Disclosing donation decisions: the role of organ donor prototypes in an extended theory of planned behaviour

Melissa K. Hyde* and Katherine M. White

Abstract

This study explored the role of donor prototype evaluations (perceptions of the typical organ donor) in organ donation communication decisions using an extended theory of planned behaviour (TPB) model. The model incorporated attitude, subjective norm, perceived behavioural control, moral norm, self-identity, and donor prototype evaluations to predict intentions to record consent on an organ donor register and discuss the organ donation decision with significant others. Participants completed surveys assessing the extended TPB constructs related to registering ($n = 359$) and discussing ($n = 282$). Results supported a role for donor prototype evaluations in predicting discussing intentions only. Both extended TPB structural equation models were a good fit to the data, accounting for 74 and 76% of the variance in registering and discussing intentions, respectively. Participants’ self-reported discussing behaviour (but not registering behaviour given low numbers of behavioural performers) was assessed 4 weeks later, with discussing intention as the only significant predictor of behaviour (Nagelkerke $R^2 = 0.11$). These findings highlight the impact of people’s perceptions of a typical donor on their decisions to discuss their organ donation preference, assisting our understanding of the factors influencing individuals’ communication processes in efforts to bridge the gap between organ supply and demand.

Much organ donation research has examined the demographic factors, beliefs and attitudes that may explain the gap between organ supply and demand worldwide (see [1,2] for a review). Since 40–50% of family members deny consent for donation of their loved one’s organs [3–5], a more recent focus has been on explaining this lack of consent [6]. Numerous aspects impact on the decision to give consent for donation (e.g. timing of the request, person making the request [7]). Prominent among these aspects is knowledge of a loved one’s organ donation wishes. It has been demonstrated consistently that awareness of and previous discussion about a loved one’s preference for donation increases the likelihood that consent for donation will be given [6, 7]. To ensure that organ donation wishes are adhered to, then, an individual needs to make important others aware of their donation preference. Communicating organ donation wishes may involve documenting the decision on a donor register, driver licence or by other official means (registering) and/or talking with family members or next-of-kin about donation wishes (discussing). Few people, however, have disclosed their donation decision to family members [8–11].

The extended theory of planned behaviour and prediction of donation decision disclosure

Several studies [e.g. 8, 12–25] have used variants of major social-cognitive models, such as the theory of planned behaviour (TPB) or its predecessor the...
theory of reasoned action (TRA) [26], to understand the determinants of people’s decisions to disclose their organ donation wishes via a donor register/card or discussion with family. The TPB is designed to account for the range of personal and social influences that may impact on people’s decision making. The model has been used successfully to predict people’s intentions and behaviours across a variety of contexts [27]. The TPB specifies people’s intentions as the most proximal determinant of their behaviour. Intentions are influenced by a person’s attitude (positive or negative evaluations of performing a behaviour), subjective norm (perceived social pressure to perform or not perform a behaviour) and perceived behavioural control (PBC; perceived ease or difficulty of performing a behaviour; also thought to be a direct predictor of behaviour). Attitude, subjective norm and PBC are informed by underlying behavioural, normative and control beliefs, respectively. Several meta-analyses [e.g. 27] have demonstrated support for the TPB as a predictive model accounting for an average of 39% of the variance in people’s intentions and 27% of the variance in people’s behaviour.

Although many organ donation studies attempt to use established theoretical frameworks and present their research as a test of the TRA or TPB, few studies follow the specifications of the TRA and TPB models [e.g. 12]. Specifically, many studies neglect to observe the principle of compatibility and do not use standard measures of the core constructs as specified by Ajzen [26]. For instance, many studies use a measure of general attitudes towards organ donation to predict specific organ donation behaviours such as signing a donor card or talking with family [28]. According to the principal of compatibility, this approach would result in a weak attitude–behaviour relationship [26]. Furthermore, few organ donation studies provide an assessment of all the constructs in the TPB model (e.g. PBC, intention, behaviour). Indeed, Nijkamp et al. [2] commented recently in their meta-analysis that they were prevented from analysing the role of intentions and perceptions of control in organ donation decisions as too few organ donation studies have included these constructs. Therefore, a test of the TPB using standard measures (as specified by Ajzen [26]) and observing the principle of compatibility is needed.

