, we designed an informational intervention in partnership with the Tunisian National Center for the Promotion of Organ Transplantation (CNPTO). We first showed a short video testimonial of a patient from a village in north-western Tunisia who had survived thanks to a heart transplant. The main intervention which followed was led by experienced medical doctors and technicians of the CNPTO. They explained the social significance of organ donation, the medical procedure and the legal and administrative framework in detail and also devoted several minutes to the Islamic perspective on organ donation. After the intervention, the team stayed for a short Q&A session with the partici-

[2] A Tunisian fatwa explicitly endorsed organ donation conditional on the consent of the donor or their family members back in 2006. An equivalent fatwa by the Al-Azhar University in Cairo, which is widely recognized within the Sunni community, followed in 2009 (Ali et al.; 2020). The prevailing consensus among Muslim religious scholars is that organ donation and transplantation for the purpose of saving lives is not only permitted but also to be encouraged. Ali et al. (2020) hypothesize that a lack of knowledge about these religious rulings and misunderstanding thereof contribute to the widespread skepticism about organ donation among Muslims, which is documented in many qualitative and quantitative studies (Khawari et al., 2005; Sharif et al., 2011; Gauher et al., 2013; Ralph et al., 2016).

pants. Within a randomized controlled trial (RCT) at a Tunisian university enrolling 1,277 students, we assessed the impact of this informational intervention on young adults' donor status. In Tunisia, adults can express their consent to be a deceased organ donor by adding the word "donor" to their ID. We measured donor status by offering on-the-spot ID changes on campus in collaboration with the CNPTO and the Tunisian Technical and Scientific Police during a designated "Organ Donation Awareness Week" on campus. All students had access to these on-the-spot ID changes, and control group students also received light-touch information about organ donation within the awareness week. This decreased the logistical costs of ID changes among the control group, which is why we view the estimated treatment effects as a lower bound. To assess spillover effects to non-treated students, we collected extensive network data at baseline. We also measured the immediate impact of the intervention on students' attitudes, social expectations, medical and legal knowledge, religious beliefs, and institutional trust with an endline survey immediately after the intervention. A follow-up survey six months later gathered further information to assess the persistence of treatment effects.

We find that the intervention substantially increased the likelihood that treated students add the donor status to their ID. Treated students are 2.7 percentage points more likely to change their ID. This corresponds to a 207% increase relative to the control group, as only 1.3% of control students changed their ID. While the percent change should be interpreted with caution, the treatment effect survives all robustness checks, including randomization inference, and remains statistically significant when correcting for multiple hypothesis testing. Importantly, the estimated treatment effect implies that the intervention is cost-effective compared to hemodialysis. The estimated cost per life-year saved amounts to less than USD 3,000, making the intervention highly cost-effective by WHO standards. This likely understates the true cost-effectiveness of the intervention for several reasons, including potential spillover effects and the fact that students in the control group benefited from some information and facilitated access to ID changes, resulting in substantially higher registration rates than would be expected based on national data.

We find no statistically significant average treatment effect on students' attitudes. By contrast, legal and medical knowledge both increase by over 0.8 standard deviations among the treated students. Religious beliefs become significantly more conducive to organ donation and institutional trust is 0.5 standard deviations higher among the treated than among the control group. This reflects higher trust in the CNPTO, an increase in the perception that organ donation is equitable, and a decrease in the perceived frequency of organ traffick-

ing. Despite severe attrition, the results from the six-month follow-up are consistent with persistent treatment effects on medical knowledge, legal knowledge, religious beliefs and institutional trust. The increase in donor registration among the treatment group is likely to be the result of a combination of these mechanisms.

Heterogeneity analysis reveals that treatment effects on donor registrations are strongly concentrated among young men — the estimated treatment effect on donor registrations by female students is essentially zero whereas registrations by male students increased by 4.4 percentage points. This is at odds with the previous literature and with women's own intentions at baseline. The endline data allows us to rule out that female students learned less during the intervention or gained less institutional trust than male students. By contrast, anecdotal and qualitative evidence points to the importance of the family for organ donation. Family attitudes do not mitigate the learning effects stemming from the treatment; however, they strongly predict young adults' actual choices. Treated students whose families are likely to approve of organ donation are significantly more likely to become organ donors. This is consistent with families acting as a constraint on students' behavior. The gender heterogeneity could be explained by the fact that young men are more likely to challenge family-related barriers than young women.

This research makes three key contributions to the literature: First, it provides the first rigorous impact evaluation of an expert-led informational intervention on deceased organ donation in a non-Western context. We show that an informational intervention led by medical experts can be highly effective in increasing deceased organ donor registrations among young adults. While organ donation legislation differs from country to country, our findings may also be of interest to other LMICs in the MENA region and beyond, which suffer from similar informational constraints, low institutional trust and fear of organ trafficking. To the best of our knowledge, this is also the first study to measure donor status in IDs, a behavioral outcome signaling strong commitment to organ donation.

Second, we contribute to a rich literature on the importance of institutional trust for public health outcomes (Alsan and Wanamaker; 2017; Lowes and Montero; 2021; Martinez-Bravo and Stegmann; 2021; Alsan and Eichmeyer; 2024; Banerjee et al.; 2024a; León-Ciliotta et al.; 2025). We add to this literature by highlighting the importance of institutional trust for deceased organ donation and showing that an in-person intervention led by medical experts can meaningfully increase deceased organ donor registrations — even in a context characterized by institutional mistrust and fear of organ trafficking.

Finally, by documenting that gender and expected family approval strongly predict actual donation decisions, we contribute to a growing literature showcasing the importance of family members for individual decision-making in non-Western contexts (Anukriti et al., 2020; Anukriti et al., 2022). Our research suggests that, in Tunisia, organ donation is not perceived as an individual choice, but as a decision that must involve the whole family. Young adults whose families do not approve of deceased organ donation are unlikely to become organ donors, even though the treatment significantly increased their knowledge and institutional trust and rendered their religious beliefs more supportive of organ donation. The family constraint appears to be particularly salient for young women. The impact of informational interventions like ours could be amplified by strategically including older family members.

The paper proceeds as follows: Section 2 describes the research design in detail. Section 3 explains our empirical strategy. Section 4 presents results and Section 5 concludes. An Online Appendix gathers further results discussed in the main text.

2 Research Background and Design

2.1 Background

Tunisia is an ideal context for studying deceased organ donation. The country is considered a pioneer in organ transplantation on the African continent and in the MENA region (Haouari; 2019). The first cornea was transplanted in 1948, followed by the first kidney in 1989 and the first heart in 1993. The CNPTO, our implementation partner, is the national organization which oversees organ transplantation. The Tunisian lawmaker has imposed high safeguards around organ transplantation: Law No. 91-22 of March 25, 1991, recognizes brain death as the legal criterion for organ donation.[3] Brain death must be confirmed by two independent physicians, and organs can only be harvested and transplanted in authorized public hospitals. An algorithm matches potential donors and recipients with medical compatibility as the only criterion. By law, the identity of the donor must remain unknown to the recipient. All costs incurred are covered by the State.

Formally, Tunisia has a presumed consent regime, where all citizens are considered po-

[3]Many other countries, including the United States and Spain, also allow for deceased organ donation after circulatory death (Sade, 2011; Streit et al., 2023).

tential donors as long as they do not register in the national refusal register. In practice, however, the CNPTO does not harvest organs without the explicit consent of the family of the deceased or the deceased themselves: Law 99-18 of March 1, 1999, regarding the national ID created the option of adding the word "donor" on the backside of one's ID, next to the blood group.[4] The institution in charge of changing IDs is the Tunisian Technical and Scientific police. Changing one's ID to add the donor status requires signing the respective form and is, by law, free of charge. Falsification is very unlikely, which is the main argument in favor of the policy. However, ID changes come at a logistical cost for the individual who has to bring the relevant form and a biometric picture to a local police station, potentially queue until it is their turn, and subsequently wait for the new ID to be issued. To date, only 13,000 individuals — approximately 0.16% of the adult population — have registered as deceased organ donors by adding the status to their ID (Zannad; 2024), a figure that falls well below the registration rates seen in Europe and North America but which is broadly consistent with trends observed in other LMICs (see Figure A1 for global data on deceased organ donations).[5]

When a potential donor dies without the donor status on their ID, the CNPTO seeks consent to harvest their organs from the donor's family. Refusal rates are high. In 2023, 58.3% of the families who were approached refused. As a result, the CNPTO harvested organs from only 19 deceased organ donors (CNPTO; 2024). Increasing the donor pool would have large marginal benefits: the 19 deceased organ donors provided organs for 52 patients in need of a transplant. In general, one deceased organ donor can save the lives of up to eight patients with organ failure and improve the lives of another 75 by tissue transplantation (HDSA; 2024). Moreover, surgeons learn by doing and become more skilled and efficient as they perform more transplantations (Magee and Pomfret; 2021). Alternative treatments, such as kidney dialysis, are intrusive and painful, as well as expensive for the national health system. For most patients, organ transplantation is more cost-effective, and higher deceased organ donation rates would therefore also decrease public spending (Axelrod et al., 2018; Zhang et al., 2023). Given the lack of donated organs, waiting lists for transplants grow: 1,506 patients are on the waiting list for a kidney transplant in Tunisia (CNPTO; 2024).

[4]Medical practice in Spain — one of the world's leading organ donation and transplantation systems — is similar in this regard. While a presumed consent regime is formally in place, the national transplant center will always seek family consent before harvesting a potential donor's organs (Streit et al.; 2023).

[5]Tunisia had 17 actual deceased organ donors in 2023 (GODT; 2024), which translates to 1.5 organ donors per 1 million inhabitants. As a reference point, Spain, the global champion in terms of deceased organ donation, counts 48.9 donors per 1 million inhabitants (Rada; 2024); the United States 48.0 (GODT; 2024). Germany has about 10.3 registered donors per 1 million inhabitants (Aerzteblatt; 2024).

In extreme cases, patients' despair may lead to human rights violations: Egypt has become known as an international hub for organ trafficking from Sub-Saharan Africa and "organ transplant tourism" in the Middle East and North Africa (MENA) (COFS; 2011). Rumors about organ trafficking hurt trust in the medical system and are likely to decrease willingness to become organ donors even in neighboring countries (Abouna; 1993).

For privacy reasons, Tunisia does not have a centralized register of deceased organ donors (Zannad; 2024). Therefore, the only practical way to measure a behavioral outcome in the Tunisian context was to offer ID changes during an event in collaboration with the technical police. IDs are part of daily life and must be presented to public authorities on many occasions. We therefore interpret ID changes to add the donor status as a behavioral outcome which signals strong commitment to organ donation. The next subsection describes the details of our experimental design.

2.2 Evaluation Design

This study was implemented as a cluster randomized controlled trial at the South Mediterranean University (SMU) in Tunis. SMU is a private university and research institution, that comprises two main departments, engineering and business. In partnership with the CNPTO, we organized an "Organ Donation Awareness Week" on campus from 7–11 April 2025. The event was publicly announced and an advertisement was screened all week.[6] This light-touch intervention was in the background of the more targeted expert-led informational intervention, which was randomized at the classroom level. We identified 42 classes without student overlap from SMU's undergraduate programs. After gathering consent from the university and lecturers, we randomly allocated 21 classes to a treatment condition and 21 classes to a control condition, stratifying by department and year of study.

As illustrated in Panel A of Figure A2, we collected three rounds of survey data from the students. Baseline data was collected in March 2025.[7] With a Qualtrics questionnaire, we measured students' basic demographic characteristics, attitudes towards organ donation, altruism, risk aversion, propensity to give socially desirable answers (Reynolds; 1982), and their social network at school (similar to Alan and Kubilay; 2025; see Section D.1). We

[6]For ethical reasons, all students, lecturers and staff on campus had to receive a minimum amount of information about the event.

[7]Delays in data clearance implied that we had to run the baseline survey during Ramadan, which contributed to a relatively low response rate. The response rate, however, did not significantly differ between the treatment arms: 55.2% in the control group and 54.5% in the treatment group, p-value 0.823.

measured the immediate impact of the intervention with an endline survey in April 2025 (see Section D.2). Finally, we measured its long-term impact with a follow-up survey in October 2025 (see Section D.3).

Given low response rates to the baseline survey in March 2025, we decided to collect additional data from the incoming cohort of first year students in fall 2025.[8] As illustrated by Panel B of Figure A2, among the second cohort of students, the baseline survey was administered in early October 2025. We organized a second "Organ Donation Awareness Week" from 27–31 October, following the same intervention protocol as in the spring.

2.3 Intervention

The treatment consists of an expert-led face-to-face intervention.[9] CNPTO representatives visited the treatment classes during regular teaching activities in teams of two. The intervention started with a short video testimonial from a patient from rural north-western Tunisia, who had survived life-threatening illness thanks to a heart transplant performed by the CNPTO.[10] We expected this component to reinforce the intervention: personal narratives have been found to be highly effective in changing attitudes (Oschatz and Marker; 2020). The video also illustrated that organ transplantation in Tunisia is managed by national institutions for the benefit of all citizens, helping to counter the widespread belief that organs can be bought if needed. Using a short powerpoint presentation, the experts then explained the medical procedure of organ transplantation. Moreover, they provided details on the legal framework around organ donation in Tunisia and explained to students how they could add the donor status to their ID. The presentation also included a few slides describing the Islamic perspective on organ donation. It concluded with a 10-minute Q&A session. Afterwards, the intervention team left the classroom and the students filled in the endline survey on their mobile device. Section E in the Online Appendix includes detailed in-

[8]The second round of the trial was not foreseen in the pre-analysis plan. We recruited 15 classes for the trial out of which 6 were randomly allocated to treatment and 9 to control, which increases the number of classes and students with respect to the pre-registered estimates.

[9]There is a growing literature on the effectiveness of expert- and layperson-led informational interventions with mixed results. Abu-Akel et al. (2021) show that the health messages pronounced by medical professionals during the COVID-19 pandemic are significantly more likely to be shared by the respondents than the messages pronounced by government officials or celebrities. Alsan and Eichmeyer (2024) provide evidence that expert-led health interventions are most effective among the *less* hesitant segments of the population. Evidence from a nationwide phone survey run by one of the authors (Hauser; 2025) confirms that the young and educated segments of the Tunisian population are relatively more willing to become organ donors. The choice of an expert-led intervention therefore appeared appropriate.

[10]This is the link to the video: `https://youtu.be/U6vYtpmkNeo`

structions for the intervention team. In the control group, the questionnaire was distributed by the lecturer on the same days as in the treated classes.

A short text at the end of the survey informed students that the CNPTO and the technical police would offer on-the-spot ID changes on campus on Thursday and Friday. This implies that students who considered adding their donor status to their ID had some time to think about their decision.[11] We followed the same protocol when we repeated the study in October 2025. All students — including those who had participated in the spring — were eligible to use the on-the-spot ID changes. The students who completed the survey received a lunch voucher for the university cafeteria, but there were no monetary or in-kind incentives for changing one's ID. Appendix F includes some pictures from the intervention.

2.4 Theory of Change and Target Population

The intervention consists of two main components: (i) information about organ donation and (ii) real-life exposure to medical professionals. We are unable to disentangle the effects of these two components. We expected the treatment to increase students' knowledge about organ donation as well as their trust in medical institutions. It may also alter their attitudes, social expectations and religious beliefs regarding organ donation. Better knowledge, higher trust, more progressive attitudes, social expectations and religious beliefs may eventually translate to policy-relevant behavioral change: more deceased organ donor registrations.

Our target population is interesting and relevant: from a psychological perspective, the opinions and attitudes of young people are generally more malleable than those of older individuals (Abrams; 2022). From a medical perspective, even though organs can be harvested from donors of all age groups, the transplants from young donors tend to be of better quality than those from older donors (Dayoub et al.; 2018). Importantly, even though overall mortality rates are lower, young adults represent a large — if not the largest — share of actual deceased organ donors.[12] Moreover, three out of the six Tunisian hospitals which are autho-

[11] For ethical reasons, we had to give the students enough time to think about the decision to change their ID. However, we risked spillover effects from the treatment group to the control group as students from both treatment arms may interact. Within each round of data collection, we therefore left only a few days between the intervention and ID changes.

[12] According to Israni et al. (2024), the age group between 18 and 34 represented 27% of all deceased organ donors in the United States between 1988 and 2025, making it the most important age group in terms of absolute numbers. In the Eurotransplant area, 43% of all deceased organ donors were between the ages of 16 and 55 in 2024 (Eurotransplant International Foundation; 2025). Equivalent data is unfortunately not available for Tunisia.

rized to harvest and transplant organs are located in the capital (Zannad; 2024). Targeting a young urban population is therefore an efficient choice even from a welfare perspective.

