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I WOULD DONATE, BUT OTHERS WON'T FOLLOW: THE IMPACT OF PRESUMED CONSENT FOR ORGAN DONATION ON PREFERENCES AND PERCEIVED DESCRIPTIVE SOCIAL NORMS IN SERBIA

Aleksandar Ninkov

Belgrade Metropolitan University – FEFA

ABSTRACT

The study examined organ donation preferences and perceived descriptive social norms under presumed consent for organ donation, a public policy proposed to address low organ donation rates in Serbia. Conducted as an online between-subjects experiment with students in Serbia, the research included two hypothetical organ donation conditions: opt-in (explicit consent) and opt-out (presumed consent). The opt-out default significantly increased willingness to donate but did not affect assumptions about others' preferences under the same default. This finding suggests that perceived descriptive social norms may hinder the opt-out default's effect on actual organ donation rates. Additionally, it implies that other potential mediating mechanisms, besides descriptive social norms, may be more significant drivers of the effect of opt-out defaults on donation intentions.

KEYWORDS: default effect; opt-out default; organ donation; presumed consent; social norms; nudge

Authors' contact:

Aleksandar Ninkov is a Teaching Associate & PhD student at the Faculty of Economics at FEFA, Belgrade Metropolitan University.

E-mail: aninkov@fefu.edu.rs; <https://orcid.org/0009-0009-1409-5104>.

INTRODUCTION

Lack of organ donors presents a global problem that endangers the lives of patients waiting for organ transplantation (Kupiec-Weglinski 2022). Even when considering citizens who would like to donate their organs after death, many never actually register as potential donors due to behavioral inertia and procrastination (Ashkenazi et al. 2006). One of the strategies for addressing this issue is the implementation of presumed organ donation consent (i.e. the opt-out default) (Johnson & Goldstein 2003). When it comes to opt-out defaults, a common public policy solution is presuming that all eligible citizens are potential organ donors unless they opt out, or unless their families oppose organ donation after their death (Thaler & Sunstein 2021, 262).

Presumed consent for organ donation is established in several EU countries, including Croatia, Slovenia and Hungary (Cotrău et al. 2020). Considerations regarding switching to the opt-out default are also actual in Serbia, since data from 2010 to 2016 show that Serbia had the lowest rates of kidney, liver, and heart transplantations in Europe (Vlačić et al. 2021). To address the problem of insufficient organ donation rates, the Human Organs Transplantation Act established presumed consent for organ donation in 2018 (Lazić & Simonović 2020, 20). However, Article 23 of the law, which introduced presumed consent, was abolished in 2021 by the Constitutional Court of Serbia (2022) due to a lack of clarity.

Generally, countries with presumed consent have significantly higher individual consent rates compared to countries with explicit consent (opt-in) system (Johnson & Goldstein, 2003). The opt-out default also tends to increase organ donation willingness in individuals (Van Dalen & Henkens 2014; Johnson & Goldstein 2003). However, its influence on actual organ donation rates remains a subject of debate. While certain studies show that the presumed consent increases actual organ donation rates (Madden et al. 2020; Ahmad et al. 2019; Steffel et al. 2019; Shepherd et al. 2014), other authors argue that the opt-out default has little to no impact on them (Molina-Pérez et al., 2022; Etheredge 2021; Arshad et al. 2019).

Family refusals are one of the key reasons why increasing individual consent rates and enhancing willingness to become a donor under the presumed consent do not necessarily translate into higher actual donation rates (Molina-Pérez et al. 2022; Bea 2021, Costa-Font 2021). Consent from family members is a common requirement because it may be ethically problematic to infer preferences based on a failure to act: „If people are not opting out, it might be because of inattention or inertia, not because the default captures what they would do if they were actually to make a decision” (Thaler & Sunstein 2021, 261). Knowing the true wishes of the deceased is a factor that significantly increases the chances for family approval

(Miller & Breakwell 2018). However, vagueness regarding the genuine preferences of a potential organ donor leads to distress in organ donation decision-making of family members, as well as to higher chances of organ donation refusals (Shaw 2017).