A further advantage of the TPB is its ability to incorporate additional relevant influences if the predictors are capable of accounting for unique proportions of the variance [26]. In the organ donation context, additions to the model have included a consideration of one’s own personal moral values about donation or communicating donation wishes as the right thing to do (moral norm [29]), as well as one’s concept of themselves as a charitable or giving person or as a person who communicates their decision, and the importance they place on this donor role as a part of their self-concept (self-identity [30, 31]). Both moral norm and self-identity (donor identity) have emerged as significant predictors of intentions to register and/or discuss the donation decision [14, 15, 25].

**Donor prototypes as an additional social influence**

While personal influences, such as moral norm and self-identity, are important in this context, it should be acknowledged that organ donation and communication of the organ donation decision do not occur in a social vacuum. Media stories and campaigns regularly encourage people to be an organ donor and there is a socially shared notion about organ donors as altruistic or giving people [32]. It is possible, then, that these images about the type of person who donates their organs upon death (i.e. an organ donor prototype) represent a largely unexplored social influence on organ donation communication decisions. It may, therefore, be useful to examine the impact of organ donor prototypes (derived from the prototype/willingness model; see [33]) on people’s decision making to communicate their organ donation preference.

As opposed to the construct of self-identity where the importance of the role of organ donor to an individual’s self-concept is assessed, donor prototypes reflect the socially shared view of the typical person who donates their organs upon death. Theoretically, then, donor prototypes differ also from the construct of attitude which represents
a person’s overall positive or negative evaluation (e.g. good/bad) of performing a behaviour [33]. This socially shared view of organ donors (i.e. donor prototype) encompasses people’s favourable or unfavourable evaluation of the organ donor image (e.g. donors as giving people) and suggests that there are social consequences associated with the act of organ donation or wanting to be an organ donor (e.g. being perceived as an altruistic person) (see [33–35] for an explanation of the psychological processes underlying prototypes). According to the prototype/willingness model, an individual’s evaluation of the prototype as favourable or unfavourable will serve to facilitate or inhibit behaviour due to the social consequences associated with behavioural performance [33–35]. More favourable prototype perceptions have been demonstrated as leading to an increased willingness or intention to perform a given behaviour [33, 34]. In the case of organ donation, it would be expected that the more favourably an individual evaluates the type of person who donates their organs upon death (i.e. an organ donor), the stronger their intentions to donate their own organs or perform other acts associated with donation such as communicating organ donation wishes on a register or to family.

An increasing number of researchers have successfully incorporated prototype perceptions within an augmented TPB model to predict both health-protective [36] and health-risk [37] behaviours. The influence of prototype perceptions in an altruistic context, however, has yet to be tested. Unlike the distinct health-risk (negative) and health-protective (positive) images explored in previous prototype studies, perceptions of the type of person who donates their organs (or blood or bone marrow) potentially encompass both negative (associations with death, harm and risks of donating) and positive (related to the charitable act of saving people’s life) images. Furthermore, the contribution of organ donor prototype perceptions (or perceptions of other types of donors e.g. blood donors) has not been evaluated within a TPB framework. Consequently, the extent to which these prototype perceptions influence people’s decisions to communicate their organ donation wishes and the direct or indirect role donor prototypes may play in informing people’s organ donation communication intentions is unclear. The little research which has explored people’s perceptions of organ donors has found generally positive perceptions of organ donors as ordinary people, family minded, generous, giving, altruistic, caring and community oriented [32, 38]. However, this research examined perceptions of organ donors generally, rather than considering the contribution of these perceptions in predicting people’s decisions to disclose their donation preference to family or record their donation wishes on a donor register/card.