2.5 Outcomes

Main Outcome: We treat ID changes as our primary outcome because it is a behavioral outcome and unlikely to be driven by experimenter demand effects.[13] During the "Organ Donation Awareness Weeks", students had the possibility to add their donor status to their ID on campus. In accordance with the Tunisian Law 99-27 of March 1, 1999, this required signing the official donor declaration form. The police agents then copied all relevant information for the new ID and took fingerprints. A photographer took biometric pictures on site. The whole procedure took less than 10 minutes. One week later, the CNPTO came back to the university to hand out the new IDs.[14] In compliance with our Ethics protocol and the GDPR, we asked the students who had changed their ID if they were willing to share this decision with the research team, and they were given a printed privacy and consent form. All of the newly registered donors gave consent to share their data with us so this outcome is observed for all the students who decided to change their ID. We then matched this data with the administrative data on the students' treatment status. The outcome is coded as 1 for students who changed their ID and 0 otherwise.

While we account for the on-the-spot ID changes in our intervention costs, they were available to all students and university staff members. The estimated treatment effect therefore describes the marginal effect of the expert-led informational sessions on top of removing logistical frictions related to ID changes. Due to the facilitation of ID changes, we expect the control group mean to be higher than the general population mean. This also implies that we are likely to underestimate the cost-effectiveness of the intervention.

Secondary outcomes: We measured six secondary outcomes with a Qualtrics survey

[13]The donor status on an ID represents a strong commitment to being a donor. It is possible to change one's mind by going to a local police station and applying for a new ID. However, the process is costly in terms of time and effort.

[14]It is theoretically possible that students changed their ID in a local police station close to their home instead of making use of the ID changes we proposed on campus. However, the logistical costs associated with doing so are considerable, which is why we believe that this is unlikely to represent a threat to our measurement strategy.

tool: attitudes towards organ donation,[15] social expectations,[16] legal knowledge, medical knowledge, religious beliefs related to organ donation,[17] and trust in medical institutions. The items are aggregated to standardized indices following Anderson (2008) for the main analysis, and we present disaggregated results in the Online Appendix. These outcomes, especially the attitudes, social expectations and trust measures, may be subject to experimenter demand effects. To test whether social desirability drives our findings, we collect data on students' propensity to give socially desirable answers at baseline. Moreover, one of the social expectations questions is incentivized: students were asked to guess the number of peers who would register as organ donors during the awareness week. The student who guessed right was awarded a TND 50 lunch voucher.

In the six-month follow-up survey, we repeated most survey items to investigate whether treatment effects persist over time. Moreover, we asked students whether they had discussed organ donation with their family members and friends (Section D.3).

3 Empirical Analysis

We recruited a total of 1,277 students for the sample, 912 in the first round and 365 in the second round of the trial. Table A1 shows the baseline balance of the full sample. Half of the students are female; a large share were born in Tunis. The only statistically significant imbalances are age (p-value 0.067), father's education (p-value 0.079), and trust in the CNPTO, which is slightly lower in the treatment group (p-value 0.064). We therefore control for age, father's education and baseline trust in the CNPTO in all main analyses.[18] A randomization inference test of joint covariate orthogonality yields a p-value of 0.525, suggesting that randomization was successful. We present baseline balance for the first cohort in Table A2 and the second cohort of students in Table A3 respectively.

[15] Note that we dropped the question "I would like to be an organ donor myself" from the attitudes index due to its strong susceptibility to social desirability pressure after the pre-registration. We instead included the question "I worry that my family may disapprove of organ donation" in the index.

[16] Following Bicchieri (2006), we measure respondents' (i) normative expectations about societal approval of organ donation, and (ii) their empirical expectations about peers' organ-donor registration behavior.

[17] This outcome was added after the pre-registration.

[18] The share of parents with university education in our sample is very high and exceeds that of the general population by far. According to the Barro and Lee (2013) data, less than 9% of Tunisians aged 15-35 were enrolled in university in 2000. This likely reflects the fact that SMU is a private and highly selective university. The sampled students come from more educated backgrounds than the average Tunisian student.

3.1 Empirical Specification

To test the null hypothesis that the intervention had no impact on the outcome y_{ic} of student i in classroom c, we estimate a linear model using OLS:

$$y_{ic} = \alpha_0 + \alpha_1 T_c + X_{ic}^{'}\gamma + \delta_s + \varepsilon_{ic} \tag{1}$$

where T_c is a binary variable which equals 1 if classroom c was allocated to treatment and 0 otherwise. X_{ic}' is a vector of control variables for student i in classroom c. We impute missing baseline covariates using the stratum-specific means or medians of the covariates. For network measures, we impute the stratum-and-treatment-group-specific mean or median. We control for the round of data collection, baseline trust in the organ donation center, student age, father's education, the total number of social ties, and binary indicators for missing covariates in all our main regressions. We also include strata fixed effects δ_s, as the treatment was assigned stratifying by department and year of study.[19] Standard errors are clustered at the classroom level. As a robustness check, we present all main results without covariate adjustment in Figure A4.

3.2 Spillover Analysis

The stable unit treatment value assumption (SUTVA) is unlikely to hold in our setting (Imbens and Rubin; 2015). As in similar informational interventions (i.e. Banerjee et al., 2024b), we expect spillovers to non-targeted individuals, as treated students may share the information from the intervention with friends in the control group. These spillover effects will bias $\hat{\alpha}_1$ towards 0. The baseline survey asked students to list the peers with whom they regularly discuss important issues, which allows us to compute the number of social ties to the treatment group for each student. We assume that, as social connectivity to the treatment group increases, a control group student is more likely to learn about the intervention from peers in the treatment group, thus being "contaminated" by spillovers.

We use the network data to estimate the following regression inspired by Miguel and Kremer (2004) and Baird et al. (2016), which assumes that spillovers increase linearly in the

[19] In our pre-analysis plan, we stated that we would use post-double selection (PDS) lasso to choose covariates. However, the lasso is unreliable in smaller sample sizes, which particularly affects the heterogeneity analysis and the follow-up survey analysis. We therefore opted for using a parsimonious set of baseline covariates throughout all analyses, which includes baseline variables that are slightly unbalanced or close to unbalanced, and highly predictive of the main outcome. Figure A3 shows the main results using PDS lasso.

number of treated social ties:

$$y_{ic} = \alpha_0 + \alpha_1 T_c + \alpha_2 N^T T_c + \alpha_3 N^T + \alpha_4 NT + \alpha_5 N + X_{ic}'\gamma + \delta_s + \varepsilon_{ic} \quad (2)$$

where N^T is the number of social ties in the treatment group, which, conditional on the total number of friends N, is exogenous. $\hat{\alpha}_3$ measures spillover effects — the impact of having more social ties to the treatment group. We thus explicitly allow for peer effects to differ by treatment arm while controlling for the total number of social ties. Table C1 reports social network measures from our baseline data collection, focusing on in-degree ties. The share of isolated students is balanced across treatment arms, as is the total number of social ties and the share of reciprocal ties. This suggests that the general structure of the social network is similar across treatment and control classrooms. As illustrated by Table C1 and Figure C1, the control group students have on average significantly more social connections among themselves than with the treatment group. Tables C2 and C3 show the same statistics by study round.

3.3 Follow-Up Analysis

The six-month follow-up survey was meant to provide additional evidence regarding the persistence of treatment effects on attitudes and spillover effects. Any treatment effects observed in the long run are unlikely to be driven by experimenter demand effects (Stantcheva; 2023). The response rate to the follow-up survey was very low, which is why we interpret these results with caution. Table A4 shows that 85.6% of invited students did not respond to the follow-up survey.[20] Attrition does not significantly differ between the two treatment arms (p-value 0.250). Yet, it is slightly lower in the treatment group (83.2% compared to 85.6% in the control group), which is why we present Lee (2009) bounds of the estimated treatment effects in Table A5. Table A4 shows that most observable baseline covariates, with the notable exception of gender in the whole sample, do not strongly predict attrition. Finally, Table A6 shows that the observable baseline characteristics of the students who answered the follow-up survey are fairly balanced across treatment arms. Keeping these caveats in

[20]The low response rate is likely to be related to several factors: the baseline and the endline surveys were administered in the classroom, ensuring relatively high compliance. Six months later, the students were not necessarily taking courses with the same classmates and the follow-up survey was therefore sent to the students by the university's research center. Some students had moved on to graduate studies, others had already graduated. Anecdotal evidence suggests that interest was low given that some students thought that they had already answered the same survey.

mind, we estimate inverse probability weights and add additional control variables, which predict attrition (self-reported baseline knowledge about organ donation, respondent gender, and an indicator for high religiosity), to all follow-up regressions.

4 Results

4.1 Treatment Effects on Donor Status

Table 1: ID Changes

	(1) Main	(2) Spillovers
Treatment	0.027**	0.020**
	(0.010)	(0.010)
Treatment x N^T		-0.021
		(0.013)
Treatment x N		0.006
		(0.008)
N^T		0.020*
		(0.010)
N		-0.002
		(0.003)
RI p-value	0.009	0.053
Control Mean	0.013	0.013
Observations	1277	1277

Notes: The table shows the estimated treatment effects on the main outcome, ID changes to add the donor status. All results are estimated using ordinary least squares (OLS) regressions. Column (1) shows the main specification as described in Equation (1). Column (2) shows results from the spillover effects regression using the number of treated students in a given student's social network (N^T) and its interaction with treatment as regressors as specified in Equation (2). All regressions control for student age, father's education, baseline trust in the organ donation center, the total number of social ties, the round of data collection, binary indicators for missing covariates, and strata fixed effects. Standard errors in parentheses are clustered at the class level. Randomization inference (RI) p-values (10,000 permutations) are reported in the last row. Inference accounts for clustering at the course level and stratification. Asterisks indicate significance at the *** 1%, ** 5% and *10% level.

A total of 43 individuals decided to add the donor status to their ID during the two "Organ Donation Awareness Weeks" at SMU: 21 of them were students from the treatment group and 8 students from the control group. Moreover, 7 out-of-sample students and 7 staff members came to change their ID.[21] Table 1 presents the estimated treatment effects on the students who were enrolled in the trial. Column (1) shows the result from estimating Equation (1): treated students are 2.7 percentage points more likely to change their ID. This corresponds to a 207% increase relative to the control group mean, as only 1.3% of control students changed their ID. Given that the control group mean is so low, the percent change should be interpreted with some caution. The estimated treatment effect decreases when the model is estimated without covariates in Figure A4, but stays statistically significant at the 5% level. Donor registration is a rare outcome and the treatment effect estimate may be affected by a small number of control students who decide to register. Table A7 shows that ID changes were spread across classes and occurred in 13 treatment classrooms compared to only 7 control classrooms. We also report Fisher exact p-values using the clustered treatment assignment in Table 1. Randomization inference yields a p-value of 0.009, meaning that out of 10,000 permutations, only 90 produced an effect size greater than or equal to the one observed.

Column (2) of Table 1 provides some evidence in favor of our initial hypothesis of positive spillover effects to the control group. When estimating Equation (2), we find that $\hat{\alpha}_3$ is positive and marginally statistically significant at the 10% level: if we were to increase the number of treated students among a control student's social network from 0 to 1, all else equal, we would expect them to become 2 percentage points more likely to register as a deceased organ donor. Table C4 shows the same estimates by study round. The follow-up survey asked students whether they had discussed organ donation with their friends. Table A8 shows that treated students are marginally more likely to report having discussed organ donation with their friends, corroborating this result.

As a robustness check, we estimate the same equation restricting to social ties which are reciprocal. Reciprocal ties imply that two students nominated each other, which is arguably a stronger measure of connection than a mono-directional tie. Yet, by restricting to reciprocal ties, we effectively reduce the number of observations across which we estimate spillover effects, as only a fraction of all social ties are reciprocal. The estimated spillover effects lose

[21] The 7 staff members who changed their ID include 2 professors who taught the treatment classrooms, 2 staff members who were involved with the Organ Donation Awareness Week as they worked in communications, and 3 not directly related staff members.

their statistical significance, as shown in Table C5, but the estimated coefficient remains positive. Finally, we estimate the same model using the number of treated classmates and interactions with treatment as regressors. The estimated coefficients, reported in the last column of Table C5, are close to zero, consistent with classmates being a weaker proxy of actual social ties. Thus, while we find evidence in favor of positive spillover effects to the control group, they are not very precisely estimated and do not survive alternative definitions of the regressor.

4.2 Cost-Effectiveness

The estimated treatment effects imply that the proposed intervention is cost-effective in comparison to alternative treatments and by WHO standards (Hutubessy et al.; 2003). A one year scale-up in Tunis would be expected to lead to 778 new donor registrations as shown in Table B1. Accounting for mortality and life expectation, the fact that one donor can donate several organs, the family consent rate and organ discard rates, the baseline scenario yields savings of over USD 40,000 due to averted kidney dialysis. Based on the same inputs and accounting for transplantation costs, the intervention would be expected to save one year of life at a cost of USD 2,983. This is well-below the WHO-CHOICE threshold of one times GDP per capita for very cost-effective interventions (Hutubessy et al.; 2003). Appendix B provides more details on the assumptions and conclusions of these calculations.

4.3 Potential Mechanisms

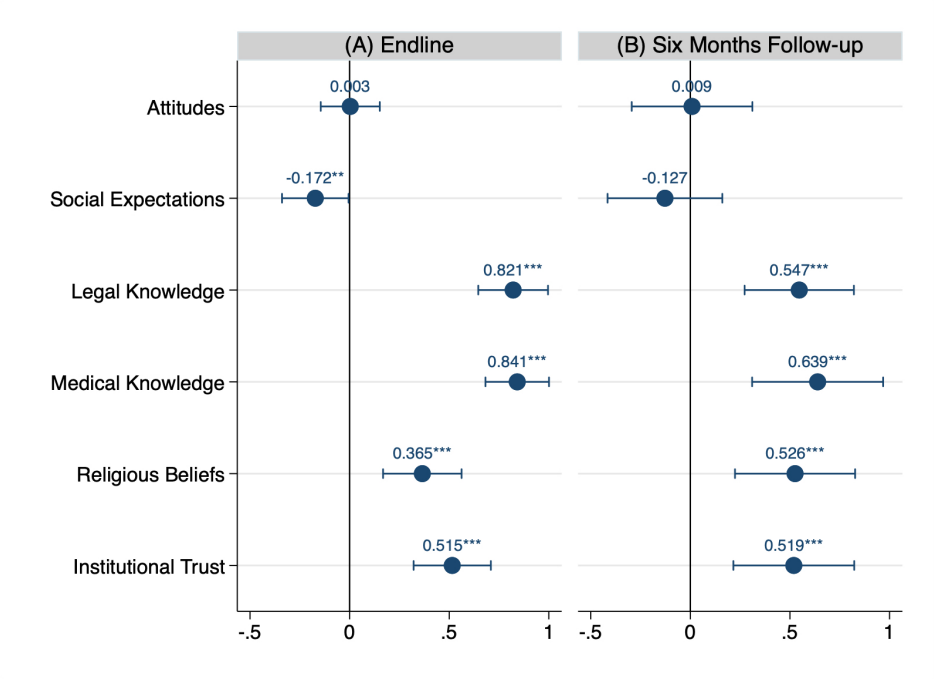
Which mechanisms drive the observed treatment effect on donor registrations? The collected survey data provides little evidence for large shifts in attitudes: Figure 1 shows that the estimated treatment effect on the aggregated attitudes index is statistically indistinguishable from zero. This result hides some heterogeneity: Panel A of Table A9 indicates that treated students report feeling more comfortable discussing organ donation with their families. Perhaps counterintuitively, treated students report *more* fear of family disapproval of organ donation. A plausible explanation is that the intervention made the possibility of family disapproval more salient.

Turning to social expectations, Figure 1 shows that the treatment reduces the social expectations index by 0.172 standard deviations, an effect that is significant at the 5% level. This decline is driven by both components of the index. Panel B of Table A9 indicates that

the treatment lowers respondents' normative expectations of societal approval of organ donation: in the control group, students expect 39% of Tunisians to approve of organ donation, while the treatment reduces this belief by over 3 percentage points, significant at the 5% level. The treatment also decreases respondents' empirical expectations of peer support for organ donation, though not significantly so. When asked how many students would register as deceased organ donors, the control group predicts approximately 89 sign-ups — substantially above the actual number of 29. The treatment thus moves beliefs closer to the true value, though not significantly so.