The aim of this study is to provide novel and preliminary insights related to the determinants of actual organ donation rates under the presumed consent default. More specifically, the main research question is whether the opt-out default will lead to alignment between organ donation intentions and beliefs about the donation intentions of others under the same default. Norms based on perceptions about what others would do in certain contexts are called descriptive social norms (Legros & Cislighi 2020). Descriptive social norms are relevant for the organ donation context since they may impact the final decisions of family members (Gilligan et al. 2012). Examining whether, and to what extent, switching to the opt-out default leads to beliefs that others would more often prefer to be organ donors could therefore be significant for addressing family refusals. Additionally, examining perceived descriptive social norms could contribute to an understanding of mechanisms through which opt-out defaults influence organ donation intentions, by laying the groundwork for future mediation analyses.

A broader theoretical framework guiding this research, which will be presented in the next section, assumes that our perceptions and preferences are partly shaped by the decision-making context (Slovic 1995). More specifically, the organ donation perceptions and preferences of individuals and family members may, to a certain extent, be constructed by a default organ donation consent rule. Therefore, this study focuses on the subtle effects of the choice environment design, in the form of establishing default rules. This type of intervention, based on changing the decision-making context, is called a nudge (Thaler & Sunstein 2021).

DEFAULT NUDGES, PREFERENCES AND DESCRIPTIVE SOCIAL NORMS IN ORGAN DONATION CONTEXT

This section will begin by exploring the concept of nudges as subtle interventions in decision-making, with a particular emphasis on the design of default rules. A brief overview of how default nudges shape perceptions and preferences will be presented. The discussion will then move to the influence of opt-out organ donation defaults, highlighting their potential to increase willingness to donate and shape perceived descriptive social norms about donation. Finally, the theoretical and practical significance of exploring perceptions of descriptive social norms in this context will be presented.

Unlike traditional ways of influencing behavior, nudges are interventions that rely on designing the decision-making context while preserving freedom of choice – they are „any aspect of the choice architecture that alters people’s behavior in a predictable way without forbidding any options or significantly changing their economic incentives” (Thaler & Sunstein 2021, 8). Among nudge interventions, default setting designs are one of the most impactful (Hummel & Maedche 2019). Designing a default means establishing a rule that applies if no active decision is made, i.e. if a person „chooses not to choose” (Sunstein 2015). However, it is crucial that default nudges can be easily overcome – „to count as a mere nudge, the intervention must be easy and cheap to avoid” (Thaler & Sunstein 2021, 8).

This research is grounded in the perspective that nudges, as a tool for shaping the decision-making context, form preferences. Evidence suggests that preferences are often constructed during the decision-making process, challenging the traditional notion of stable, pre-existing preferences that are consistent with rational choice models (Slovic 1995). For example, Tversky and Simonson (1993) demonstrate that the attractiveness of an option can vary based on the presence of other options, indicating that preferences are context-dependent. Next, Tversky and Kahneman (1981) write that essentially the same options are often treated differently depending on the way they are presented: „The psychological principles that govern the perception of decision problems and the evaluation of probabilities and outcomes produce predictable shifts of preference when the same problem is framed in different ways” (453). In the case of default settings, an important element of the decision-making context, evidence shows that preferences can be formed in light of the default option (Dhingra et al. 2012).

Besides reducing the effort required to choose the default option, default nudges construct preferences by conveying implicit endorsement and establishing a reference point (Dinner et al. 2011). Implicit endorsement means that a default option is perceived as being recommended by the policymakers (McKenzie et al. 2006) and as a common preference among others (Everett et al. 2015). Regarding reference points, a default option serves as a psychological anchor against which individuals compare other choices (Herrmann et al. 2011). Individuals tend to stick with these reference points because the negative consequences and regret from abandoning them may be perceived as worse than the equivalent negative consequences resulting from omissions (Baron & Ritov 2004; Baron & Ritov 1994).

Based on the presented theoretical framework, the objective of this study is to examine whether assumptions about organ donation preferences of others will follow increased intentions to become an organ donor

under an opt-out default. First, evidence suggests that the opt-out default increases willingness to donate organs beyond merely reducing the effort required to become a donor (Van Dalen & Henkens 2014; Johnson & Goldstein 2003). Citizens are also more willing to be organ donors if they are aware of the opt-out default legislation in their country, controlling for other variables (Shepherd & O'Carroll 2013). Therefore, the first hypothesis of this study is that the opt-out default will significantly increase the willingness to become an organ donor compared to the opt-in default.

