Altruistic attitudes among the relatives of patients with chronic kidney disease (CKD): A cross-sectional study

Abstract:

Introduction: A major barrier to kidney transplantation is the scarcity of organs. In India kidney donation is limited to “altruistic” donors and the law prohibits the donors from receiving anything of material value in exchange for giving a kidney. However, recent publications supported by surveys argued for a regulated system of incentives for donation and questioned altruism as the only motivation for kidney donation especially to close family members and friends. To the best of our knowledge, there are no studies exploring the altruistic behaviour among the relatives (the potential kidney donors) of patients with CKD.

Objectives:This study was conducted with the objective of assessing altruistic attitudes among the close relatives of patients with CKD in India and determining the socio-demographic factors which influence altruism.

Methods: A cross-sectional study was conducted on a sample of 100 relatives of patients with CKD on hemodialysis. The altruistic behaviour among the relatives of patients with CKD was assessed by the Altruism Personality scale. The study instrument also contained questions related to socio-demographic details of the participants such as age, gender, religion, education, habitat and relationship with the CKD patient. After the CKD patients relatives’ informed consent was obtained, they were requested to self-administer the questionnaire in the form of a pen-and-paper test and a trained social worker helped those who had difficulty in understanding the questionnaire. Results: We received 94 responses. The age of respondents range from 22-87 years with a mean age of 44.04 years. 51 respondents were females. 64 respondents were Muslims and rest were Hindus. The mean altruism score of the sample was 59.18 (SD: 12.25). The age of the sample was found to be positively correlated with the altruism score (p<0.0001).

Conclusion: Mean altruism score of the studied population was above the neutral score of 47.5, indicates that the relatives of the patients with CKD were generally altruistic in nature and kinship altruism should be utilised to promote organ donation over any other modes of donation in our population.

Keywords: Altruism; kidney donation; relatives; CKD

Introduction: The growth of Chronic kidney disease (CKD) has become a profound public health problem, especially for developing countries like India. Due to the steady increase in the incidence of risk factors such as Diabetes among younger Indians, the prevalence of CKD is expected to rise further as Diabetes accounts for 40-60% case of ESRD (1). Patients with stage 5 CKD require renal replacement therapy (RRT)- Chronic Hemodialysis (HD), Peritoneal dialysis (PD) or Kidney transplantation. The prevalence of end-stage renal disease requiring transplantation in India is estimated to be between 151 and 232 per million population and around 220,000 people require kidney transplantation in India (2). A major barrier to kidney transplantation is the scarcity of organs. Current Indian law permits both living kidney transplantation and transplantation from deceased donation. The published data indicates that approximately 7500 kidney transplantations are performed at 250 kidney transplant centres in India, out of these 90% come from living donors (2). Countries around the world are working to increase kidney donation as it is a significantly better treatment option for patients with CKD when compared to dialysis, in terms of better clinical outcome and cost-effectiveness (3). However, due to the ever increasing demand for a kidney transplant and a relatively static supply of organs, the gap between the number of patients wanting a kidney and the number of available organs is widening.

In India, like most other countries, kidney donation is limited to “altruistic” donors and the law prohibits the donors from receiving anything of material value in exchange for giving a kidney. Altruistic acts are defined as acts of goodwill for the well-being of others, without any selfish intent (4). Altruism is exercised in several medical contexts, especially in organ donation. Organ donation is an ultimate example of altruistic acts where the contribution by the society is simply paramount in its deliverance as organs can only come from the members of the society (5). However, recent publications supported by surveys argued for a regulated system of incentives for donation, that can have the potential to increase both living and deceased donation while eliminating the harms of unregulated markets (3). They also argued to recognise realistically the multiple and overlapping motives that underlie donation within and outside of families other than “altruism” such as a sense of obligation, a need to be accepted or valued by family and friends or even an easily identifiable secondary gain (3).

To the best of our knowledge, there are no studies exploring the altruistic behaviour among the relatives (the potential kidney donors) of patients with CKD. This study was conducted with the objective of assessing altruistic attitudes among the close relatives of patients with CKD in India and determining the socio-demographic factors which influence altruism.