These findings run counter to our initial hypothesis that the intervention would strengthen pro-donation social expectations. However, they are consistent with a learning mechanism operating in a context of high baseline beliefs. The intervention conveyed factual information about organ donation in Tunisia, including the high prevalence of family refusals and the rarity of deceased organ donation, which likely led treated students to update their beliefs about societal approval *downwards*. While other results indicate that the intervention substantially improved students' views of organ donation and the institutions involved, the patterns observed here likely reflect a correction of overly optimistic prior beliefs rather than a deterioration in social norms. While we cannot fully disentangle the underlying mechanisms, the evidence suggests that changes in social expectations or attitudes are unlikely to be the primary drivers of the observed increase in donor registration.

Figure 1: Mechanisms



Notes: The figure plots the estimated treatment effects on the secondary outcomes, aggregated to indices. The indices are standardized to have mean 0 and standard deviation 1 in the control group. All results are estimated using ordinary least squares (OLS) regressions. Positive values indicate more progressive attitudes, norms and religious beliefs, increases in knowledge and institutional trust. See Section D.2 for a full list of items by index. All regressions in Panel (A) control for the baseline outcome if available, baseline trust in the organ donation center, student age, father's education, the total number of social ties, the round of data collection, binary indicators for missing covariates, and strata fixed effects. The set of controls for the regressions in Panel (B) includes the baseline outcome, if available, baseline trust in the organ donation center, student age, father's education, having no social ties, self-reported baseline knowledge about organ donation, respondent gender, an indicator for high religiosity, the round of data collection, binary indicators for missing covariates, as well as strata fixed effects. The regressions in Panel (B) are weighted using inverse probability weights. Standard errors are clustered at the class level. Asterisks indicate significance at the *** 1%, ** 5% and *10% level.

By contrast, Panel A of Figure 1 confirms that the intervention was highly effective in transmitting new knowledge and correcting wrong beliefs. The estimated treatment effects on knowledge are economically and statistically highly significant: the treatment led to a 0.821 standard deviation increase in legal knowledge and a 0.841 standard deviation increase in medical knowledge, both statistically significant at the 1% level.[22] The evidence on the intervention's ability to shape religious beliefs around organ donation is positive. The aggregate index increased by 0.365 standard deviations, significant at the 1% level.

Finally, the intervention had a large and highly statistically significant impact on institutional trust. Figure 1 shows that the treatment increased institutional trust by 0.515 standard deviations. Panel F of Table A10 shows the four sub-components of the index, two of which are noteworthy: First, trust in our implementation partner, the CNPTO, increased by 0.307 points relative to a control group mean of 1.452 points, a statistically and economically significant increase. Second, the intervention also decreased the perceived frequency of organ trafficking: in the control group, less than 41% of students stated that organ trafficking was not common or not very common in Tunisia. The treatment increased this share by 10.5 percentage points, statistically significant at the 5% level.

Social desirability bias and experimenter demand effects are a major concern for the interpretation of the secondary outcomes. We therefore collected information on students' propensity to give socially desirable answers at baseline. Panel A of Figure A6 divides the sample into students with below versus above the median propensity to give socially desirable answers. The estimated treatment effects on attitudes, knowledge, religious beliefs and institutional trust for the two groups are not statistically different from each other, suggesting that our results regarding these outcomes are unlikely to be driven by social desirability bias. The negative treatment effect on social expectations is driven by individuals with high propensity to give socially desirable answers. Social desirability bias does not threaten the main finding, which relies on administrative records. Moreover, Figure A7 shows that the treatment effects on the behavioral outcome are larger among individuals with *low* propensity to give socially desirable answers, though not significantly so (p-value

[22] Column (1) of Panel D in Table A10 shows that, when asked to select from a list the organs that can be transplanted in Tunisia, students in the treatment group on average correctly identified 1.4 more organs than those in the control group. Figure A5 shows a breakdown by organ: the CNPTO currently has the technology and expertise to transplant kidneys, liver, hearts, corneas, lungs, the pancreas and bone tissue. Treated students were more likely to correctly identify all of these organs and tissues. In addition, treated students were significantly less likely to believe that reproductive organs — such as the uterus and ovaries — can be transplanted in Tunisia, which is consistent with religious rulings limiting organ transplantation to non-reproductive organs, reflected in the Tunisian law.

0.297). This suggests that our main findings — with the notable exception of the negative treatment effect on social expectations — are unlikely to be driven by social desirability pressure.

Our main findings are also robust to controlling for multiple hypotheses testing: Table A11 compares p-values from the original regressions with sharpened False Discovery Rate q-values following Benjamini et al. (2006) as implemented in Anderson (2008), and p-values which are computed using the procedure proposed by Romano and Wolf (2016). The FDR q-values resemble the original p-values. The treatment effect on the behavioral outcome stays significant at the 5% level after the Romano-Wolf correction, while the treatment effects on legal and medical knowledge, religious beliefs, and institutional trust keep their statistical significance at the 1% level, emerging as robust mechanisms.

The results from the follow-up survey support this conclusion. Panel B of Figure 1 visualizes the estimated treatment effects at follow-up. Even though the confidence intervals widen, the emerging pattern is very similar to what was observed at endline: treated students show large and statistically significant knowledge gains and improvements in religious beliefs and institutional trust even six months after the intervention. Tables A12 and A13 disaggregate the indices by question item; results resemble those at endline. Table A5 shows the estimated Lee bounds (Lee; 2009). The treatment effects on medical knowledge, religious beliefs and institutional trust stay positive and statistically significant in the best-case scenario. However, the confidence intervals of the lower bounds include zero. Overall, the results suggest that the intervention likely had not only a large, but possibly also a persistent impact on students' knowledge, religious beliefs, and institutional trust.

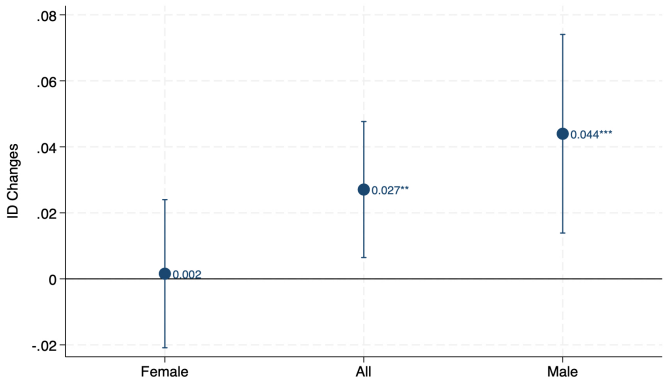
4.4 Heterogeneity

We pre-registered exploratory heterogeneity analyses by gender, expected family consent, and religiosity.[23] A large body of literature suggests that women tend to make more pro-social choices than men (McDonald and Kanske; 2023). Furthermore, the intervention team

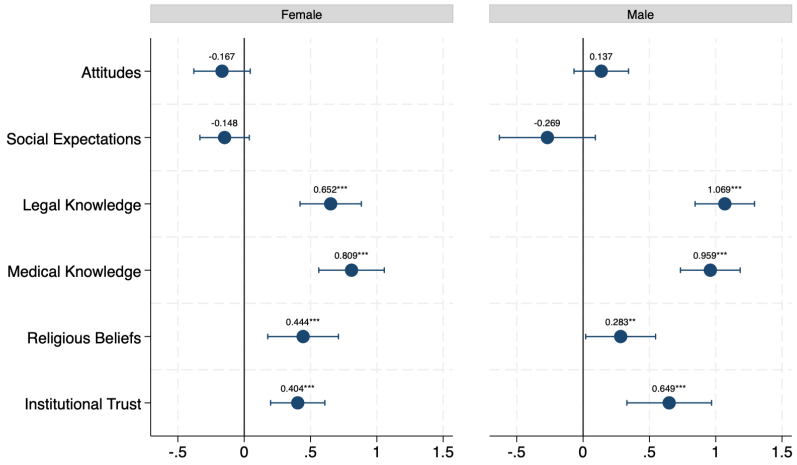
[23]We are not reporting detailed results on heterogeneity by religiosity. A majority of students declared practicing their religion every day; hence, the sample of less religious students is small and the treatment effects on this subgroup are very imprecisely estimated, rendering further interpretation difficult (see Figure A7). In our pre-analysis plan, we also stated that we would use Athey and Imbens (2016)'s method of recursive partitioning for analyzing heterogeneity in treatment effects. Given the small sample size, the relatively low response rates at baseline which limits the availability of non-imputed baseline covariates, and the low variation in the main outcome variable, this method is not suitable to our study. We therefore only report the results of the pre-registered heterogeneity analyses by gender and expected family consent.

Figure 2: Heterogeneity by Gender

(a) ID Changes



(b) Mechanisms



Notes: The figure plots the estimated treatment effects on ID changes (Panel A) and the secondary outcomes aggregated to indices (Panel B) by gender. All results are estimated using ordinary least squares (OLS) regressions, we estimate the model separately for female and male respondents. The indices are standardized to have mean 0 and standard deviation 1 in the control group. Positive values indicate more progressive attitudes, norms and religious beliefs, increases in knowledge and institutional trust. See Section D.2 for a full list of items by index. All regressions control for the baseline outcome if available, baseline trust in the organ donation center, student age, father's education, the total number of social ties, the round of data collection, binary indicators for missing covariates, and strata fixed effects. Standard errors are clustered at the class level. Asterisks indicate significance at the *** 1%, ** 5% and *10% level.

was entirely female — a role model effect should have favored registration among female students (Beaman et al.; 2012; Porter and Serra; 2020). A priori, we therefore expected larger treatment effects on donor registration among women. Instead, we find that 22 out of the 29 students who registered as organ donors (76%) were male. Figure 2 reveals that the estimated treatment effects on donor registration are entirely driven by young men. Male

students are 4.4 percentage points more likely to become organ donors when allocated to the treatment group. The estimated treatment effect on female students is close to zero and not statistically significant — the two estimates are statistically different at the 5% level. This result is robust to estimating the models without covariates (Figure A4). To the best of our knowledge, no previous study has found large gender differences in willingness to register as organ donors. If anything, female respondents tend to report higher motivation to become organ donors than male respondents (Regalia et al.; 2014). It is theoretically possible that the female students in our sample are intrinsically less interested in organ donation and less motivated to register. The baseline data, however, does not support this explanation: female respondents reported significantly higher altruism (p-value < 0.001) and willingness to become a deceased organ donor (p-value < 0.01) than male respondents. A competing explanation is that the share of registered organ donors among women was already high at baseline and the treatment merely allowed men to catch up. This is unlikely to be the case. While we have no reliable measure of baseline registration rates, the national average of registered donors is so low (0.16% of adults), that it is unlikely that more than 2 students in our sample were registered organ donors at baseline.[24]

Was the intervention better tailored to male students, failing to motivate women? To test this hypothesis, we disaggregate the treatment effects on secondary outcomes by gender in Panel B of Figure 2. The estimated treatment effects on social expectations, medical knowledge, religious beliefs and institutional trust are statistically indistinguishable from each other between the two subsamples.[25] Hence, the survey data provides little evidence for the hypothesis that women in the treatment group learned less or gained less institutional trust than men in the same group.

An alternative explanation is that treated women were more likely to spread the word among their social network than men, creating larger spillover effects among females, and diluting the treatment effects. The survey data at endline and follow-up does not support this hypothesis: female donors from the treatment group were no more likely than male

[24]Moreover, during the intervention 7 staff members chose to change their IDs to add the donor status, all of them women. While this represents a highly selected population, it adds evidence to the hypothesis that not gender, but a factor which is correlated with gender is driving the observed heterogeneity.

[25]The treatment effect on legal knowledge is significantly higher among the male respondents (p-value 0.009). However, the item-by-item analysis reported in Panels A and B of Table A14 shows that treatment effects on legal knowledge are largely indistinguishable across genders, with one exception: knowledge that the sale of organs is illegal. For this item, the positive treatment effect is driven primarily by male respondents. Importantly, baseline knowledge on this dimension is substantially higher among women. The treatment effectively closed this gender gap in knowledge, suggesting that gender differences in the responsiveness to the intervention are unlikely.

donors from the treatment group to report having discussed the ID change with their friends (p-value 0.567). Six months later, treated female students were just as likely as male students to report having discussed organ donation with their friends (p-value 0.258). When we run Equation (2) separately by gender to explicitly test for the possibility of gender differences in spillovers in Table C6, we find that $\hat{\alpha}_3$ loses statistical significance but stays positive for both female and male students. While it is larger for male students, the difference is not statistically significant (p-value 0.619).

We instead conjecture that the gender gap in donor registration may be related to constraints outside the trial. Young Tunisian men tend to have more autonomy than young women and may have more freedom to register as an organ donor — even against their families' preferences. Panels C and D of Table A14 show an item-by-item breakdown of the attitudes index by gender. The last column confirms that the negative treatment effect on fear of family disapproval is driven by the female subsample. This should be taken with a grain of salt since women in the control group reported less fear of family disapproval than men. Yet, the strong treatment effect on the female subsample may be indicative of the treatment increasing the salience of family disapproval among women specifically. As preregistered, we construct a weighted index of expected family consent based on a student's expectations about their family's attitudes toward organ donation at baseline, parental profession (working in the medical sector or not), and parental education following Anderson (2008). The intuition is that we expect family approval of organ donation to be high when students' parents are highly educated, work in a medical profession or when the students themselves believe that their family supports organ donation. Panel B of Figure A7 shows that the estimated treatment effect on the group of students for whom we expect low family approval is indistinguishable from zero. For students with high expected family approval, we observe a treatment effect of 4.4 percentage points, statistically significant at the 1% level. A subgroup treatment heterogeneity test yields a p-value of 0.082, the difference is thus marginally significant.

Figure A6 provides the same comparison for the secondary outcomes. Panel A shows that the estimated treatment effects on the secondary outcomes are very similar between the two groups. All students appear similarly receptive to the new information. As to gender, family attitudes at baseline do not constrain how the treatment affects students' knowledge and trust. However, family attitudes seem to predict students' agency to act on their beliefs and become organ donors, supporting the hypothesis that family attitudes represent a constraint

on young adults' behavior.[26]

The six-month follow-up survey asked students whether they had discussed organ donation with their family. Table A8 shows that in the control group, 43.8% of students declared they had talked about it with their families. Regression analysis provides no evidence of a treatment effect, consistent with the widespread fear of family disapproval students reported at endline (see Panel A of Table A9). While the follow-up results should be interpreted with caution due to the low response rate, they suggest that the intervention failed to empower the majority of students to discuss organ donation with their families. In contrast, 80% of the students who decided to register as organ donors told us that they had discussed organ donation with their families earlier, with no significant differences across treatment arms.

5 Conclusions

Organ transplantation is a promising technology for many LMICs that increasingly face the burden of an aging population that is more likely to suffer from organ failure (Streit et al.; 2023). While it is relatively straightforward to install medical equipment and train medical professionals, fostering public support for organ donation remains challenging, especially in contexts with low institutional trust. Within an RCT conducted at a Tunisian university, we evaluate the impact of an expert-led informational intervention on young adults' decision to register as deceased organ donors. We find that the intervention increases donor registration by 2.7 percentage points among the treated. It is highly effective in transmitting knowledge about organ donation and fostering trust in medical institutions. The evidence also suggests that the intervention successfully created awareness about Islam's endorsement of organ donation, shaping religious beliefs, which are conducive to organ donation. The proposed intervention is cost-effective. If scaled up, it would likely generate savings for the public health system. By WHO standards, raising awareness of organ donation seems to be a highly cost-effective policy intervention.

The baseline data collected for this intervention provides suggestive insights regarding peer effects and the role of family elders, which could offer a starting point for guiding future policies. The estimated spillovers to the control group appear large and point toward

[26]This is consistent with qualitative observations we made during the data collection. Several students told the intervention team that they would have liked to change their ID but that their parents had told them not to do so. Other students asked us for the intervention material to share it with their parents, i.e., to tell them about the Tunisian fatwa encouraging organ donation.

the possibility of peer-to-peer learning, but they are imprecisely estimated. Even though women exhibit comparable gains in knowledge and institutional trust, treatment effects are driven by young men, which is at odds with women's baseline intentions. This discrepancy and gender-specific treatment effects on attitudes are consistent with women having less agency to act on their preferences than men. Donor registration is higher among students from supportive families, adding evidence to the hypothesis that family dynamics play an important role. Given that organ donation seems to be viewed as a collective decision in this context, the intervention's impact might be increased by involving both peer networks and older family members.

While Tunisia's deceased organ donor rates are similar to those of many LMICs in the MENA region and beyond, the study was conducted in the setting of a private university, among students who are not representative of the general population. Yet, this group remains relevant and interesting, as young adults are more sensitive to new information and may spread it among their social network. Targeting this age group is efficient from a medical perspective since the organs donated by young donors are, on average, of better quality than those of older donors. Most importantly, despite overall lower mortality rates, young adults tend to be overrepresented among actual deceased organ donors. We therefore believe that the findings of our study can inform health policy in Tunisia and in similar contexts. Future research should expand the target group and explore intra-family decision-making dynamics in greater depth.