Second, the study aims to explore the potential impact of the opt-out organ donation default of perceived descriptive social norms. By influencing descriptive social norms, opt-out defaults may not only increase individual willingness to donate but also shift societal expectations regarding organ donation. Dinner et al. (2011) write that default effects differ depending on the context, and that their impact on implied endorsement (including assumed preferences of others) can be pivotal in socially important domains. Furthermore, it is hypothesized that opt-out defaults increase organ donation willingness partly by conveying implicit messages about social norms and common behaviors of others (Davidai et al. 2012). When it comes to empirical evidence about defaults and descriptive social norms, Everett et al. (2015) found that when donating money to altruistic causes was set as the default option, participants were more likely to believe that others would also choose to donate.

Descriptive social norms can significantly affect how individuals evaluate their own decisions. When people perceive that a particular action is commonly taken by others, they are more likely to view that action as appropriate or expected, which can lead them to align their behavior with the perceived norm (Schulz et al. 2007). Descriptive social norms can also mediate the effect of defaults on decisions: higher expectations that others will donate money to charity, induced by the opt-out default to donate, increased actual donations (Everett et al., 2015).

Building on these insights, the second hypothesis of this study will test the assumption that participants are significantly more likely to believe that others would be willing to become organ donors under the opt-out default compared to the opt-in default. A reference group for descriptive social norms is broadly defined in this research as others in the context of the default organ donation rule in Serbia, i.e. other people that could be potential organ donors under Serbia's default consent system.

Examining the alignment of organ donation intentions with perceived descriptive organ donation norms is of both theoretical and practical importance. The research could enhance the theoretical understanding of default organ donation nudges on perceptions, as well as lay the groundwork for exploring mediational mechanisms through which organ dona-

tion defaults affect preferences. From a practical perspective, perceptions of descriptive social norms could be relevant to the decision-making of family members. If organ donation is perceived as a norm, it may enhance communication about donation wishes and increase families' willingness to consent to donation for their deceased relatives (Gilligan et al. 2012, 315).

METHODS AND MEASUREMENTS

The online experiment had a between-subjects design with two conditions. The presentation of the experimental intervention was inspired by the studies of Van Dalen & Henkens (2014) and Johnson & Goldstein (2003). In the first condition, participants were asked if they would explicitly register as potential organ donors in Serbia or do nothing and therefore not become registered organ donors. In the second condition, participants were asked to imagine a rule whereby all eligible citizens in Serbia are automatically regarded as potential organ donors unless they explicitly opt out. They were asked if they would do nothing and therefore automatically become potential organ donors, or explicitly oppose and opt out. In both conditions, they could express their uncertainty by choosing the *do not know* option. Participants were randomly assigned to one of the two presented conditions.

The sample size was calculated using an alpha value of 0.05 and a power of 0.80. The effect size between low and medium of default settings impact on organ donation intentions was estimated by Jachimowicz et al. (2019). Regarding the second dependent variable, Everett et al. (2015) revealed a medium effect size of default options on descriptive social norm perceptions in altruistic settings. Considering the presented inputs, a power analysis was performed using G*Power 3.1 software to calculate the required total sample size for binary logistic regression¹. The assumed odds ratio was 2.2, corresponding to an effect size between low and medium (Maher et al. 2013). The analysis indicated a required total sample size of 217 participants². This study included 220 participants in total (109 in the opt-in condition and 111 in the opt-out condition), thus ensuring adequate statistical power.

Responses were collected from the 8th to the 26th of July 2024, via a Google Forms link shared on social media platforms. A convenience

1 Note: the first dependent variable (organ donation willingness) was recoded into two values for binary logistic regression analysis (Yes = 1; No & Don't know = 2).