The present study

In conducting this study, we explored the personal and social influences informing the two organ donation communication behaviours directly related to obtaining consent for organ donation: registering consent on an organ donor register (i.e. registering) and discussing the organ donation decision with a partner or family members (i.e. discussing). We adopted an extended version of the TPB (employing standard measures and observing the principle of compatibility), including moral norm and self-identity, to assess the determinants of people’s registering intentions and behaviour and discussing intentions and behaviour. Furthermore, we examined the potential influence of donor prototype perceptions on people’s decisions to register their consent on a donor register and discuss their organ donation wishes with family. Consistent with an extended TPB model, we hypothesized that for each behaviour of registering and discussing: attitude, subjective norm and PBC would predict intentions (H1), intention and PBC would predict behaviour (H2) and moral norm, self-identity and donor prototype evaluations would predict intentions (H3).

Methods

Participants and procedure

We obtained approval to conduct the study from the University Human Research Ethics Committee.
Students were recruited from a large metropolitan university in South-East Queensland, Australia, via in-class announcements and received course credit and entry into a prize draw of four AUD$30 music vouchers. Community participants were recruited from several residential areas in South-East Queensland, Australia, chosen for their representation of respondents with a wide range of socio-demographic characteristics (e.g. age, education, ethnicity, socio-economic status). A survey and reply paid envelope, along with a letter explaining the study and inviting participation from a household member 18 years and over, were placed randomly in people’s curbside letter (mail) box. Participants responding to the survey received entry into a prize draw of four AUD$50 department store vouchers.

Students and community members completed a questionnaire about registering the organ donation decision \((n = 359)\) and discussing the organ donation decision \((n = 282)\) (Time 1). (Please note that there is some overlap in participants between the two samples \((n = 106\) who completed both registering and discussing questions). Some participants had previously registered their consent but had not discussed their decision and, therefore, were directed to complete the questions about discussing only. Other participants had previously discussed their decision but had not registered their consent and were asked to complete the questions about registering only. The remaining participants had not registered their consent or discussed their decision and were directed to complete both sets of questions relating to registering and discussing.) Participants completing the questions about registering (94 males, 265 females) ranged in age from 17 to 65 years \([\text{mean} = 28.99\ \text{years, standard deviation (SD)} = 13.69\ \text{years}]\). Participants completing the questions about discussing the donation decision (73 males, 209 females) ranged in age from 17 to 65 years \([\text{mean} = 28.01\ \text{years, SD} = 13.16\ \text{years}]\). In both sub-samples, the majority of participants were Caucasian (87 and 84%, respectively), and over half of the participants were students (66 and 70%, respectively). Four weeks later (Participants were also contacted with two reminders (at 4 weeks and 8 weeks) after the initial 4 week follow-up period, giving them a total of 3 months in which to respond) (Time 2), 130 respondents \((\text{age mean} = 28.44, \ \text{SD} = 12.92, \ \text{male} n = 35, \ \text{female} n = 95)\) and 109 respondents \((\text{age mean} = 28.82, \ \text{SD} = 13.13, \ \text{male} n = 26, \ \text{female} n = 83)\) reported their registration and discussion behaviour, respectively, for the preceding month. (Please note that there is overlap in participants completing measures of each behaviour \((n = 92\) who completed both registering and discussing behaviour questions at the follow-up). See footnote ‘a’ for an explanation of the overlap in participants.) Questionnaires completed at both time points were matched via a participant generated code identifier. (No significant differences were found on the Time 1 measures between respondents completing the first questionnaire and respondents completing questionnaires at both time points.)

**Measures**

Measures of the TPB predictors [26], moral norm [39] and self-identity [31] were obtained for each of the target behaviours of (i) registering consent to donate your organs upon death via the Australian Organ Donor Register (registering) and/or (ii) discussing the decision to donate (or not donate) your organs upon death with your partner or family members (discussing) at Time 1. Participants’ evaluation of the type of person who donates organs upon death (donor prototype evaluation) was assessed at Time 1 also. Measures of self-reported behaviour for each of the behaviours of registering and discussing the donation decision were obtained at Time 2. All extended TPB construct items for each of the behaviours of registering and discussing were measured on seven-point response scales (strongly disagree/strongly agree) and coded so that higher values reflected higher levels on the variable under examination unless otherwise specified.