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A Additional Tables and Figures

A.1 Tables

Table A1: Baseline Balance

	N	Control	Treatment	Diff: C-T	p-value
A. Demographics:					
Female	781	0.513	0.484	0.029	0.523
Born in Tunis	779	0.412	0.430	-0.018	0.532
Age in years	779	19.865	20.155	-0.290	0.067
Mother university education	778	0.810	0.790	0.020	0.359
Father university education	777	0.822	0.768	0.055	0.079
Mother works in medical sector	778	0.132	0.142	-0.010	0.410
Father works in medical sector	777	0.119	0.100	0.019	0.200
Practices religion	565	0.593	0.559	0.034	0.505
High social desirability	759	0.528	0.487	0.041	0.207
High altruism	750	0.642	0.622	0.020	0.625
B. Institutional Trust:					
Medical sector	767	1.411	1.357	0.054	0.347
CNPTO	767	1.317	1.225	0.092	0.064
C. Organ Donation Attitudes:					
Comfortable discussing with family	762	0.581	0.607	-0.026	0.555
Feels sufficiently informed	763	0.422	0.448	-0.026	0.512
Wants to add status	761	0.420	0.434	-0.014	0.857
Worries about family disapproving	761	0.756	0.717	0.039	0.235
F-test (joint balance)				1.76	0.525

Notes: This table presents the baseline characteristics of the sampled students who answered the baseline survey. "High social desirability" is a binary variable that equals 1 whenever a student shows above median propensity to give socially desirable answers in a subsample of questions taken from Reynolds (1982), and 0 otherwise. "Practices religion" equals 1 whenever a student stated that they practice their religion every day, 0 otherwise. "High altruism" is a binary variable equal to 1 whenever a student scores above the median in a subsample of questions from the Rushton et al. (1981) altruism scale, and 0 otherwise. The items on institutional trust are scored on a scale from 0 to 3 where 3 is high trust. The items on attitudes towards organ donation are the following: "I have sufficient knowledge about organ donation to make an informed decision about whether I want to become a donor myself."; "I feel comfortable discussing organ donation with my family."; "I would like to be an organ donor myself."; "I worry my family may disapprove of organ donation." They are scored as 1 when a student somewhat or strongly agrees and 0 otherwise. The last row reports the F-statistic and randomization inference p-value from a joint test of covariate orthogonality. The F-statistic is from an OLS regression of treatment on all baseline covariates with strata fixed effects and standard errors clustered at the course level. The p-value is computed from 1,000 permutations that reshuffle treatment assignment at the course level within strata.

Table A2: Baseline Balance — Spring 2025 (Round 1)

	N	Control	Treatment	Diff: C-T	p-value
A. Demographics:					
Female	500	0.480	0.487	-0.007	0.919
Born in Tunis	498	0.403	0.430	-0.027	0.518
Age in years	499	20.451	20.634	-0.183	0.059
Mother university education	499	0.811	0.790	0.021	0.520
Father university education	498	0.810	0.783	0.027	0.287
Mother works in medical sector	499	0.137	0.147	-0.010	0.607
Father works in medical sector	498	0.133	0.107	0.026	0.168
Practices religion	374	0.601	0.602	-0.001	0.996
High social desirability	478	0.532	0.485	0.047	0.236
High altruism	470	0.636	0.598	0.038	0.340
B. Institutional Trust:					
Medical sector	486	1.438	1.363	0.075	0.151
CNPTO	486	1.260	1.221	0.039	0.446
C. Organ Donation Attitudes:					
Comfortable discussing with family	481	0.553	0.633	-0.080	0.033
Feels sufficiently informed	482	0.378	0.430	-0.052	0.292
Wants to add status	480	0.426	0.436	-0.010	0.702
Worries about family disapproving	480	0.759	0.682	0.077	0.058
F-test (joint balance)				1.19	0.896

Notes: This table presents the baseline characteristics of the students of the first cohort (Round 1) who answered the baseline survey. "High social desirability" is a binary variable that equals 1 whenever a student shows above median propensity to give socially desirable answers in a subsample of questions taken from Reynolds (1982), and 0 otherwise. "Practices religion" equals 1 whenever a student stated that they practice their religion every day, 0 otherwise. "High altruism" is a binary variable equal to 1 whenever a student scores above the median in a subsample of questions from the Rushton et al. (1981) altruism scale, and 0 otherwise. The items on institutional trust are scored on a scale from 0 to 3 where 3 is high trust. The items on attitudes towards organ donation are the following: "I have sufficient knowledge about organ donation to make an informed decision about whether I want to become a donor myself."; "I feel comfortable discussing organ donation with my family."; "I would like to be an organ donor myself."; "I worry my family may disapprove of organ donation." They are scored as 1 when a student somewhat or strongly agrees and 0 otherwise. The last row reports the F-statistic and randomization inference p-value from a joint test of covariate orthogonality. The F-statistic is from an OLS regression of treatment on all baseline covariates with strata fixed effects and standard errors clustered at the course level. The p-value is computed from 1,000 permutations that reshuffle treatment assignment at the course level within strata.

Table A3: Baseline Balance — Fall 2025 (Round 2)

	N	Control	Treatment	Diff: C-T	p-value
A. Demographics:					
Female	281	0.562	0.477	0.085	0.441
Born in Tunis	281	0.425	0.430	-0.005	0.407
Age in years	280	19.000	19.126	-0.126	0.444
Mother university education	279	0.808	0.789	0.019	0.502
Father university education	279	0.841	0.734	0.107	0.201
Mother works in medical sector	279	0.126	0.133	-0.007	0.541
Father works in medical sector	279	0.099	0.086	0.013	0.606
Practices religion	191	0.579	0.452	0.127	0.061
High social desirability	281	0.523	0.492	0.031	0.438
High altruism	280	0.651	0.672	-0.021	0.806
B. Institutional Trust:					
Medical sector	281	1.373	1.344	0.029	0.917
CNPTO	281	1.399	1.234	0.165	0.084
C. Organ Donation Attitudes:					
Comfortable discussing with family	281	0.621	0.555	0.066	0.698
Feels sufficiently informed	281	0.484	0.484	0.000	0.937
Wants to add status	281	0.412	0.430	-0.018	0.885
Worries about family disapproving	281	0.752	0.789	-0.037	0.396
F-test (joint balance)				12.90	0.433

Notes: This table presents the baseline characteristics of the students of the second cohort (Round 2) who answered the baseline survey. "High social desirability" is a binary variable that equals 1 whenever a student shows above median propensity to give socially desirable answers in a subsample of questions taken from Reynolds (1982), and 0 otherwise. "Practices religion" equals 1 whenever a student stated that they practice their religion every day, 0 otherwise. "High altruism" is a binary variable equal to 1 whenever a student scores above the median in a subsample of questions from the Rushton et al. (1981) altruism scale, and 0 otherwise. The items on institutional trust are scored on a scale from 0 to 3 where 3 is high trust. The items on attitudes towards organ donation are the following: "I have sufficient knowledge about organ donation to make an informed decision about whether I want to become a donor myself."; "I feel comfortable discussing organ donation with my family."; "I would like to be an organ donor myself."; "I worry my family may disapprove of organ donation." They are scored as 1 when a student somewhat or strongly agrees and 0 otherwise. The last row reports the F-statistic and randomization inference p-value from a joint test of covariate orthogonality. The F-statistic is from an OLS regression of treatment on all baseline covariates with strata fixed effects and standard errors clustered at the course level. The p-value is computed from 1,000 permutations that reshuffle treatment assignment at the course level within strata.

Table A4: Predictors of Attrition in Follow-up

	All	Responded to BL	Responded to BL and EL
A. Demographics:			
Female	-0.073**	-0.049	-0.071
	(0.025)	(0.036)	(0.048)
Born in Tunis		-0.001	0.012
		(0.028)	(0.044)
Age in years		-0.005	-0.005
		(0.017)	(0.022)
Mother university education		0.022	0.031
		(0.034)	(0.053)
Father university education		-0.003	-0.009
		(0.043)	(0.067)
Mother works in medical sector		0.007	0.004
		(0.046)	(0.061)
Father works in medical sector		0.030	-0.012
		(0.048)	(0.072)
Practices religion		-0.051	-0.095
		(0.031)	(0.049)
High social desirability		-0.007	-0.042
		(0.026)	(0.038)
High altruism		-0.012	-0.062
		(0.026)	(0.044)
B. Institutional Trust:			
Medical sector		0.014	0.026
		(0.018)	(0.025)
CNPTO		-0.004	-0.004
		(0.019)	(0.030)
C. Organ Donation Attitudes:			
Comfortable discussing with family		-0.046	-0.025
		(0.039)	(0.064)
Feels sufficiently informed		0.049	0.019
		(0.026)	(0.037)
Wants to add status		-0.039	0.015
		(0.032)	(0.054)
Worries about family disapproving		0.032	0.039
		(0.034)	(0.052)
Observations	1277	781	455
Control Mean	0.856	0.832	0.756

Notes: This table presents the correlations between students' baseline characteristics and non-response in the follow-up. The outcome is an indicator variable which equals 1 when a student failed to respond to the follow-up survey and 0 otherwise. "Responded to BL" restricts to students who had responded to the baseline survey. "Responded to BL and EL" restricts to students who had responded to both baseline and endline.

Table A5: Lee Bounds Mechanisms at the 6-Month Follow-Up

	(1) Lee Bounds		(2) IPW Estimate		(3) Unweighted
Outcome	Lower Bound	Upper Bound	Point Est.	95% CI	Point Est.
Attitudes	0.112	0.367	0.009	[-0.287, 0.304]	0.031
	[-0.360, 0.584]	[0.017, 0.718]			(0.138)
Social Expectations	-0.271	0.107	-0.127	[-0.409, 0.154]	-0.108
	[-0.696, 0.153]	[-0.300, 0.514]			(0.124)
Legal Knowledge	-0.036	0.592	0.547***	[0.279, 0.815]	0.591***
	[-0.334, 0.262]	[-0.081, 1.266]			(0.139)
Medical Knowledge	0.414	0.813	0.639***	[0.318, 0.960]	0.623***
	[-0.096, 0.925]	[0.296, 1.330]			(0.166)
Religious Beliefs	0.176	0.508	0.526***	[0.231, 0.820]	0.493***
	[-0.150, 0.502]	[0.027, 0.989]			(0.148)
Institutional Trust	0.125	0.642	0.519***	[0.223, 0.815]	0.387***
	[-0.373, 0.622]	[0.175, 1.109]			(0.134)
Observations	188		200		200

Notes: Column (1) of this table shows Lee bounds for the six-month follow-up outcomes following Lee (2009). The bounds are identified under the monotonicity assumption that treatment weakly increases the probability of responding to the follow-up survey. 95% confidence intervals in brackets are derived from 500 bootstrap replications clustered at the course level. No tightening covariates are used. The Lee bounds sample size reflects the control group follow-up respondents plus the trimmed fraction of treatment group follow-up respondents. Column (2) shows estimates which replicate the main follow-up results from Figure 1, Panel B, using inverse probability weights (IPW) to account for differential attrition. Weights are estimated from a logit model of follow-up response on baseline characteristics and strata fixed effects. The IPW sample size is the full follow-up sample. Column (3) shows the same estimates without IPW. Asterisks indicate significance at the *** 1%, ** 5% and *10% level.

Table A6: Baseline Balance — Answered Follow-up

	N	Control	Treatment	Diff: C-T	p-value
A. Demographics:					
Female	206	0.539	0.523	0.016	0.629
Born in Tunis	155	0.397	0.446	-0.049	0.412
Age in years	157	19.625	19.914	-0.289	0.318
Mother university education	157	0.828	0.763	0.065	0.236
Father university education	157	0.781	0.806	-0.025	0.797
Mother works in medical sector	181	0.091	0.163	-0.072	0.145
Father works in medical sector	181	0.091	0.096	-0.005	0.894
Practices religion	135	0.661	0.658	0.003	0.554
High social desirability	155	0.556	0.489	0.067	0.307
High altruism	155	0.651	0.696	-0.045	0.447
B. Institutional Trust:					
Medical sector	157	1.313	1.376	-0.063	0.667
CNPTO	157	1.344	1.215	0.129	0.219
C. Organ Donation Attitudes:					
Comfortable discussing with family	155	0.667	0.652	0.015	0.966
Feels sufficiently informed	155	0.429	0.402	0.027	0.909
Wants to add status	155	0.492	0.446	0.046	0.323
Worries about family disapproving	155	0.730	0.696	0.034	0.246
F-test (joint balance)				1.71	0.739

Notes: This table presents the baseline characteristics of the students who answered the follow-up survey. "High social desirability" is a binary variable that equals 1 whenever a student shows above median propensity to give socially desirable answers in a subsample of questions taken from Reynolds (1982), and 0 otherwise. "Practices religion" equals 1 whenever a student stated that they practice their religion every day, 0 otherwise. "High altruism" is a binary variable equal to 1 whenever a student scores above the median in a subsample of questions from the Rushton et al. (1981) altruism scale, and 0 otherwise. The items on institutional trust are scored on a scale from 0 to 3 where 3 is high trust. The items on attitudes towards organ donation are the following: "I have sufficient knowledge about organ donation to make an informed decision about whether I want to become a donor myself."; "I feel comfortable discussing organ donation with my family."; "I would like to be an organ donor myself."; "I worry my family may disapprove of organ donation." They are scored as 1 when a student somewhat or strongly agrees and 0 otherwise. The last row reports the F-statistic and randomization inference p-value from a joint test of covariate orthogonality. The F-statistic is from an OLS regression of treatment on all baseline covariates with strata fixed effects and standard errors clustered at the course level. The p-value is computed from 1,000 permutations that reshuffle treatment assignment at the course level within strata.

Table A7: ID Changes across Classrooms

	Control	Treatment
Number of classes	31	28
Classes with $\geq$1 ID change	7	13
with exactly 1 change	6	8
with exactly 2 changes	1	2
with 3+ changes	0	3
Total ID changes	8	21

Notes: The table illustrates the number of ID changes by treatment status of the classroom.

Table A8: 6-Month Follow-Up: Did you discuss Organ Donation with ... ?

	Friends	Family
Treatment	0.141*	0.022
	(0.082)	(0.078)
Control Mean	0.539	0.438
Observations	200	200

Notes: The follow-up survey asked respondents whether they had discussed organ donation with (i) their friends and (ii) their family. This table reports the estimated treatment effects on these outcomes, coded as 1 when a respondent declared they had discussed organ donation with their friends / family and 0 otherwise. All results are estimated using ordinary least squares (OLS) regressions. All regressions control for the baseline outcome, if available, baseline trust in the organ donation center, student age, father's education, having no social ties, self-reported baseline knowledge about organ donation, respondent gender, an indicator for high religiosity, the round of data collection, binary indicators for missing covariates, as well as strata fixed effects. The regressions are weighted using inverse probability weights. Standard errors in parentheses are clustered at the class level. Asterisks indicate significance at the *** 1%, ** 5% and *10% level.

Table A9: Disaggregated Mechanisms

A: Attitudes towards Organ Donation

	Feels at Ease with Donation	Comfortable Discussing with Family	Not Afraid of Family Disapproval
Treatment	0.011	0.092***	-0.118***
	(0.041)	(0.029)	(0.040)
Control Mean	0.602	0.656	0.413
Observations	639	661	647

B: Social Expectations

	National	University
Treatment	-3.489**	-18.100
	(1.607)	(15.109)
Control Mean	39.2	88.5
Observations	594	535

C: Legal Knowledge

	Organ Sale Illegal in Tunisia	Organ Donation not Costly	Knows how to Become Donor
Treatment	0.114***	0.295***	0.434***
	(0.034)	(0.053)	(0.045)
Control Mean	0.676	0.230	0.204
Observations	599	541	658

Notes: This table reports the estimated treatment effects on the secondary outcomes item-by-item. All results are estimated using ordinary least squares (OLS) regressions. The outcomes are survey items from the endline survey, all are coded such that positive values imply more progressive attitudes, norms and higher knowledge. Attitudes were measured on a 4-point Likert scale. "Somewhat agree" and "completely agree" are coded as 1, "somewhat disagree" and "completely disagree" as 0 to make the outcomes binary. Social expectations were measured at the national level (on a 0-100% scale, how many Tunisians approve of organ donation?) and at the university level (insert the number of students who will change their ID). The legal knowledge items equal 1 when a respondent gave the correct answer and 0 otherwise. See Section D.2 for a full list of items by index. All regressions control for the baseline outcome if available, baseline trust in the organ donation center, student age, father's education, the total number of social ties, the round of data collection, binary indicators for missing covariates, and strata fixed effects. Standard errors in parentheses are clustered at the class level. Asterisks indicate significance at the *** 1%, ** 5% and *10% level.