2 The other required values for calculating the sample size for binary logistic regression were the following: X parm $\pi = 0.5$, reflecting an equal distribution of participants across the two conditions, and $\Pr(Y=1|X=1) H_0 = 0.5$, based on the existing literature (Van Dalen & Henkens 2014).

sampling of students in Serbia was used. After data collection, balance checks were performed to ensure successful randomization. Participants in the two conditions were compared by gender, study field, study level, university type, and university location using chi-squared tests of independence, and by age using an independent two-tailed t-test. The mentioned tests did not find statistically significant differences between the conditions. The average age of participants in the total sample was 23.3 years. There were more women ($n = 181$, 82.3%) than men ($n = 39$, 17.7%). Slightly more than half of participants studied social sciences & humanities ($n = 114$, 51.8%). Technical & technological sciences ($n = 58$, 26.4%), medical sciences ($n = 22$, 10%), and natural sciences & mathematics ($n = 14$, 6.4%) followed. Around two thirds of participants were first-degree students ($n = 148$, 67.3%). Most participants were students at state universities ($n = 209$, 95%). Finally, the sample was primarily composed of students studying in Belgrade ($n = 139$, 63.2%) and Vojvodina ($n = 74$, 33.6%).

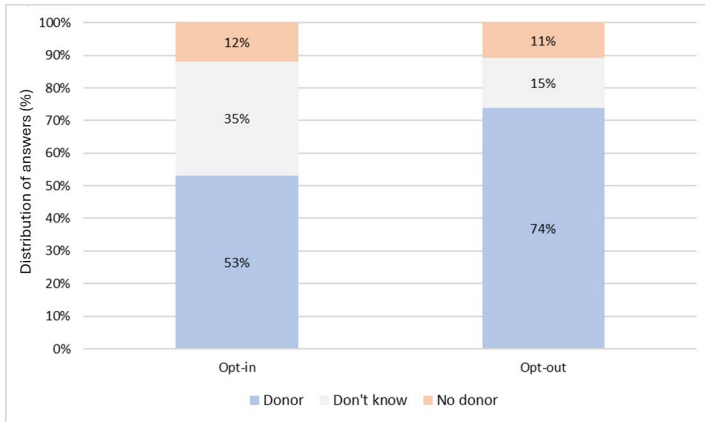
When it comes to dependent variables, organ donation preferences were measured using a variable with three possible responses. Participants in both conditions could choose to make an active decision, adhere to the default rule, or select the *do not know* option. The perceived descriptive social norm variable was measured using a 10-point Likert scale and referred to a previously presented organ donation default scenario in Serbia. Perceptions of health-related descriptive social norms are commonly measured with Likert scales, including a 4-point (Smith-McLallen & Fishbein 2008), 5-point (Simons-Morton et al. 2018), and 7-point (Priebe & Spink 2011) scales. A 10-point scale was chosen for the purposes of this research, since it is more sensitive to variations in participants' opinions, allowing for a more nuanced understanding of their responses compared to shorter scales (Taherdoost 2019). The question formulation was as follows: „How do you think others would respond to the question about organ donation in the scenario presented above?”. Higher values indicated greater expectations that others would be willing to become potential organ donors (1 – *almost no one would be a potential organ donor*; 10 – *Almost everyone would be a potential organ donor*).

RESULTS

A descriptive statistic showed that the opt-out condition increased willingness to become an organ donor by around 20 percentage points compared to the opt-in condition. In the opt-in condition, 53.2% of participants were willing to become potential donors ($n=58$), 11.9% decided not to become potential organ donors ($n=13$) and 34.9% of participants were unsure about the decision ($n=38$). In the opt-out condition, 73.9% of participants intended to become potential organ donors ($n=82$), 10.8% were not willing

to become potential organ donors ($n=12$) and 15.3% of participants were unsure of what to do ($n=17$). The descriptive statistic is presented in Figure 1.

Figure 1. Organ donation preferences by study conditions



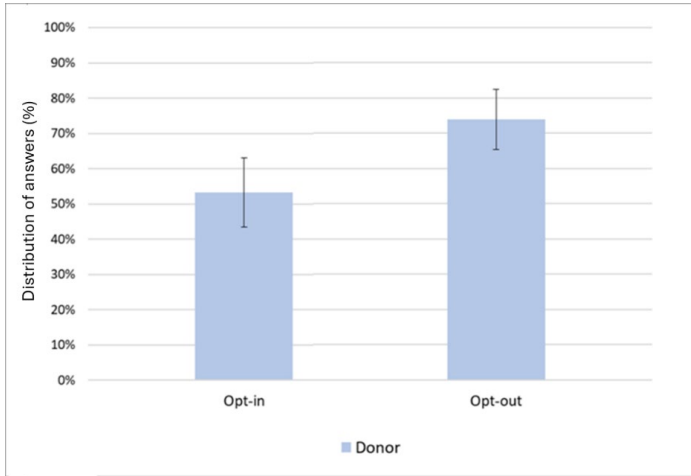
Note: The bars compare organ donation preferences in the opt-in (explicit consent) and opt-out (presumed consent) conditions.