**Extended TPB measures**

Participants reported their registering and discussing ‘behaviour’ in the 1-month follow-up period using a one-item measure (e.g. ‘In the past 4 weeks did you register your consent to donate your organs upon death on the Australian Organ Donor Register?’)
scored 0 ‘no’ and 1 ‘yes’. Four semantic differential format items, including two reversed items, measured ‘attitude’ for each behaviour (e.g. ‘For me to discuss my organ donation decision with my partner or family members would be’: ‘worthless-valuable, good-bad’). The four items were summed to create a reliable attitude scale for each behaviour (registering: $\alpha = 0.91$, discussing: $\alpha = 0.91$). Two items were used to assess every one of the extended TPB constructs for each behaviour of registering consent and discussing the organ donation decision (with the exception of attitude, described above). The two items assessing the extended TPB constructs (except attitude) for each separate behaviour of registering and discussing were averaged to create scales for registering and discussing: “intention” (e.g. ‘I intend to register my consent to donate my organs upon death’; registering intention: $r(354) = 0.90, P < 0.001$; discussing intention: $r(279) = 0.79, P < 0.001$), ‘subjective norm’ (e.g. ‘Most people who are important to me would approve of me registering my consent to donate my organs upon death’; registering subjective norm: $r(357) = 0.82, P < 0.001$; discussing subjective norm: $r(282) = 0.54, P < 0.001$), ‘PBC’ (e.g. ‘I have complete control over whether I discuss my organ donation decision with my partner or family members’; registering PBC: $r(359) = 0.51, P < 0.001$; discussing PBC: $r(281) = 0.55, P < 0.001$), ‘moral norm’ (e.g. ‘I feel I ought to register my consent to donate my organs upon death’; registering moral norm: $r(359) = 0.80, P < 0.001$; discussing moral norm: $r(281) = 0.82, P < 0.001$) and ‘self-identity’ (e.g. ‘I am the type of person who would discuss my organ donation decision with my partner or family members’, scored ‘completely false/completely true’; registering self-identity: $r(359) = 0.64, P < 0.001$; discussing self-identity: $r(282) = 0.67, P < 0.001$).

Donor prototype evaluation

Based on results from a pilot study conducted to explore the commonly held perceptions of the type of person who donates their organs upon death (i.e. the typical organ donor; see [38]), a measure comprising a series of adjective pairs (e.g. selfish/unselfish) was developed to assess participants’ evaluation of the organ donor prototype. In the current study, to assess participants’ evaluations of the organ donor prototype [40], participants were instructed first to think about the typical person who donates their organs upon their death. Respondents were then asked ‘What is your opinion of the type of person who donates their organs upon death?’ and were instructed to rate their opinion of the typical organ donor on six 7-point semantic differential scales, including three reversed items, with scale anchors of ‘selfish-unselfish, uncaring-caring, family minded-not family minded, generous-mean, irrational-rational, community minded-not community minded’. A measure of participants’ evaluation of the organ donor prototype was then computed by reverse scoring the negative adjectives (i.e. reverse scoring family minded-not family minded, generous-mean, community minded-not community minded) so that high scores reflected the positive aspect of the trait. These items were then summed and averaged to create a donor prototype evaluation scale which was reliable ($\alpha = 0.76$). In addition, we conducted confirmatory factor analyses (CFAs) using AMOS 6.0 and maximum likelihood estimation to ensure the constructs of attitude and donor prototype evaluation demonstrated discriminant validity. Consistent with the specifications of the prototype/willingness model [33], which suggests that attitude and prototype evaluations are separate constructs, CFAs in the current study revealed that the indicator variables for attitude and the indicator variables for donor prototype evaluations demonstrated unidimensional loadings on their respective factors. (Specifically, the model testing discriminant validity between registering attitudes and donor prototype evaluations was found to be an acceptable fit to the data, $\chi^2 (35, n = 359) = 112.188$, $P < 0.001$, comparative fit index (CFI) = 0.946, root mean square error of approximation (RMSEA) = 0.078. The intercorrelation between registering attitude and donor prototype evaluation was 0.27. All factor loadings exceeded 0.46 for the donor prototype evaluations construct and 0.78 for the registering attitude construct. Similarly, the model testing discriminant validity between
discussing attitudes and donor prototype evaluations was found to be an acceptable fit to the data, \( \chi^2 (35, n = 282) = 110.644, P < 0.001, \text{CFI} = 0.936, \text{RMSEA} = 0.087. \) The intercorrelation between discussing attitude and donor prototype evaluation was 0.28. All factor loadings exceeded 0.44 for the donor prototype evaluations construct and 0.72 for the discussing attitude construct.