Table A10: Disaggregated Mechanisms (continued)

D: Medical Knowledge

	Organs	Potential Donors	Brain Death
Treatment	1.365***	0.510***	0.190***
	(0.160)	(0.075)	(0.039)
Control Mean	1.848	0.616	0.451
Observations	671	671	570

E: Religious Beliefs around Organ Donation

	Islam Encourages Organ Donation	Traditional Funeral Possible	No Religious Concerns
Treatment	0.163***	0.148***	0.052
	(0.046)	(0.038)	(0.050)
Control Mean	0.221	0.514	0.439
Observations	551	542	647

F: Institutional Trust

	Trust Medical Sector	Trust CNPTO	Donation Equitable	Trafficking Uncommon
Treatment	0.062	0.307***	0.375***	0.105**
	(0.084)	(0.085)	(0.042)	(0.046)
Control Mean	1.427	1.452	0.353	0.407
Observations	594	561	593	593

Notes: This table reports the estimated treatment effects on the secondary outcomes item-by-item. All results are estimated using ordinary least squares (OLS) regressions. The outcomes are survey items from the endline survey, all coded such that positive values imply more knowledge, more progressive religious beliefs and higher institutional trust. "Organs" and "Potential Donors" are indices of knowledge scores; a respondent was awarded one point for each correct answer and lost a point for each wrong answer. The "Organs" index theoretically takes on a range from [-5,7]; the "Potential Donors" index takes on a range of [-1,2]. "Brain Death" equals 1 when a respondent knew that brain death is irreversible and 0 otherwise. "Islam Encourages Organ Donation" and "Traditional Funeral Possible" are coded as 1 when a respondent knew that Islam encourages organ donation / a traditional funeral is possible after organ donation, and 0 otherwise. "No Religious Concerns" equals 1 when a respondent somewhat or strongly agrees that they do not have religious concerns regarding organ donation and 0 otherwise. The trust item was coded on a 4-point Likert scale from 0 to 3, where 3 is high trust as in the World Values Survey (2022). "Donation Equitable" and "Trafficking Uncommon" equal 1 when a respondent believes that organ donation is equitable / organ trafficking is not common, and 0 otherwise. See Section D.2 for a full list of items by index. All regressions control for the baseline outcome if available, baseline trust in the organ donation center, student age, father's education, the total number of social ties, the round of data collection, binary indicators for missing covariates, and strata fixed effects. Standard errors in parentheses are clustered at the class level. Asterisks indicate significance at the *** 1%, ** 5% and *10% level.

Table A11: Multiple Hypotheses Tests

	(1) Original p-values	(2) FDR q-values	(3) Romano-Wolf
ID Changes	0.011	0.007	0.049
Attitudes	0.965	0.160	0.994
Social Expectations	0.043	0.016	0.169
Legal Knowledge	0.000	0.001	0.001
Medical Knowledge	0.000	0.001	0.001
Religious Beliefs	0.000	0.001	0.002
Institutional Trust	0.000	0.001	0.001
Observations	1277		

Notes: Column (1) provides p-values from the original regressions at endline. Column (2) shows sharpened False Discovery Rate (FDR) q-values following Benjamini et al. (2006) as implemented in Anderson (2008). Column (3) shows p-values corrected for multiple hypotheses testing using the procedure proposed by Romano and Wolf (2016). All results are estimated using ordinary least squares (OLS) regressions. All regressions control for the baseline outcome if available, baseline trust in the organ donation center, student age, father's education, the total number of social ties, the round of data collection, binary indicators for missing covariates, and strata fixed effects. Standard errors are clustered at the class level. The number of observations refers to the total sample, which equals the number of observations for the "ID changes" regression. The number of observations for the other outcomes varies, as reported in Tables A9 and A10.

Table A12: Disaggregated Mechanisms at the 6-Month Follow-Up

A: Attitudes towards Organ Donation

	Feels at Ease with Donation	Comfortable Discussing with Family	Not Afraid of Family Disapproval
Treatment	0.054	-0.067	0.030
	(0.070)	(0.076)	(0.072)
Control Mean	0.629	0.663	0.360
Observations	200	200	200

B: Social Expectations

	National	University
Treatment	-1.460	-26.536
	(2.866)	(17.529)
Control Mean	36.9	67.2
Observations	200	184

C: Legal Knowledge

	Organ Sale Illegal in Tunisia	Organ Donation not Costly	Knows how to Become Donor
Treatment	0.069	0.231***	0.224***
	(0.061)	(0.052)	(0.073)
Control Mean	0.742	0.258	0.337
Observations	200	200	200

Notes: This table reports the estimated treatment effects on the secondary outcomes item-by-item using the data collected in the six-month follow-up. All results are estimated using ordinary least squares (OLS) regressions. The outcomes are survey items from the follow-up survey, all are coded such that positive values imply more progressive attitudes, norms and higher knowledge. Attitudes were measured on a 4-point Likert scale. "Somewhat agree" and "completely agree" are coded as 1, "somewhat disagree" and "completely disagree" as 0 to make the outcomes binary. Social expectations were measured at the national level (on a 0-100% scale, how many Tunisians approve of organ donation?) and at the university level (insert the number of students who will change their ID). The legal knowledge items equal 1 when a respondent gave the correct answer and 0 otherwise. See Section D.2 for a full list of items by index. All regressions control for the baseline outcome, if available, baseline trust in the organ donation center, student age, father's education, having no social ties, self-reported baseline knowledge about organ donation, respondent gender, an indicator for high religiosity, the round of data collection, binary indicators for missing covariates, as well as strata fixed effects. The regressions are weighted using inverse probability weights. Standard errors in parentheses are clustered at the class level. Asterisks indicate significance at the *** 1%, ** 5% and *10% level.

Table A13: Disaggregated Mechanisms at the 6-Month Follow-Up (continued)

D: Medical Knowledge

	Organs	Potential Donors	Brain Death
Treatment	0.599**	0.180	0.335***
	(0.249)	(0.140)	(0.072)
Control Mean	2.416	0.674	0.315
Observations	200	200	200

E: Religious Beliefs around Organ Donation

	Islam Encourages Organ Donation	Traditional Funeral Possible	No Religious Concerns
Treatment	0.153**	0.237***	0.087
	(0.068)	(0.075)	(0.078)
Control Mean	0.135	0.438	0.404
Observations	200	200	200

F: Institutional Trust

	Trust Medical Sector	Trust CNPTO	Donation Equitable	Trafficking Uncommon
Treatment	0.203*	0.337***	0.305***	0.064
	(0.106)	(0.106)	(0.074)	(0.069)
Control Mean	1.146	1.360	0.247	0.348
Observations	200	200	200	200

Notes: This table reports the estimated treatment effects on the secondary outcomes item-by-item using the data collected in the six-month follow-up. All results are estimated using ordinary least squares (OLS) regressions. The outcomes are survey items from the follow-up survey, all coded such that positive values imply more knowledge, more progressive religious beliefs and higher institutional trust. "Organs" and "Potential Donors" are indices of knowledge scores; a respondent was awarded one point for each correct answer and lost a point for each wrong answer. The "Organs" index theoretically takes on a range from [-5,7]; the "Potential Donors" index takes on a range of [-1,2]. "Brain Death" equals 1 when a respondent knew that brain death is irreversible and 0 otherwise. "Islam Encourages Organ Donation" and "Traditional Funeral Possible" are coded as 1 when a respondent knew that Islam encourages organ donation / a traditional funeral is possible after organ donation, and 0 otherwise. "No Religious Concerns" equals 1 when a respondent somewhat or strongly agrees that they do not have religious concerns regarding organ donation and 0 otherwise. The trust item was coded on a 4-point Likert scale from 0 to 3, where 3 is high trust as in the World Values Survey (2022). "Donation Equitable" and "Trafficking Uncommon" equal 1 when a respondent believes that organ donation is equitable / organ trafficking is not common, and 0 otherwise. See Section D.2 for a full list of items by index. All regressions control for the baseline outcome, if available, baseline trust in the organ donation center, student age, father's education, having no social ties, self-reported baseline knowledge about organ donation, respondent gender, an indicator for high religiosity, the round of data collection, binary indicators for missing covariates, as well as strata fixed effects. Standard errors in parentheses are clustered at the class level. Asterisks indicate significance at the *** 1%, ** 5% and *10% level.

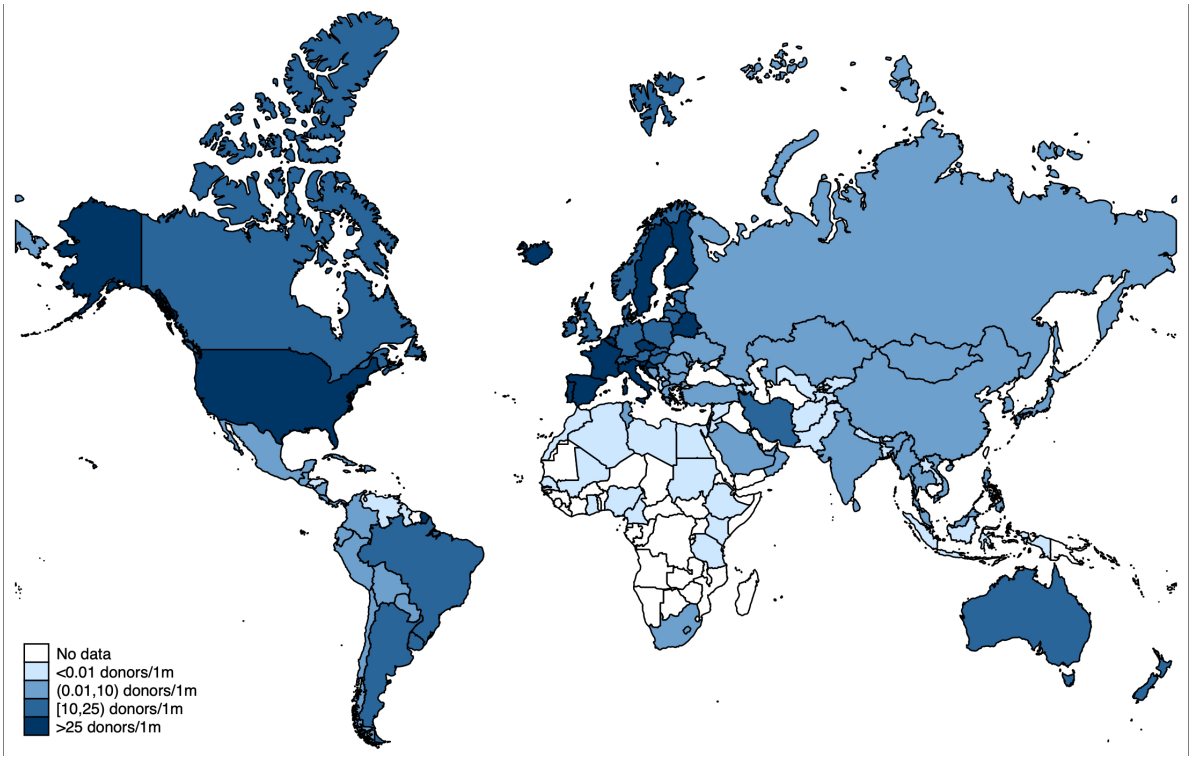
Table A14: Mechanisms by Gender: Attitudes and Legal Knowledge

Panel A: Legal Knowledge - Female			
	Knows how to Become Donor	Organ Sale Illegal in Tunisia	Organ Donation not Costly
Treatment	0.430***	0.031	0.287***
	(0.059)	(0.049)	(0.063)
Control Mean	0.218	0.732	0.245
Observations	286	274	246
Panel B: Legal Knowledge - Male			
Treatment	0.455***	0.236***	0.339***
	(0.062)	(0.051)	(0.073)
Control Mean	0.189	0.607	0.192
Observations	330	308	283
p-value: F = M	0.756	0.003	0.513
Panel C: Attitudes - Female			
	Feels at Ease with Donation	Comfortable Discussing with Family	Not Afraid of Family Disapproval
Treatment	-0.067	0.059	-0.193***
	(0.053)	(0.040)	(0.053)
Control Mean	0.669	0.692	0.481
Observations	286	286	286
Panel D: Attitudes - Male			
Treatment	0.033	0.141***	-0.021
	(0.056)	(0.048)	(0.057)
Control Mean	0.535	0.638	0.354
Observations	330	330	330
p-value: F = M	0.145	0.172	0.017

Notes: This table reports the estimated treatment effects on the attitudes index by gender, item-by-item. All results are estimated using ordinary least squares (OLS) regressions, we estimate the model separately for female and male respondents. The outcomes are survey items from the endline survey, all are coded such that positive values imply more progressive attitudes, norms and higher knowledge. Attitudes were measured on a 4-point Likert scale. "Somewhat agree" and "completely agree" are coded as 1, "somewhat disagree" and "completely disagree" as 0 to make the outcomes binary. See Section D.2 for a full list of items by index. All regressions control for the baseline outcome if available, student age, father's education, baseline trust in the organ donation center, the total number of social ties, the round of data collection, binary indicators for missing covariates, and strata fixed effects. Standard errors in parentheses are clustered at the class level. Asterisks indicate significance at the *** 1%, ** 5% and *10% level.

A.2 Figures

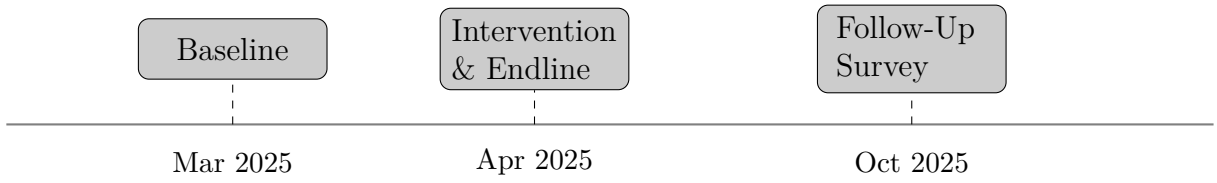
Figure A1: Number of Actual Deceased Organ Donors per 1 Million Inhabitants



Notes: Data: Global Observatory on Donation and Transplantation (2024).