A binary logistic regression was performed to test for the effect of the opt-out default on the willingness of participants to become organ donors. The logistic regression model was statistically significant ($X^2(1, N=220)=10.25, p=.001$). The pseudo- R^2 value was 0.062 (Nagelkerke R^2).

The regression analysis revealed a highly significant positive impact of the opt-out condition on organ donation willingness ($B=0.91, SE=0.29, Wald X^2(1)=9.93, p=.002$). Although participants in the opt-out condition were more than twice as likely to express an intention to become potential organ donors compared to those in the opt-in condition, it is worth noting that the confidence intervals for the odds ratio were wide, indicating considerable uncertainty in the estimate ($OR=2.49, 95\% CI [1.41, 4.38]$).

In line with the first hypothesis, the opt-out condition significantly increased the willingness to become a potential organ donor compared to the opt-in condition. Figure 2 presents the standard errors for proportions of participants who expressed their intention to become potential organ donors in the two conditions.

Figure 2. Percentage of participants willing to be organ donors by study conditions, with ± 2 standard error bars



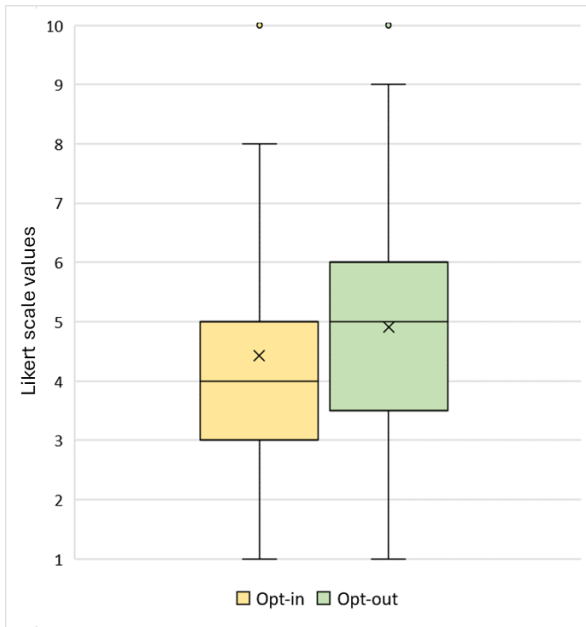
Note: The bars display the percentage of participants who indicated a willingness to become organ donors in each of the two study conditions. The error bars represent ± 2 standard errors, reflecting the variability and reliability of the estimated percentages.

Regarding descriptive social norm perceptions, as the distribution of the descriptive social norm perception variable did not meet the assumptions of normality³, a non-parametric analysis was performed. The median response value on a 10-point Likert scale was 4 in the opt-in condition and 5 in the opt-out condition. However, a Mann-Whitney U test showed no significant differences in perceived descriptive social norms ($U = 5234$, $Z = 1.75$, $p = .079$). The difference remained non-significant even after excluding outliers ($U = 5014$, $Z = 1.70$, $p = .088$).

Contrary to the second hypothesis, the opt-out condition did not have a significant impact on descriptive social norm perceptions. Descriptive statistics for perceived descriptive social norms by study conditions are presented in Figure 3.

³ A Shapiro-Wilk test was performed, and normal distribution assumption was rejected for the descriptive social norm variable ($W=0.94$, $p=.000$) in the opt-in condition, as well as in the opt-out condition ($W=0.96$, $p=.002$).