**Additional measures**

One item for each behaviour measured whether participants had previously registered their intent on their driver licence or register and whether they had previously talked about their organ donation preference, both coded as 0 (no) and 1 (yes), for analyses. Although registering the donation decision is normally a behaviour that is performed only once, the Australian government recently introduced a national register of ‘consent’ (as of July 2005) which voids all other previous methods (e.g. driver’s licence, donor card) of registering one’s ‘intent’ to donate organs upon death. For the Australian public, this change means that even if a person has already registered his or her intent to donate on a driver licence, donor card or register (prior to July 2005) every person over the age of 18 years is required to re-register their consent on the Australian Organ Donor Register. Therefore, to account for participant’s previous registration of their intent to donate, a measure of past registration behaviour was included in the current study. To account for the possibility that being a student or being a community member may influence the results in the current study, a measure of respondent type was included also in the model. For ‘respondent type’, students and community members participating in the study were coded as 1 (students) and 2 (community), respectively, for analyses.

**Results**

Means and SDs for the measures related to each behaviour of registering and discussing are presented in Table I. After initial inspection of the correlation matrix which revealed registering subjective norm and registering moral norm as the strongest correlates of registering intentions and discussing subjective norm and discussing moral norm as the strongest correlates of discussing intentions (Table II), structural equation modelling (SEM) was then performed using AMOS 6.0. Maximum likelihood was used to estimate the parameters of the model. Model fit was determined by the following indicators: chi-square test (non-significant or acceptable if no >3 times the degrees of freedom [41]), CFI (>0.90), Tucker–Lewis index (TLI; >0.90) and RMSEA (<0.08) [42]. Path coefficients and \( R^2 \) values were also inspected to evaluate the predictive power of the model.

**Predicting communication intentions**

For each of the behaviours of registering and discussing, separate SEM analyses were used to test the hypothesized relationships between intention, extended TPB variables (attitude, subjective norm, PBC, moral norm, self-identity) and donor prototype evaluations, while controlling for past behaviour and respondent type. The extended TPB variables, in each separate SEM analysis, were allowed to co-vary among themselves.

**Registering consent for donation**

For registering intentions, the proposed model was not a good fit to the data, \( \chi^2 (18) = 185.017, \)
\(P < 0.001\), CFI = 0.881, TLI = 0.762, RMSEA = 0.161. Modification indices suggested model improvement with the inclusion of the following paths: past registration behaviour to attitude, subjective norm, PBC, moral norm and self-identity; donor prototype evaluations to attitude, subjective norm, moral norm and self-identity; respondent type to past registration behaviour. Analysis of the revised model including these additional paths indicated that respondent type influenced past registration behaviour; past registration behaviour informed the extended TPB predictors of attitude, subjective norm, PBC, moral norm and self-identity; donor prototype evaluations influenced the extended TPB predictors (with the exception of PBC) and the extended TPB predictors, as well as past registration behaviour and respondent type, had direct effects on registering intentions (see Fig. 1). The final model was an adequate fit to the data, \(\chi^2 (8) = 12.589, \ P = 0.127, \ CFI = 0.997, \ TLI = 0.985, \ RMSEA = 0.040\). All the paths shown in the final model were significant at least at the \(P < 0.05\) level. The final model explained 74\% of the variance in intentions to register consent on the organ donor register.