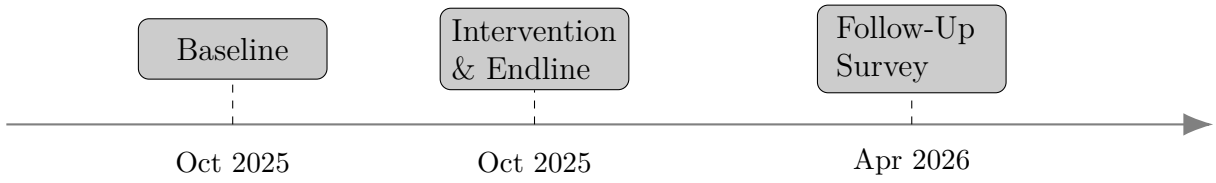
Figure A2: Timeline

A. Cohort 1



42 classes, $N = 912$

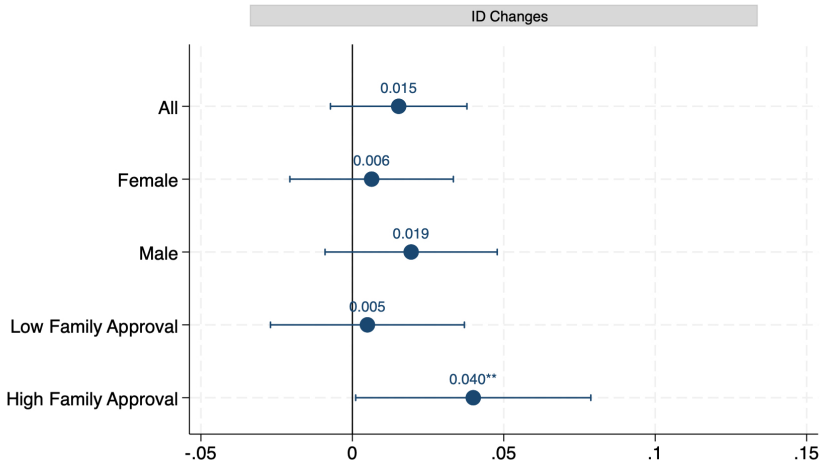
B. Cohort 2



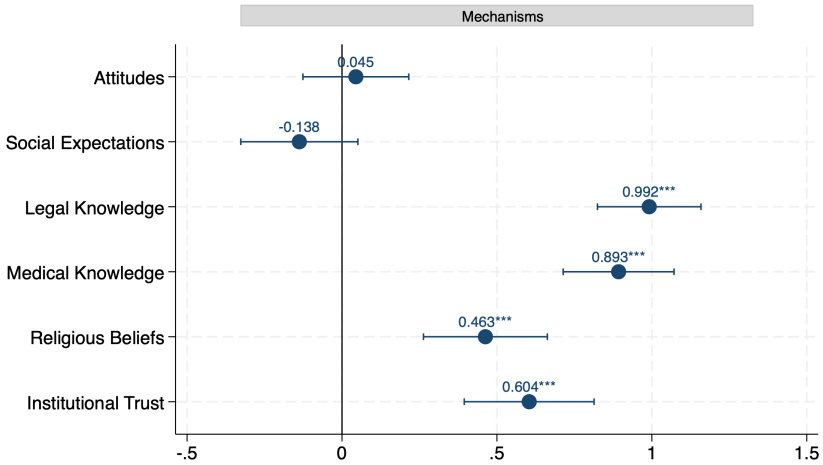
15 classes, $N = 365$

Figure A3: Results with PDS Lasso Covariate Selection

(a) ID Changes



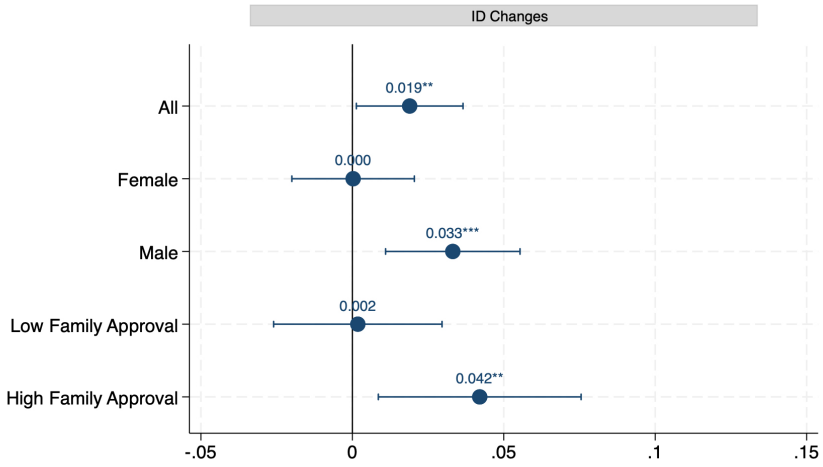
(b) Mechanisms



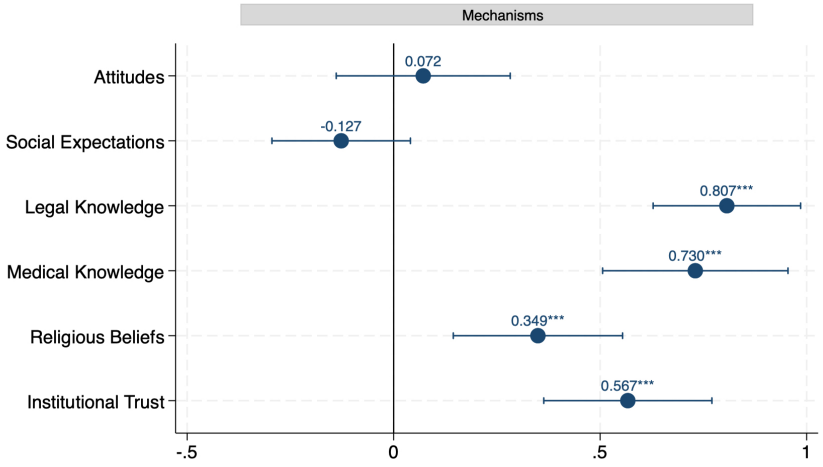
The figure plots the estimated treatment effects on ID changes (Panel A) and the secondary outcomes (Panel B), aggregated to indices, controlling for strata fixed effects, baseline covariates, if available, and the covariates which are chosen by the PDS lasso. *Panel A:* For the full sample and the male subsample, the lasso selects baseline interest in becoming an organ donor and baseline fear of family disapproval as covariates. For the female subsample and the subsamples with high/low family approval, the lasso selects no covariates. *Panel B:* For the attitudes, social expectations, legal knowledge indices, religious beliefs and institutional trust indices, the lasso selects no covariates. For the medical knowledge index, the lasso selects the "missing mother's profession" dummy. All results are estimated using ordinary least squares (OLS) regressions. "All" shows the treatment effect on the whole sample (Equation (1)). The remaining estimates report the treatment effects for the subgroups which are formed based on the baseline characteristics described in Section 4.4. All indices are standardized to have mean 0 and standard deviation 1 in the control group. Positive values indicate more progressive attitudes, social expectations and religious beliefs, increases in knowledge and institutional trust. See Section D.2 for a full list of items by index. Standard errors are clustered at the class level. Asterisks indicate significance at the *** 1%, ** 5% and *10% level.

Figure A4: Robustness Checks

(a) ID Changes without Covariates

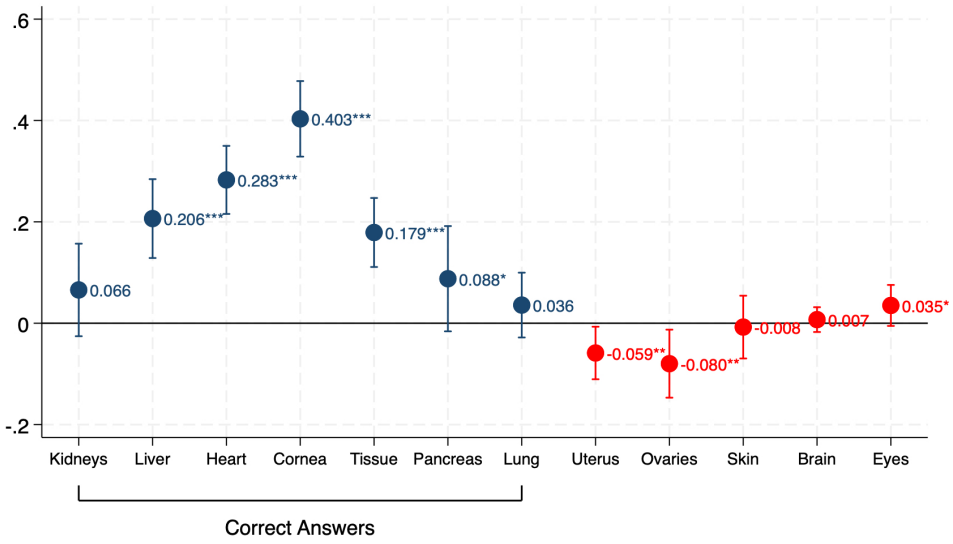


(b) Mechanisms without Covariates



The figure plots the estimated treatment effects on ID changes (Panel A) and the secondary outcomes (Panel B), aggregated to indices, and only controlling for strata fixed effects. All results are estimated using ordinary least squares (OLS) regressions. "All" shows the treatment effect on the whole sample (Equation (1)). The remaining estimates report the treatment effects for the subgroups which are formed based on the baseline characteristics described in Section 4.4. All indices are standardized to have mean 0 and standard deviation 1 in the control group. Positive values indicate more progressive attitudes, social expectations and religious beliefs, increases in knowledge and institutional trust. See Section D.2 for a full list of items by index. Standard errors are clustered at the class level. Asterisks indicate significance at the *** 1%, ** 5% and *10% level.

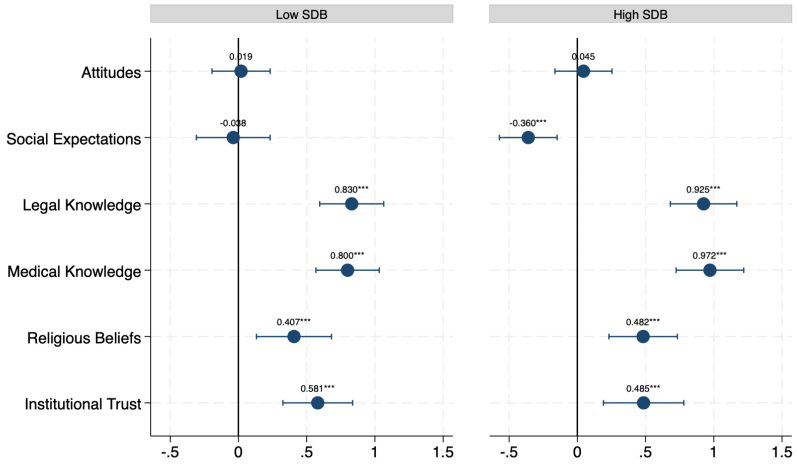
Figure A5: Which Organs / Tissues can be Transplanted in Tunisia?



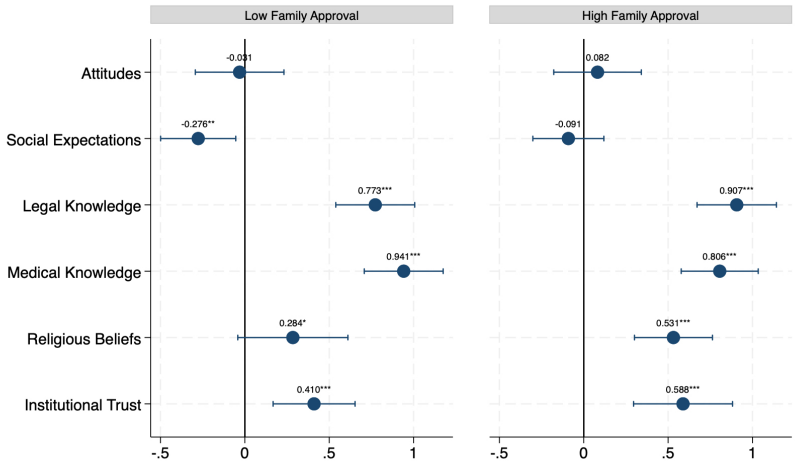
Notes: This figure disaggregates the treatment effects on the medical knowledge index reported in Panel D, column (1) of Table A10. All results are estimated using ordinary least squares (OLS) regressions. The outcomes are equal to 1 whenever a student answered that a given organ can be transplanted in Tunisia and 0 otherwise. Blue color indicates correct answers; red wrong answers. "Tissue" is short for "bone tissue". All regressions control for the baseline outcome if available, baseline trust in the organ donation center, student age, father's education, the total number of social ties, the round of data collection, binary indicators for missing covariates, and strata fixed effects. Standard errors are clustered at the class level. Asterisks indicate significance at the *** 1%, ** 5% and *10% level.

Figure A6: Further Heterogeneity

(a) Mechanisms by Social Desirability Bias (SDB)

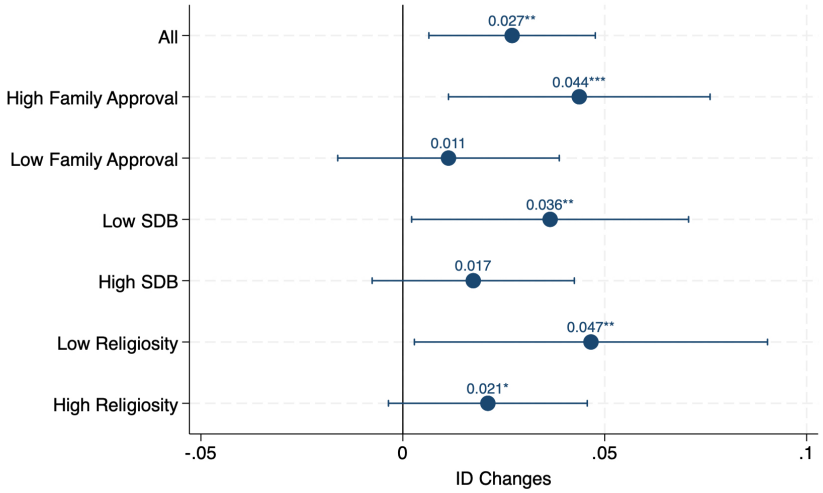


(b) Mechanisms by Expected Family Approval



Notes: The figure plots the estimated treatment effects on the secondary outcomes aggregated to indices by propensity to give socially desirable answers (Panel A) and by expected family approval (Panel B). All results are estimated using ordinary least squares (OLS) regressions, we estimate the model separately for respondents with low and high propensity to give socially desirable answers and respectively low and high expected family approval. The indices are standardized to have mean 0 and standard deviation 1 in the control group. Positive values indicate more progressive attitudes, norms and religious beliefs, increases in knowledge and institutional trust. See Section D.2 for a full list of items by index. All regressions control for the baseline outcome if available, baseline trust in the organ donation center, student age, father's education, the total number of social ties, the round of data collection, binary indicators for missing covariates, and strata fixed effects. Standard errors are clustered at the class level. Asterisks indicate significance at the *** 1%, ** 5% and *10% level.

Figure A7: Further Heterogeneity — ID Changes



Notes: The figure compares the estimated treatment effects on ID changes from the main model with estimated treatment effects by expected family approval, propensity to give socially desirable answers ("Low/High SDB"), and religiosity, all measured at baseline. All results are estimated using ordinary least squares (OLS) regressions. All regressions control for the baseline outcome if available, baseline trust in the organ donation center, student age, father's education, the total number of social ties, the round of data collection, binary indicators for missing covariates, and strata fixed effects. Standard errors are clustered at the class level. Asterisks indicate significance at the *** 1%, ** 5% and *10% level.

B Cost-Effectiveness

Table B1 in Appendix B lists the input parameters for our cost-effectiveness calculations. Several of these input parameters are not available for Tunisia, and we therefore have to rely on data from OECD countries (Miranda et al.; 2003; Schnitzler et al.; 2005; Bambha et al.; 2020; Agüero-Cobo et al.; 2024; Boenink, R. et al.; 2025). We do so by adjusting for GDP per capita differences and making the most conservative assumptions possible. This Appendix explains each assumption in detail and presents three different scenarios. The conservative scenario uses "worst-case" assumptions, while the base case is the most likely scenario based on our estimates. While there is necessarily uncertainty around our cost-effectiveness estimates, it is therefore likely that we are underestimating the true cost-effectiveness of the program.

With the proposed face-to-face intervention in small groups, a team of two medical professionals could reach N=28,800 students in one academic year. The main cost incurred by scaling up this intervention consists of the salaries for two medical experts, who lead the awareness workshop, and the police officer and photographer who are responsible for the ID changes. Based on the estimated treatment effects, we expect the intervention to yield 778 new registered deceased donors after one academic year. In the cost-effectiveness estimates presented in Table B1, we further account for country-specific mortality rates (United Nations; 2024), the rate of brain death (Bambha et al.; 2020), multiple organ donation (Aissi; 2022; HDSA; 2024), an organ discard rate of 22.5% (Miranda et al.; 2003), and further interference from the families. Even if a donor has the donor status on their ID, families could still intervene and refuse donation. The rate of refusal in 2023 was 58.3% (CNPTO; 2024); however, this rate refers to potential donors without the donor status on their ID. Anecdotal evidence and evidence from other contexts (Zannad; 2024; de Groot et al.; 2012) suggests that families tend to accept their loved ones' desire to be an organ donor, but there is no reliable data. To be conservative, we assume a remaining family refusal rate of 20% in the base case scenario. Table B1 also presents a conservative scenario, where we assume the same family refusal rates as for non-registered donors and use the lower bound of the confidence interval of our estimated treatment effect. In the optimistic scenario, we set family refusals to zero and use the upper bound of the confidence interval of our estimated treatment effect.

Hemodialysis is the only alternative treatment to transplantation in the case of kidney failure. We therefore use hemodialysis as a natural comparison point for assessing the cost-

effectiveness of our intervention. Mushi et al. (2015) and Chabouh et al. (2022) estimate that the *annual* costs of hemodialysis in Tunisia amount to approximately USD 10,000 — USD 12,000 *per patient*. This figure would be even higher if indirect costs such as the patient's productivity loss were taken into account.[27] Panel B of Table B1 presents the outputs of our cost sensitivity analysis for a one-year scale-up of the program in Tunis. The base case scenario estimates 778 new registered donors, producing 0.75 additional kidney transplants over these donors' lifetimes (accounting for the 26% probability of dying before age 85, the rarity of qualifying brain death — only 3 in 1,000 deaths — an 80% family consent rate, and the 22.5% organ discard rate). Assuming that 10 years of dialysis can be averted by one transplantation — a very conservative assumption — this yields net health system savings of over USD 63,000. Net of the program cost, this still implies overall savings of over USD 40,000. The optimistic scenario would yield savings of over USD 118,000 while the estimates of the conservative scenario yield dissavings of USD 10,000, net of the program cost. Given the very pessimistic assumptions on which the conservative scenario relies, the true cost-effectiveness is more likely to lie between the base case and the optimistic scenario.