Figure 3. Descriptive social norm perception by study conditions



Note: The box plots compare perceived descriptive social norm means, medians, upper and lower quartiles, interquartile ranges, whiskers, and outliers in the opt-in (explicit consent) and opt-out (presumed consent) organ donation conditions. The scale measured assumed organ donation willingness of others with the following values: 1 – almost no one would be a potential organ donor; 10 – Almost everyone would be a potential organ donor.

DISCUSSION

The opt-out (presumed consent) default significantly increased organ donation intentions compared to the opt-in (explicit consent) default, thus supporting the first hypothesis. While 53.2% of participants preferred to be organ donors in the opt-in condition, 73.9% of them preferred the same in the opt-out condition. On the other side, the perception of descriptive social norms was not significantly different between the two conditions. Contrary to the second hypothesis, participants did not significantly more often believe that others would prefer to be organ donors under the opt-out default compared to the opt-in setting. This raises questions about how organ donation defaults interact with social norms and whether other factors may more significantly mediate the relationship between defaults and donation intentions.

A more detailed discussion of the findings will be presented below, exploring both theoretical and practical implications of the results. This

section will first examine a theoretical framework of pluralistic ignorance for understanding the findings. This will be followed by potential reasons why the opt-out default did not have significantly altered perceptions of descriptive social norms, considering the role strong pre-existing beliefs. Other mediational mechanisms through which presumed consent may have influenced organ donation intentions will also be presented. Next, the discussion will address the practical implications of the findings: the impact on family members' decision-making, potential long-term effects of presumed consent on the public discourse, and interventions for addressing misperceptions of descriptive social norms. Finally, study limitations and directions for future research will be considered.

A theoretical framework for understanding the obtained findings includes the concept of pluralistic ignorance – „Pluralistic ignorance has been an especially popular explanation for the fact that shifting private attitudes are not always accompanied by shifting social norms” (Miller 2023, 2). It could be that the opt-out default increases individuals' willingness to be organ donors, yet people may mistakenly believe that other group members are less likely to prefer becoming donors. This disconnect between personal preferences and perceived descriptive social norms could be a significant factor limiting the full potential of the opt-out system to boost donation rates, as previously argued. However, the assumption about pluralistic ignorance in the domain of organ donation requires further research that would include different samples, as well as different levels of reference groups (Sargent & Newman 2021, 11).

When it comes to potential explanations for the obtained results, a non-significant finding does not necessarily mean that the impact of organ donation defaults on descriptive social norms does not exist – it may be the case that the effect was too small to be detected with the sample size used in this study. However, this is not consistent with the literature that suggests a more prominent role and impact on descriptive social norms regarding default settings in altruistic and socially significant contexts (Everett et al. 2015; Dinner et al. 2011). It is possible that pre-existing beliefs about descriptive social norms regarding organ donation in Serbia may have limited the ability of the opt-out default to shape perceptions – “social norms are clearly not exclusively perceived via a default option” (Everett et al. 2015, 235).

Regarding the implications of study findings on mediation mechanisms, establishing a reference point via default settings could be more influential in shaping organ donation preferences than conveying implicit endorsement in the form of favorable descriptive social norms. In an opt-in system, where the default is not to be an organ donor, making the choice to donate can provoke emotional discomfort and distress due to the nega-

tive thoughts associated with this topic (Johnson & Goldstein 2004, 1714). Conversely, in an opt-out system, where the default is to be an organ donor, choosing not to donate might result in a sense of loss for not contributing to the welfare of others (Johnson & Goldstein 2004, 1714). In both scenarios, making an active decision requires deviating from the established reference point and dealing with negative psychological consequences, which are often more impactful than equivalent positive outcomes and more intense when they result from actions rather than inactions (Baron & Ritov 1994; Tversky & Kahneman 1991).

Considering the practical implications of low or non-existent impact of the opt-out organ donation default on descriptive social norms, it may hinder actual donation rates in two ways. First, family members may struggle to determine a deceased's true preferences under an opt-out rule, since the active consent of the deceased is often lacking (Thaler & Sunstein 2021, 263). In these situations, families look for outside cues like organ donation beliefs and norms, attempting to infer a deceased's will from these cues (Falomir-Pichastor et al. 2013). Therefore, if family members do not believe that organ donation is a norm of behavior in society, this could potentially increase family refusals.