**Discussing the donation decision**

For discussing intentions, the initial model was not a good fit to the data, \(\chi^2 (18) = 114.680, \ P < 0.001, \ CFI = 0.912, \ TLI = 0.824, \ RMSEA = 0.138\). Modification indices suggested that model improvement with the inclusion of paths from past discussing behaviour to the extended TPB variables; donor prototype evaluations to attitude, subjective norm and self-identity and respondent type to past discussing behaviour. The analysis for the revised model incorporating these additional paths indicated that respondent type influenced past discussion behaviour; past discussion behaviour influenced the extended TPB predictors; donor prototype evaluations informed attitude, subjective norm and self-identity and PBC, moral norm, self-identity, donor prototype evaluation, past discussing behaviour and respondent type influence discussing intentions (see Fig. 2). The final model was an adequate fit to the data, \(\chi^2 (9) = 20.312, \ P = 0.016, \ CFI = 0.990, \ TLI = 0.959, \ RMSEA = 0.067\). All the paths shown in the final model were significant at least at the \(P < 0.05\) level. The final model explained 76\% of the variance in intentions to discuss the donation decision with a partner or family members.

### Predicting communication behaviour

At the 4-week follow-up, eight respondents reported registering their consent to be an organ donor on the Australian Organ Donor Register (6\%) and 45 participants (41\%) reported discussing their donation decision. Given the insufficient ratio

---

**Table II. Bivariate correlations among predictor and dependent variable for registering and discussing**

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Respondent type(^a)</td>
<td>—</td>
<td>0.08</td>
<td>0.15***</td>
<td>0.20***</td>
<td>0.13*</td>
<td>0.09</td>
<td>0.38***</td>
<td>0.04</td>
<td>0.12*</td>
<td>—</td>
</tr>
<tr>
<td>2. Attitude</td>
<td>0.06</td>
<td>—</td>
<td>0.52***</td>
<td>0.40***</td>
<td>0.47***</td>
<td>0.62***</td>
<td>0.35***</td>
<td>0.27***</td>
<td>0.61***</td>
<td>—</td>
</tr>
<tr>
<td>3. Subjective norm</td>
<td>0.05</td>
<td>0.61***</td>
<td>—</td>
<td>0.68***</td>
<td>0.62***</td>
<td>0.51***</td>
<td>0.38***</td>
<td>0.22***</td>
<td>0.74***</td>
<td>—</td>
</tr>
<tr>
<td>4. PBC</td>
<td>0.17***</td>
<td>0.49***</td>
<td>0.71***</td>
<td>—</td>
<td>0.54***</td>
<td>0.39***</td>
<td>0.37***</td>
<td>0.13***</td>
<td>0.70***</td>
<td>—</td>
</tr>
<tr>
<td>5. Moral norm</td>
<td>0.07</td>
<td>0.43***</td>
<td>0.62***</td>
<td>0.45***</td>
<td>—</td>
<td>0.53***</td>
<td>0.33***</td>
<td>0.17***</td>
<td>0.68***</td>
<td>—</td>
</tr>
<tr>
<td>6. Self-identity</td>
<td>0.04</td>
<td>0.49***</td>
<td>0.50***</td>
<td>0.31***</td>
<td>0.57***</td>
<td>—</td>
<td>0.36***</td>
<td>0.28***</td>
<td>0.64***</td>
<td>—</td>
</tr>
<tr>
<td>7. Past behaviour(^a)</td>
<td>0.27***</td>
<td>0.31***</td>
<td>0.29***</td>
<td>0.34***</td>
<td>0.23***</td>
<td>0.30***</td>
<td>—</td>
<td>0.05</td>
<td>0.45***</td>
<td>—</td>
</tr>
<tr>
<td>8. Donor prototype evaluation</td>
<td>0.08</td>
<td>0.28***</td>
<td>0.28***</td>
<td>0.15*</td>
<td>0.18**</td>
<td>0.23***</td>
<td>0.08</td>
<td>—</td>
<td>0.22***</td>
<td>—</td>
</tr>
<tr>
<td>9. Intention</td>
<td>0.08</td>
<td>0.54***</td>
<td>0.71***</td>
<td>0.67***</td>
<td>0.77***</td>
<td>0.56***</td>
<td>0.40***</td>
<td>0.25***</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>10. Behaviour</td>
<td>0.18**</td>
<td>—</td>
<td>—</td>
<td>0.20*</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>0.28**</td>
<td>—</td>
</tr>
</tbody>
</table>

Correlations above the diagonal are for registering; correlations below the diagonal are for discussing. \(*P < 0.05, **P < 0.01, ***P < 0.001.\)

\(^a\)Dichotomous scale.
of behavioural performers to non-performers, registering behaviour was not examined further in the current study. Using logistic regression analysis to determine the predictors of discussing behaviour, a test of the predictors (respondent type, discussing intention and discussing PBC) against the constant-only model was statistically significant, $\chi^2 (3, n = 108) = 8.76, P = .033$, explaining 11% of the variance in classification of respondents who had and had not discussed their organ donation decision. At the final step, discussing intention was the only significant predictor of discussing behaviour (Table III).