Donors would not only provide kidneys. Panel C of Table B1 shows estimates using years of life saved through organ transplantation as outcome of interest. We assume that on average 10 life-years are gained per organ transplant (Schnitzler et al.; 2005) — again a conservative assumption. Based on the same input parameters and accounting for organ discard rates and transplantation costs, we conclude that the intervention would save one year of life at a cost of approximately USD 2,983 in the base case scenario. At USD 2,983 per life-year saved in the base case, the intervention costs approximately one-fifth of Tunisia's GDP per capita (USD 14,451, PPP-adjusted, World Bank, 2024). This is well below the WHO-CHOICE threshold of one times GDP per capita for "very cost-effective" interventions (Hutubessy et al.; 2003). Even the worst-case scenario, which is extremely pessimistic with respect to the size of the treatment effect and family consent rate, yields a cost per life-year of less than USD 12,000. Bertram et al. (2016) note that only relying on GDP per capita as a threshold for cost-effectiveness is problematic, and factors like budget impact and feasibility should also be considered. Yet, our estimates imply that the intervention is likely to lead to savings for the health system. The annual cost of dialysis for one patient likely exceeds

[27] Hemodialysis is the most common form of kidney dialysis. Typically administered in an outpatient facility, it consists of filtering the patient's blood to remove waste products. Hemodialysis usually requires 3 sessions per week, which can last between 3 and 5 hours. In 2022, about 12,000 Tunisian patients were on hemodialysis. There is no nationally representative data on the average length of treatment in Tunisia, but 55% of the patients sampled by Mrabet et al. (2025) had undergone hemodialysis for more than 5 years. Some patients survive on dialysis for over 10 years.

USD 11,000 per patient-year, and is thus itself not more cost-effective.

To assess robustness to parameter uncertainty, we complement the scenario analysis with a probabilistic sensitivity analysis (PSA) drawing 10,000 Monte Carlo samples from distributions over the possible parameter values of the treatment effect and the family consent rate (Table B2 in the Online Appendix). The intervention is cost-effective at the WHO-CHOICE threshold of one times GDP per capita in 99.1% of simulations, with a median cost per life-year of USD 3,358 and a 95% simulation interval of [USD 2,114, USD 8,989].

These cost-effectiveness estimates are likely to represent a lower bound. First, they do not account for spillover effects to untreated individuals, which may substantially increase the reach of the intervention. Second, there is reason to believe that even accounting for spillover effects, we would still be underestimating the effectiveness of the intervention. For ethical reasons, we needed to inform all students, faculty and staff members on campus about the "Organ Donation Awareness Weeks". The control group thus received a light-touch treatment, and the surveys alone, which were administered to both treatment arms, are likely to have further increased awareness of organ donation in the control group. Importantly, for measurement purposes, we needed to offer ID changes on campus, significantly lowering the logistical costs of registering as an organ donor for all students. The average share of registered organ donors in the control group is 1.3% after the trial — well above the national share of 0.16% — suggesting that simply offering convenient on-the-spot ID changes may already have increased individuals' propensity to register. In the absence of the light-touch information and on-the-spot ID changes, the control group mean would likely have been lower and the intention-to-treat effect higher.

B.1 Deterministic Scenarios

Panel A: Input Parameters

Treatment effect: The estimated intention-to-treat effect on donor registration from Table 1, Column (1). The base case uses the point estimate of 2.7 percentage points. The conservative and optimistic scenarios correspond approximately to the lower and upper bounds of the 95% confidence interval (1.0 and 4.8 percentage points, respectively).

Family consent rate: The probability that a registered donor's family consents to organ harvesting upon brain death. In Tunisia, the overall family refusal rate was 58.3% in 2023

Table B1: Cost-Effectiveness Sensitivity Analysis

	Conservative	Base Case	Optimistic
A. Input Parameters			
Treatment effect (pp)	1.0	2.7	4.8
Family consent rate	42%	80%	100%
Students reached per year	28,800	28,800	28,800
P(survive to age 85)	74%	74%	74%
Brain death rate (per 1,000)	3.0	3.0	3.0
Annual program cost (USD)	23,123	23,123	23,123
Transplant cost (USD)	9,330	9,330	9,330
Annual dialysis cost (USD)	11,000	11,000	11,000
Discount rate (annual)	3%	3%	3%
Organ discard rate	22.5%	22.5%	22.5%
Expected deceased organ donors	0.09	0.49	1.08
B. Track 1: Kidney-Only vs. Dialysis			
Usable kidneys per donor	1.6	1.6	1.6
Kidney transplants	0.15	0.75	1.67
Dialysis savings (USD)	13,722	70,571	156,824
Transplant costs (USD)	1,364	7,017	15,593
Net health system savings	12,358	63,554	141,230
Net program cost (USD)	10,765	-40,431	-118,107
C. Track 2: All Organs, Cost per Life-Year Saved			
Usable organs per donor	2.33	2.33	2.33
Life-years per transplant	10	10	10
All-organ transplants	0.22	1.13	2.51
Total transplant costs (USD)	2,047	10,526	23,390
Total life-years saved	2.2	11.3	25.1
Cost per life-year (USD)	11,474	2,983	1,855

Notes: This table presents a two-track sensitivity analysis of the cost-effectiveness of the proposed intervention, scaled to one academic year. The precise input and output parameters are described below.

(CNPTO; 2024), implying a baseline consent rate of approximately 41.7%. This was the rate among families of donors who were *not* registered. Having the word "donor" on one's national ID — a legally binding declaration — should substantially decrease refusal rates, but the magnitude of this effect is unknown. The conservative scenario assumes no improvement (42%), the base case assumes an 80% consent rate, and the optimistic scenario assumes that a legal declaration guarantees consent (100%).

Students reached per year: Based on the intervention design, a team of two medical

experts can visit 6 classrooms of approximately 30 students per day, reaching 3,600 students per month. Over an 8-month academic year, this yields 28,800 treated students.

P(survive to age 85): The probability that a registered donor survives to age 85, based on Tunisian life tables from the United Nations World Population Prospects (United Nations; 2024). We restrict to donors who die before age 85.

Brain death rate (per 1,000): The probability that a death qualifies for deceased organ donation through brain death. We use 3 per 1,000 deaths based on Bambha et al. (2020).

Annual program cost: The total cost of scaling up the intervention for one academic year, including salaries for two medical experts, one police officer (2,500 TND/month each), and one photographer (1,000 TND/month, only punctual deployment), converted at the exchange rate of 1 December 2025. The program cost is held constant at USD 23,123 across all scenarios.[28]

Transplant cost: There are no reliable data on transplantation costs for Tunisia. We adjust the estimated cost of a kidney transplant in Spain (EUR 34,000 according to Agüero-Cobo et al., 2024) to the Tunisian context using the ratio of GDP per capita in purchasing power parity terms. Based on the World Bank (2024) World Development Indicators, Tunisia's GDP per capita (PPP, current international USD) is USD 14,451 compared to USD 57,965 for Spain, yielding an adjustment factor of 0.25. This implies an estimated transplant cost of approximately USD 9,330 in Tunisia.

Annual dialysis cost: The annual cost of hemodialysis per patient in Tunisia, based on Mushi et al. (2015) and Chabouh et al. (2022), who estimate annual costs of approximately USD 10,000–12,000. We use the midpoint of this range.

Discount rate: Dialysis savings are discounted over 10 years at a 3% annual rate.

Organ discard rate: There is no data on the Tunisian organ discard rate. We use the Spanish discard rate of 22.5% from the early 2000s (Miranda et al.; 2003).

Expected deceased organ donors: The product of the treatment effect, the family consent rate, students reached, the probability of dying before age 85, and the brain death rate conditional on death.

Panel B: Track 1 — Kidney Transplantation vs. Dialysis

[28]The currency conversion is based on the exchange rate of 1 December 2025.

We restrict attention to kidneys and compare program costs against averted dialysis expenditure.

Usable kidneys per donor: Each deceased donor has two kidneys, but not all are transplantable. We apply a 22.5% discard rate based on the Spanish experience in the early 2000s (Miranda et al.; 2003), yielding 1.55 usable kidneys per donor ($2 \times (1 - 0.225)$). The same discard rate is applied to all organs in Comparison 2 (Panel C).

Kidney transplants: The expected number of kidney transplants generated by the intervention over a 65-year horizon, calculated as: students reached $\times$ treatment effect $\times$ (1 $-$ survival probability) $\times$ brain death rate $\times$ family consent rate $\times$ usable kidneys per donor.

Dialysis savings: The present value of averted dialysis costs, discounting at 3% per year over 10 years per kidney transplant. The assumption of 10 years of averted dialysis is conservative: transplantation is estimated to double the expected remaining lifetime compared to dialysis, and the gains are especially large for patients at young ages (Boenink, R. et al.; 2025). The age at dialysis initiation in Tunisia is considerably lower than in Europe or the US (Counil et al.; 2008; Jebali et al.; 2018), hence the gains of transplantation in terms of additional life-years are likely to be higher.

Transplant costs: The total cost of performing the kidney transplants, calculated as the number of kidney transplants multiplied by the transplant procedure cost.

Net health system savings: Dialysis savings minus transplant procedure costs.

Net program cost: The annual program cost minus net health system savings. Negative values indicate that the program generates net savings for the health system — i.e., the averted dialysis expenditure exceeds both the program cost and the transplant procedure costs.

Panel C: Track 2 — All Organs, Cost per Life-Year Saved

This comparison considers all organs harvested from each deceased donor and computes the cost per life-year saved, providing a metric comparable to other health interventions.

Usable organs per donor: The average number of organs harvested per deceased donor. We use 3 across all scenarios, based on the most recent figures reported by the Tunisian organ donation center (Aissi; 2022). In principle, one deceased donor can provide up to 8 transplantable organs (HDSA; 2024). We use the Spanish discard rate of 22.5% (Miranda

et al.; 2003), implying that one donor provides about 2.33 usable organs ($3 \times (1 - 0.225)$).

Life-years per transplant: The average life-years gained per organ transplant. Schnitzler et al. (2005) estimate that an average deceased organ donor provides 30.8 additional life-years distributed across 2.9 transplant recipients, implying approximately 10.6 life-years per organ transplant. We use 10 as a conservative figure.

All-organ transplants: The expected number of organ transplants over the 65-year horizon, calculated as: students reached $\times$ treatment effect $\times$ (1 $-$ survival probability) $\times$ brain death rate $\times$ family consent rate $\times$ usable organs per donor.

Total life-years saved: All-organ transplants multiplied by life-years per transplant.

Cost per life-year saved: The sum of the annual program cost and total transplant procedure costs, divided by total life-years saved.

B.2 Probabilistic Sensitivity Analysis

The scenario analysis in Table B1 relies on discrete combinations of uncertain inputs. To assess robustness more systematically, we complement it with a probabilistic sensitivity analysis. We treat the two uncertain parameters as random variables and draw 10,000 combinations from their respective distributions: the treatment effect (normal, truncated at zero, calibrated to the 95% confidence interval) and the family consent rate (uniform over the full plausible range of 42%–100%). Panel A of Table B2 reports each distribution along with its mean and approximate 95% confidence interval. All remaining parameters are held fixed at the values in Table B1.

Panels B and C of Table B2 report the results on savings from averting kidney dialysis. The median net health system savings is USD 53,635, with a 95% simulation interval of [USD 14,890, USD 110,248]. Even the lower bound is positive, hence, the intervention generates net savings in the vast majority of simulated scenarios. Panel C shows that the median cost per life-year saved is USD 3,358 — approximately one-quarter of Tunisian GDP per capita — with a 95% interval of [USD 2,114, USD 8,989]. Under the WHO-CHOICE threshold of one times GDP per capita, the intervention is cost-effective in 99.1% of simulations; this rises to 99.9% at three times GDP per capita. The uniform distribution assigned to the family consent rate has a mean of 71%, which is more conservative than the 80% base-case assumption in Table B1, yet the conclusions are essentially unchanged.

Table B2: Probabilistic Sensitivity Analysis

	Distribution	Mean	95% interval
A. Stochastic Input Distributions			
Treatment effect (pp)	Normal, trunc. at 0	2.7	[1.0, 4.8]
Family consent rate	Uniform	71%	[42%, 100%]
		Median	95% interval
B. Track 1: Kidney-Only vs. Dialysis			
Net health system savings (USD)		53,635	[14,890, 110,248]
C. Track 2: All Organs, Cost per Life-Year Saved			
Cost per life-year (USD)		3,358	[2,114, 8,989]
P(cost-effective at 1× GDP per capita)		99.1%	
P(cost-effective at 3× GDP per capita)		99.9%	

Notes: This table reports the results of a probabilistic sensitivity analysis (PSA) based on 10,000 Monte Carlo draws. Panel A describes the distributions assigned to the uncertain inputs, the 95% interval for the treatment effect, and the possible range of values for the family consent rate. Panels B and C report the median and 95% simulation interval for net health system savings (Track 1) and cost per life-year saved (Track 2), together with the probability that the intervention falls below the WHO-CHOICE cost-effectiveness thresholds of 1× and 3× GDP per capita (USD 14,451, PPP-adjusted, World Bank, 2024)

C Spillovers

Definition of social ties: Students' social network was measured in the baseline survey, a couple of weeks prior to the intervention (see Section D.1). Contrary to what we stated in the pre-registration, the number of nominations a student can make was not restricted in the survey. Given the relatively low response rate to the baseline survey, we focus on in-degree ties: as is standard in the literature, we define in-degree ties as the nominations a student i receives from their peers. Out-degree ties, that is the number of nominations student i makes, are a potential alternative measure. However, given high nonresponse at baseline, the number of out-degree ties is strongly downwards-biased; for example, in our data, many students are isolated in the out-degree sense because they did not answer the survey, not because they do not have friends. We therefore prefer the in-degree measure. We also present spillover effects estimates using the number of reciprocal ties, which are social ties that fulfill both the in- and out-degree definition. Reassuringly, the results are similar.

Descriptive statistics: Tables C1, C2 and C3 present descriptive statistics about students' networks for the full sample and for the first and second cohort respectively. Figure C1 provides an illustration of the social network of two first-year classes.

Estimation: Spillover effects are estimated following Equation (2) as detailed in Section 3.2. This specification has changed slightly relative to the pre-registered one to account for the fact that some ties go to "out-of-sample" students, who form part of neither the treatment nor the control group. Out of the 1,374 students enrolled at SMU in the spring term of the academic year 2024/2025, we recruited 912 students for the trial. N is thus the sum of peers who were allocated to the treatment group (N^T), to the control group, or who were not enrolled in the study (out-of-sample). The pre-registered specification referred to N^C, social ties to the control group, instead of N. We do not report the results of Equation (3) of the pre-registered report, which uses the *share* of friends treated, and yields similar results. Table C4 shows the estimated spillover effects by round of study.

Reciprocal ties: Table C5 shows estimates using reciprocal ties, which are social ties that fulfill both the in- and out-degree definition, instead of in-degree social ties as in the main specification. Results are similar. We define reciprocity as in Garlaschelli and Loffredo (2004): the share of reciprocal ties r is the number of bidirectional ties $L^{\leftrightarrow}$ over the total number of ties L: $r \equiv \frac{L^{\leftrightarrow}}{L}$. Intuitively, when all social ties are reciprocal, we would find $r = 1$. By contrast, $r = 0$ when no social ties are reciprocal.

Classmates: Given that not all students answered the baseline survey (the overall response rate is 61.7% in the control group and 60.7% in the treatment group, p-value = 0.708), we pre-registered that we would construct an additional proxy of student interactions based on administrative data about the students' schedules.[29] Exploiting the variation in class composition, we are able to compute the share of treated classmates for each student, even for those for whom we lack baseline data. Assuming that the likelihood of spillover effects increases with the share of treated classmates a student has, we re-estimate Equation (2) using the number of treated classmates as a regressor.

Table C6 shows spillover estimates by gender, as discussed in Section 4.4.

Table C1: Social Networks

	N	Control	Treatment	Diff: C-T	p-value
Isolated student	1277	0.284	0.297	-0.013	0.800
Total social ties	1277	2.018	1.868	0.150	0.434
Share of reciprocal ties	1277	0.244	0.212	0.032	0.276
Share of reciprocal ties with treatment group	1277	0.058	0.297	-0.239	0.000
Number social ties from control group	1277	1.519	0.380	1.139	0.000
Number social ties from treatment group	1277	0.498	1.489	-0.991	0.000
No social ties from control group	1277	0.367	0.734	-0.367	0.000
No social ties from treatment group	1277	0.683	0.359	0.324	0.000
Share of social ties from treatment group	1277	0.174	0.562	-0.388	0.000

Notes: The baseline survey asked students to list the peers with whom they frequently discuss important matters. The social ties shown in this table represent the nominations *received* by a given student. For instance, a student is isolated if they were not nominated by anyone. A social tie is reciprocal when student A is nominated by student B and vice versa. For students without social ties, the share of (reciprocal) social ties to the treatment group is set to 0.