Second, if people have certain preferences but believe that others are less likely to hold the same positions, it could initially discourage communication about the topic (Bursztyn et al. 2020, 3024). In line with this, the literature implies that fears of family objection and assumed lack of support are common barriers to discussion about organ donation wishes (Hyde & White 2009). The lack of communication presents a particular challenge in the domain of organ donation, because knowing the true preferences of the deceased is one of the most important determinants of family consent (Miller & Breakwell 2018). Without open discussions, families are left to guess the deceased's preferences, which can lead to decision uncertainty and lower consent rates (Shaw 2017).

On the other hand, descriptive social norms in favor of donation may also be shaped by the opt-out default over a longer time span. The adoption of presumed consent legislation itself can lead to increased media attention, and thus foster interest, discussion, and changes in perception about organ donation in the public sphere (Faherty et al., 2022; Dallimore et al., 2019). Therefore, even if pluralistic ignorance is present at the moment of implementing presumed consent, a broader impact of default change on the public discourse could, over time, reinforce descriptive social norms in favor of donation. As individuals observe increasing public discussion and institutional endorsement of organ donation, they may update their beliefs about what others think.

Interventions for addressing the misperception of descriptive social norms include providing accurate information about the preferences of others, which can have a notable impact on decisions (Bursztyn et al. 2020). Next, misperceived descriptive social norms could be a reason for adding an element of active consent to an opt-out default design, and thus helping families to determine the true wishes of the deceased. For example, citizens may first be prompted to make an active decision, and only if they fail to do so does the presumed consent rule take effect (Wachner et al. 2022). However, additional research is needed to test the assumed organ donation misperceptions of descriptive social norms and potential interventions for addressing them.

One limitation of this study was the use of convenience sampling, which included only students in Serbia as participants. This approach may hinder the generalization of the experimental intervention effects to the broader population (Hanel & Vione 2016). The sample may be biased towards higher willingness to donate, as there is evidence that younger and more educated people are generally more favorable to organ donation (Falomir-Pichastor et al. 2013; Barcellos, Araujo & Da Costa 2005). Additionally, evidence suggests that individuals with lower education levels are more likely to adhere to organ donation defaults (Steenart et al. 2021). Consequently, the differences in organ donation willingness observed between the opt-in and opt-out condition could be even more pronounced in the general Serbian population.

Another limitation is the reliance on a hypothetical scenario to test the effects of default rules. Decisions and perceptions in hypothetical situations may not accurately reflect real-world behavior and experiences (Penn & Hu 2018). Finally, a broad notion of „others” under a default organ donation rule in Serbia limits conclusions about pluralistic ignorance, since only organ donation preferences of a convenience sampling of Serbian students are measured in this study. Although the presented literature suggests that the opt-out default notably increases organ donation willingness in the general population, further research is needed to address methodological limitations regarding the assessment of pluralistic ignorance in the context of organ donation.

Future research could use a representative sample of the Serbian population to provide more generalizable findings and test the assumptions regarding the impact of organ donation defaults on a national level. It could also examine mediational mechanisms of presumed organ donation consent and compare the effects of presumed consent modifications that combine the opt-out default with active choosing (Wachner et al. 2022), as well as other organ donation consent designs such as mandated choice and prompted choice (Thaler & Sunstein 2021, 265–271). Finally, future

studies may further explore the potential existence of pluralistic ignorance in the domain of organ donation by conducting research in other countries and longitudinal studies, as well as defining multiple reference groups for perceived descriptive social norms. Since pluralistic ignorance may have consequences on the effectiveness of the opt-out default in increasing actual organ donation rates, as previously argued, it could be a particularly promising and fruitful research topic.

CONCLUSION

The findings of this study underscore the significant impact of the opt-out default on increasing organ donation intentions, in line with previous research. However, the study also reveals that the opt-out default does not significantly influence perceptions of descriptive social norms related to organ donation. This suggests the existence of a misalignment between organ donation intentions and assumed donation preferences of others under the opt-out default. Therefore, while defaults can drive individual intentions, they may not necessarily alter broader social beliefs or norms about donation, potentially limiting their effectiveness in the context where family consent plays a crucial role. Further research is needed to replicate and generalize the findings, explore mediational pathways, and inform public policies.

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