**Discussion**

Using an extended TPB framework, we explored the role of donor prototype evaluations in predicting people’s decisions to communicate their organ donation wishes. Specifically, we proposed a model for each behaviour of registering consent on an organ donor register and discussing the organ donation decision with a partner of family members to examine the contribution of attitude, subjective norm, PBC, self-identity, moral norm (extended TPB predictors) and donor prototype evaluations, while controlling for the effects of past behaviour and respondent type. In addition, we predicted discussing behaviour over a 1-month time period (but not registering behaviour due to the low numbers of behavioural performers between the two data collection time points). The extended TPB explained 74% (registering) and 76% (discussing) of the variance in intentions. Donor prototypes emerged as a significant predictor of discussing intentions and informed the extended TPB predictors for discussing
and registering intentions, providing some support for Hypotheses 1 and 3. In partial support of Hypothesis 2, intention was the only significant predictor of behaviour accounting for \( \sim 11\% \) of the variation in discussing the organ donation decision with a partner or family members.

In exploring the broader social influence of donor prototype evaluations on communicating organ donation decisions, the study’s results revealed that donor prototype evaluations had a significant direct impact on intentions to discuss (but not register) the donation decision as well as an indirect impact informing the extended TPB predictors for registering and discussing intentions. The significant contribution of donor prototype evaluations for intentions to discuss, but not register, the organ donation decision may be explained by the differing nature of registering and discussing behaviour and the degree of public disclosure required for each behaviour. Discussing the decision is a public behaviour that involves interaction with others and it

\[
\begin{array}{llllll}
\text{Variable} & \text{B} & \text{SE} & \text{Wald} & \text{95\% CI} & \text{Odds ratio} \\
\hline
1. Respondent type & -0.208 & 0.409 & 0.259 & 0.812 & 0.365 & 1.810 \\
2. Respondent type & -0.117 & 0.430 & 0.075 & 0.889 & 0.383 & 2.064 \\
Intention & 0.382 & 0.196 & 3.807* & 1.466 & 0.998 & 2.153 \\
PBC & 0.054 & 0.210 & 0.066 & 1.055 & 0.699 & 1.593 \\
\end{array}
\]

CI, confidence interval; SE, Standard Error. *\( P < 0.05 \).
is possible that a person only intends to discuss his or her decision if they believe donors are evaluated positively, thus reducing the likelihood that family members will react negatively when an individual raises his or her preference to be an organ donor. In contrast, registering the donation decision is a private, personal behaviour that does not necessarily involve consultation with others or the possibility of being perceived negatively by others, potentially rendering evaluations of a typical donor as less influential for this behaviour.

The significant, albeit small, effect of donor prototype evaluations in the current study extends previous research on perceptions of organ donors and the general desire to be an organ donor [32, 38] by demonstrating an impact of these perceptions on intentions to discuss the organ donation decision. Additionally, the direct contribution of a prototype that may incorporate both positive and negative images on intentions to perform an altruistic-type behaviour points to the potential role for donor prototypes in other charitable giving contexts, such as blood and bone marrow donation, where the donor role involves both risks to the donor but beneficial or health-promoting outcomes for the recipient.

The study’s results support the relationships between the extended TPB predictors and intentions for each of the behaviours of registering and discussing and suggest several areas for future intervention to encourage communication of donation wishes. The contribution of PBC to the prediction of intentions for both communication behaviours of registering and discussing suggests that respondents with greater perceptions of control and confidence in their ability to easily communicate their decision were more likely to do so. These findings are consistent with other literature highlighting the barriers to effective donation decision communication such as uncertainty about how and when to raise the topic [10, 43] or a lack of motivation and knowledge about where to register the donation decision [44]. Increasing an individual’s confidence in his or her ability to perform the behaviours and emphasizing the means by which an individual can easily communicate his or her decision (e.g. where to register consent or tips detailing how and when to start a conversation) may prove effective in strengthening intentions to communicate the decision.