[29] In the engineering school, cohorts of a given program typically take the same classes, but a significant share of students follow individualized study plans, e.g. because they failed a class in a previous year. In the business school, there is substantial variation among the students following a given course. As a result, the class composition varies and a student may have different classmates across their classes.

Table C2: Social Networks — Spring 2025 (Round 1)

	N	Control	Treatment	Diff: C-T	p-value
Isolated student	912	0.324	0.337	-0.013	0.754
Total social ties	912	1.837	1.595	0.242	0.277
Share of reciprocal ties	912	0.198	0.176	0.022	0.400
Share of reciprocal ties with treatment group	912	0.044	0.251	-0.207	0.000
Number social ties from control group	912	1.345	0.307	1.038	0.000
Number social ties from treatment group	912	0.491	1.287	-0.796	0.000
No social ties from control group	912	0.421	0.768	-0.347	0.000
No social ties from treatment group	912	0.686	0.403	0.283	0.000
Share of social ties from treatment group	912	0.182	0.528	-0.346	0.000

Notes: The baseline survey asked students to list the peers with whom they frequently discuss important matters. This table restricts to the cohort of students who answered baseline in spring 2025 (Round 1). The social ties shown in this table represent the nominations *received* by a given student. For instance, a student is isolated if they were not nominated by anyone. A social tie is reciprocal when student A is nominated by student B and vice versa. For students without social ties, the share of (reciprocal) social ties to the treatment group is set to 0.

Table C3: Social Networks — Fall 2025 (Round 2)

	N	Control	Treatment	Diff: C-T	p-value
Isolated student	365	0.205	0.169	0.036	0.633
Total social ties	365	2.380	2.725	-0.345	0.387
Share of reciprocal ties	365	0.335	0.322	0.013	0.868
Share of reciprocal ties with treatment group	365	0.086	0.438	-0.352	0.000
Number social ties from control group	365	1.868	0.606	1.262	0.001
Number social ties from treatment group	365	0.512	2.119	-1.607	0.000
No social ties from control group	365	0.259	0.625	-0.366	0.000
No social ties from treatment group	365	0.678	0.219	0.459	0.000
Share of social ties from treatment group	365	0.158	0.669	-0.511	0.000

Notes: The baseline survey asked students to list the peers with whom they frequently discuss important matters. This table restricts to the cohort of students who answered baseline in fall 2025 (Round 2). The social ties shown in this table represent the nominations *received* by a given student. For instance, a student is isolated if they were not nominated by anyone. A social tie is reciprocal when student A is nominated by student B and vice versa. For students without social ties, the share of (reciprocal) social ties to the treatment group is set to 0.

Table C4: ID Changes — Spillovers By Data Collection Round

	First Round		Second Round	
	(1) Main	(2) Spillovers	(3) Main	(4) Spillovers
Treatment	0.022*	0.033**	0.036	0.034
	(0.011)	(0.014)	(0.024)	(0.030)
Treatment x N^T		-0.016		-0.041*
		(0.015)		(0.021)
N^T		0.008		0.040**
		(0.009)		(0.017)
Control Mean	0.015	0.015	0.010	0.010
Observations	912	912	365	365
p-value Treatment			0.585	0.966
p-value N^T				0.080

Notes: The table shows the estimated treatment effects on the main outcome, ID changes to add the donor status by round of data collection. All results are estimated using ordinary least squares (OLS) regressions separately for each round. Columns (1) and (3) show the main specification as described in Equation (1) for the first and the second round of data collection respectively. Columns (2) and (4) show results from the spillover effects regression for the first and second round of data respectively, using the number of treated students in a given student's social network (N^T) and its interaction with treatment as regressors as specified in Equation (2). "p-value Treatment" and "p-value N^T" report p-values for the null hypothesis that the respective coefficient is equal across the two data collection rounds (Wald test, standard errors clustered at the course level). All regressions control for baseline trust in the organ donation center, student age, father's education, the total number of social ties, binary indicators for missing covariates, and strata fixed effects. Standard errors in parentheses are clustered at the class level. Asterisks indicate significance at the *** 1%, ** 5% and *10% level.

Table C5: ID Changes — Spillovers with Alternative Definitions of Social Ties

		Spillovers	
	Main	Reciprocal Ties	Classmates
Treatment	0.027**	0.016	0.030
	(0.010)	(0.010)	(0.034)
Treatment x N^T		-0.014	0.001
		(0.031)	(0.001)
Treatment x N		-0.001	-0.000
		(0.017)	(0.000)
N^T		0.027	-0.001
		(0.025)	(0.001)
N			0.000
			(0.000)
Control Mean	0.013	0.013	0.013
Observations	1277	1277	1277

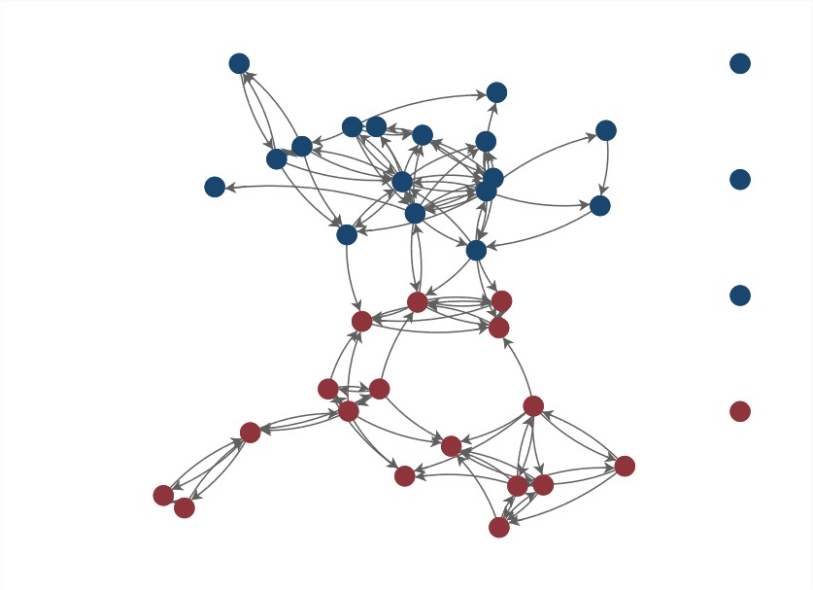
Notes: The table shows the estimated treatment effects on the main outcome, ID changes to add the donor status. All results are estimated using ordinary least squares (OLS) regressions. Column "Main" shows the main specification as described in Equation (1). "Reciprocal Ties" defines N as a student's total number of reciprocal social ties and N^T as the number of treated social ties among them. Column "Classmates" shows results from an alternative spillover effects regression where N^T is the number of treated students among a given student's classmates and N is the total number of classmates. All regressions control for the baseline outcome if available, baseline trust in the organ donation center, student age, father's education, the total number of social ties, the round of data collection, binary indicators for missing covariates, and strata fixed effects. Standard errors in parentheses are clustered at the class level. Asterisks indicate significance at the *** 1%, ** 5% and *10% level.

Table C6: ID Changes — Spillovers by Gender

	(1) Female	(2) Male
Treatment	-0.000	0.027**
	(0.011)	(0.013)
Treatment x N^T	-0.010	-0.033
	(0.012)	(0.020)
Treatment x N	-0.001	0.015
	(0.006)	(0.013)
N^T	0.016	0.025
	(0.011)	(0.015)
N	-0.000	-0.006
	(0.004)	(0.004)
p-value: F = M (N^T)	0.619	
Control Mean	0.015	0.012
Observations	543	734

Notes: The table shows the estimated treatment effects on the main outcome, ID changes to add the donor status, by gender. All results are estimated using ordinary least squares (OLS) regressions. Both columns show results from the spillover effects regression using the number of treated students in a given student's social network (N^T) and its interaction with treatment as regressors as specified in Equation (2). All regressions control for student age, father's education, baseline trust in the organ donation center, the total number of social ties, the round of data collection, binary indicators for missing covariates, and strata fixed effects. Standard errors in parentheses are clustered at the class level. The row "p-value" reports the p-value from the test that N^T is the same among the female and the male subsample. Asterisks indicate significance at the *** 1%, ** 5% and *10% level.

Figure C1: Social Ties in the Classroom



The figure illustrates the social networks of two first-year classrooms from the engineering department, one of which was allocated to treatment and one of which was allocated to the control condition. Red nodes represent students from the treated classroom, blue nodes represent students from the control condition. The arrows represent the direction of the social ties between students.

D Survey Inventory

D.1 Baseline Survey

Below, we present a subset of the question items contained in our baseline survey.

Attitudes towards organ donation

1. I have sufficient knowledge about organ donation to make an informed decision about whether I want to become a donor myself.
2. I feel comfortable discussing organ donation with my family.
3. I worry my family may disapprove of organ donation.

We use the following question item to measure stated risk preferences:

Risk aversion

Please rate your willingness to take risks, in general, on a scale from 1 to 10 where 1 means that you are not willing to take risks at all, and 10 means that you are very much willing to take risks.

We include the following questions from the Marlowe-Crowne Social Desirability Scale (Reynolds; 1982) to measure students' propensity to give socially desirable answers:

Propensity to give socially desirable answers

1. No matter who I am talking to, I am always a good listener.
2. When I don't know something, I don't at all mind admitting it.
3. I am always polite, even to people who are disagreeable.
4. I have never been annoyed when people expressed ideas very different from my own.
5. There have been times when I was quite jealous of the good fortune of others.

We use the following items from Rushton et al. (1981) to measure altruism:

Altruism

1. I have given money to a stranger who asked me for it.
2. I have allowed someone to go ahead of me in a queue in a shop.
3. I have offered to help a classmate I did not know well with a homework assignment.

We furthermore measure students' social networks with a dropdown menu, similar to Alan and Kubilay (2025):

Social Networks

We are interested in studying the social network in the university. Please choose the names of the students with whom you discuss important matters. Note that you will have to choose their department and year of study first.

[Dropdown menu with student names]

D.2 Endline Survey

Below, we present the question items which were used for the construction of our secondary outcomes. These items were asked twice, at endline and at the six-month follow-up survey.

1. Attitudes towards Organ Donation

1. The idea of my organs being in someone else's body gives me a feeling of discomfort. *(Completely disagree, Somewhat disagree, Somewhat agree and Completely agree)*
2. I feel comfortable discussing organ donation with my family. *(Completely disagree, Somewhat disagree, Somewhat agree and Completely agree)*
3. I worry that my family may disapprove of organ donation. *(Completely disagree, Somewhat disagree, Somewhat agree and Completely agree)*

2. Social Expectations

1. In your opinion, what percentage of Tunisians approve of organ donation?

   (Slide scale from 0 to 100)

2. How many students from MSB / MedTech will choose to change their ID to become organ donors this week? We will give a 50 TND cafeteria voucher to the person who gets closest.[a]

   (Please insert the number here)

[a] At follow-up, we changed this item to: "As you may remember, the CNPTO, together with the technical police, offered free on-the-spot ID changes on Thursday and Friday, 30 and 31 October 2025 at SMU, for all those who wanted to add their donor status. Please take a guess: How many SMU students *chose* to change their ID to register as organ donors *that week*?"

3. Legal knowledge

1. Do you know how you can declare your desire to be an organ donor in Tunisia? *(Yes - No - Don't know - Prefer not to answer).*

2. Does Tunisian law allow for the sale of organs? *(Yes - No - Don't know - Prefer not to answer).*

3. If you agree to donate a family member's organs you may end up paying extra medical bills in Tunisia. *(Correct - Wrong - Don't know - Prefer not to answer).*

4. Medical knowledge

1. Which organs can be transplanted in Tunisia? *(Kidney, Liver, Heart, Pancreas, Uterus, Ovaries, Lungs, Cornea, Skin, Bone tissue, Brain, Eyes, Don't know)*

2. From whom can organs be removed for the purpose of being transplanted? *Living persons, Dead persons (cerebral death), Dead persons (cardiac / circulatory death), Don't know, Prefer not to answer*

3. It is possible for a brain-dead person to recover from their injuries. *(Yes - No - Don't know - Prefer not to answer).*

5. Religious beliefs related to organ donation

1. What is the position of Islam towards organ donation? *(Negative: it discourages organ donation; neutral; positive: it encourages organ donation; don't know)*
2. I am worried that organ donation may conflict with my religion. *Completely disagree, somewhat disagree, somewhat agree and completely agree.*
3. Is it possible to hold a traditional funeral service after organ donation? *(Yes, no, don't know)*

6. Trust in medical institutions

1. How much confidence do you have in the medical system in Tunisia? *(A great deal, Quite a lot, Not very much, None at all, Don't know, Prefer not to answer)*
2. How much confidence do you have in the CNPTO?[a] *(A great deal, Quite a lot, Not very much, None at all, Don't know, Prefer not to answer)*
3. How common is organ trafficking in Tunisia in your opinion? *(Not common at all, Not very common, Common, Very common, Don't know, Prefer not to answer)*
4. Do you feel that organ donation benefits all categories of persons equally in Tunisia? *(Yes, absolutely; Yes, mostly; No, not really; No, not at all; Prefer not to answer).*

[a]Centre National pour la Promotion de la Transplantation d'Organes

D.3 Follow-up Survey

To gather more information on the importance of peers on individual decision-making, we added a number of additional questions to the follow-up survey:

1. Have you discussed organ donation with your family ?
2. Have you discussed organ donation with your friends at university?

3. If you have recently decided to change your ID to become an organ donor, who had the most influence on your decision? *(a lot of influence, some, not very much, none)*

    - Friends at university
    - Friends outside university
    - Siblings, cousins
    - Parents
    - Medical experts
    - Social media

E Instructions for the Intervention Team

CNPTO representatives:
Before the intervention, verify that you have a USB key with the presentation and sufficient informational flyers and brochures with you. Make sure to arrive at the classroom at the scheduled time. After introducing yourself and the CNPTO, briefly announce the topic and ask all people present if they consent to attending the presentation. Anyone who feels uneasy about the topic is allowed to leave the room during the presentation.
The lecturer will help you set up the powerpoint presentation. Limit the presentation to about 15 minutes and follow the slides closely. After this, participants have 10 minutes to ask questions. At the end of the presentation, distribute flyers and brochures, then thank the lecturer and the students before leaving the room. The lecturer will distribute the link / QR code to the endline survey.

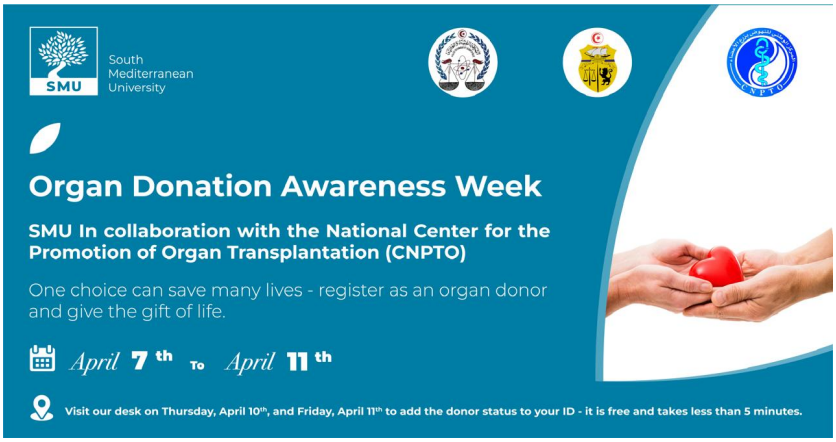
Police agent and photographer:

Greet the students and introduce yourself. Explain the procedure of adding the donor status to one's ID to them. Use neutral language throughout and do not influence their decision in any way. If they want to change their ID, ask them to sign the relevant forms and take fingerprints. The photographer will then take a biometric photo.

Once the new ID is issued, ask the student whether they consent to sharing their decision with the research team. Hand them one printed copy of the privacy statement and two copies of the consent form. Give them time to read the forms and explain any points that may be unclear. If they consent to sharing their decision, ask them to sign the consent forms. They can keep one copy for themselves. Please collect the other copy and hand it to the research team at the end of the day.

F Implementation Pictures

(a) Poster advertising the intervention



(b) Organ donation awareness intervention, 7 April 2025

(c) Filling in the registration form for ID changes, 10 April 2025

(d) Donor registration, 10 April 2025

(e) Taking fingerprints, 10 April 2025

(f) Newly issued IDs, 18 April 2025