Methods

Study population

The study was conducted in a tertiary care hospital in Calicut city, Kerala, after obtaining permission from ethical committee of the institution. The hospital has a full fledged nephrology department with facilities for dialysis and kidney transplantation. The study was approved by the institutional ethics committee of the hospital.

Study instrument

The altruistic behaviour among the relatives of patients with CKD was assessed by the Altruism Personality scale (6). The Altruism Personality scale has 20 items on which respondents are required to rate the frequency with which they engage in certain altruistic behaviours. One item which is not relevant in the Indian context was removed, namely, “I have helped a stranger’s car out of the snow”.

The study instrument also contained questions related to socio-demographic details of the participants such as age, gender, religion, education, habitat and relationship with the CKD patient.The final number of questions in the questionnaire was 25.

Data collection

The study topic was introduced to the relatives of patients with CKD and informed consent was obtained from everybody who agreed to participate. The participants were then handed the study questionnaire, which was to be answered using a pen and paper format and a trained social worker helped those who had difficulty in understanding the questionnaire. The data were entered in an Ms Excel spreadsheet and analysed using Graphpad Prism version 7.

Results: We approached 100 relatives of patients with CKD and received 94 responses. The age of respondents range from 22-87 years with a mean age of 44.04 years. 51 respondents were females. 64 respondents were Muslims and rest were Hindus. 46 respondents received less than 10 years of formal education, 30 respondents completed 12 years of formal education and 18 respondents completed 15 years of formal education. 31 respondents were wife of CKD patients, followed by children (25), husband (15), parents (11), siblings (4) and others (8). The mean altruism score of the sample was 59.18 (SD: 12.25). The age of the sample was found to be positively correlated with the altruism score (p<0.0001). The results showed no association between gender, religion, educational level and relationship with CKD patients with altruism score (table 1).

Discussions: We explored the altruism level of relatives of patients with CKD and it’s association with demographic factors. We found that the mean altruism score of the studied population was above the neutral score of 47.5, indicates that the relatives of the patients with CKD were generally altruistic in nature which has clinical and policy implications. Recently, there has been debates over the desirability of material incentives offered as a supplement to live organ donation to promote kidney donation to meet the demand gap. However, our study results indicates that in a society where family and social bonds are strong, altruistic kidney donation should be promoted over any other modes of donation as relatives are generally altruistic in their approach. Moreover, studies have also shown that altruism is more significantly related to the willingness of individuals to donate a kidney only for immediate family and close friends where material expectations are usually nil (7). Another recent study explored the extent to which an individual’s stated altruistic sentiments can be influences by age and social proximity by measuring the willingness to sacrifice own health for another person’s health found that individuals are more altruistic towards young children and altruism tends to be lowest towards those who are more socially distant (8). Individuals demonstrate greater degrees of both health and wealth altruism toward members of their immediate family than other groups, which supports the theory of kinship altruism.

In conclusion, altruistic kidney donation should be promoted in developing communities like India were kinship altruism could be high. Our study results highlights that relatives of patients with CKD are generally altruistic in nature and kinship altruism should be utilised to promote organ donation in our population.

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Table 1

| Factors influencing altruistic behaviours | | | |
| --- | --- | --- | --- |
|  | Mean (SD) | Mean Altruism total score (SD) | p value |
| Age | 44.04 (1.45) | 59.18 (1.26) | <0.0001\* |
|  | Number |  |  |
| Gender | Female: 51  Male: 31 | 59.9 (1.47)  63.52 (1.94) | 0.14 |
| Religion | Hindu: 30  Muslim: 64 | 57.77 (14.33)  59.84 (11.2) | 0.58 |
| Education (in years) | Upto 10 year: 46  12 year: 30  15 year: 18 | 59.63 (12.52)  58.53 (11.4)  59.11 (13.52) | 0.93 |
| Relationship with CKD patient | Wife: 31  Children: 25  Husband: 15  Parents: 11  Siblings: 4  Others: 8 | 55.81 (11.47)  59.44 (11.07)  60.33 (15.76)  59.82 (13.74)  72.25 (2.22)  61.88 (8.94) | 0.19 |

\*p<0.05