In line with previous research [14, 15], self-identity and moral norm significantly predicted intentions to communicate the donation preference on a donor register or with family, suggesting that the more individuals consider being an organ donor who has communicated their donation decision as an important part of their self-concept, and the more they believe they are morally obligated to communicate their decision, the stronger their intentions to perform these behaviours. Future strategies, then, may include making the organ donor identity salient in donation messages and encouraging potential donors to make a direct statement about their identity by engaging in donor identity confirming behaviours such as registering and discussing their donation decision. Furthermore, tapping into feelings of moral duty by emphasizing the difficulty, uncertainty and anguish involved in making the decision to donate a loved one’s organs when the person’s donation preference is unknown may encourage a sense of communicating the donation decision as ‘the right thing to do’.

For registering intentions, the findings suggest that the more favourably individuals view registering their decision and perceive that important others would want them to register their decision, the more likely they are to do so. The failure of attitudes and subjective norm to predict discussing intentions is in contrast to previous research [18], however, and suggests that other personal influences, such as one’s perception of themselves as a person who discusses their decision and the perception that one is morally obligated to communicate their donation decision, may be more influential when forming an intention to discuss the donation decision with a partner or family/members. The lack of influence of the perceived approval from important others on people’s intentions to discuss their donation decision in the current study (as evidenced by the non-significant finding for subjective norm in predicting people’s discussing intentions) may be problematic in efforts to ensure that people’s donation wishes are communicated to their loved ones.
Perceiving approval from significant others to discuss one’s preference is likely to be an important pre-requisite for actual discussion to occur, with discussion essential to the donation process as next-of-kin play an integral role in the organ procurement process by providing or confirming consent for donation. As noted previously, researchers [e.g. 6, 7] have observed that family members who are aware of their loved one’s preference for donation are more likely to provide consent for donation.

**Limitations and conclusion**

This study has several strengths including the use of both students and community members, a strong theoretical framework using standardized measures, a prospective assessment of behaviour and a novel examination of a largely untested predictor for altruistic behaviours in the form of donor prototype evaluations. There are a number of limitations, however, that deserve comment. First, although we assessed the behaviours over a 1-month period, only a small number of respondents had registered their decision within that time frame, precluding analyses predicting behavioural performance for registering. Despite providing participants with two additional opportunities to complete the follow-up questionnaire (i.e. 3 months in which they could respond), this method did not increase response rates either a longer follow-up time frame or a prompt, such as providing the actual consent form or website link to the register, might be beneficial (as is commonly practiced in other studies examining registration behaviour [45]). Second, we acknowledge that there are many ways in which prototype evaluations have been assessed previously including overall evaluations and separate measures of prototype favourability and similarity [46]. While we provided a preliminary investigation of the role of donor prototype evaluations in organ donation decisions, future research should continue to test the influence of donor prototypes and could assess the feasibility of other prototype measures in this context (e.g. donor prototype favourability and similarity). Finally, although we attempted to recruit a range of participants, future research should assess the predictors of communication intentions and behaviours with a greater representation of non-students, non-Caucasians and males, given the higher proportion of student, female and Caucasian respondents in the current research.

Overall, the results of the current study provided some support for the role of donor prototype evaluations within an extended TPB model in predicting people’s communication of their organ donation decision given that donor perceptions influenced the decision to discuss one’s donation preference, although future research should seek to confirm these findings. The critical role of consent in the organ donation process highlights the need for the continued examination of the important factors influencing people’s decision to disclose their organ donation preference, both publicly by registering their decision and privately by discussing the decision with significant others. In doing so, we can bridge the gap between organ supply and demand, an outcome that alleviates the suffering and improves the quality of life for those recipients waiting to benefit from people’s performance of the requisite steps confirming individuals’ donation preferences.

**References**


Received on August 11, 2008; accepted on March 30, 2009