

Religious Motivation for Living Donor Transplantation

A Global Survey and Systematic Review

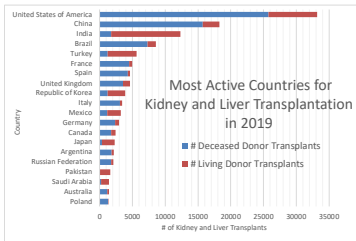
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PURPOSE OF THE STUDY

This study explores people's religious motivations for organ donation in countries with high degrees of living donor transplantation.

BACKGROUND

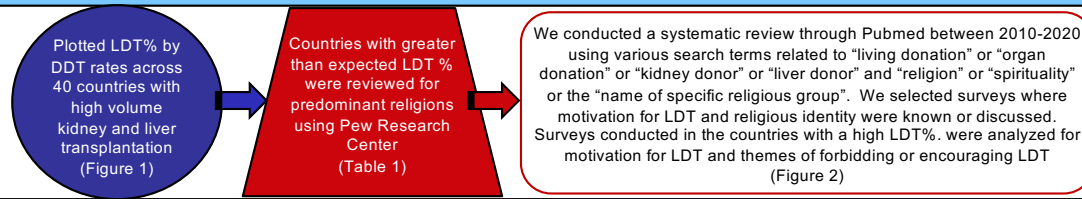
The US leads the world in transplantation but the supply of organs still does not meet the demand. Increased living donor transplantation (LDT) can help meet the need for kidney and liver grafts.



In the last 10 years countries such as China, India, and Turkey have dramatically increased kidney and liver transplantation with some countries tending to perform more LDT than deceased donor transplantation (DDT) (WHO-GODT, 2019). A large multivariate analysis of socioeconomic, demographic and policy comparisons of DDT and LDT rates across 53 countries revealed that GDP and presumed consent legislature were associated with DDT while religion remained a factor in LDT (Bendorf et al, 2013).

Theologians of various faiths have written that no religion formally forbids LDT or DDT but accept that varied cultural and diverse thought continues to exist at state, local and community levels. Religious motivation has been held in the US and abroad as a factor which drives altruistic donor behavior. We wished to explore the themes of religious motivation for transplantation in countries with high LDT.

METHODS



RESULTS

Eleven countries were found with LDT% higher than 50% (Table 1). 16 Surveys met the search criteria; Muslim countries were most predominant including Turkey (7), Saudi Arabia (5), and Pakistan (2). India and Mexico produced one paper each (Table 2). The surveys queried people of various backgrounds (religious, student, health professionals) about living "organ donation" and few commented specifically about the type of organ. Most queried living donation to a relative and only one about unrelated donation. No surveys concerning religion and LDT were found from populations in Sudan, Algeria, Philippines, Japan, Korea, or Israel

Figure 1: Top 40 Countries for Kidney and Liver Transplant

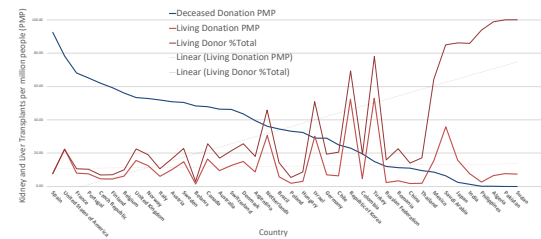
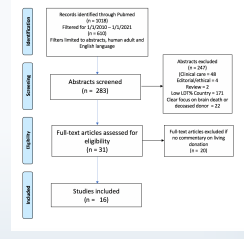


Table 1: Countries by LDT%

COUNTRY	LDT%	Major Religions*
Pakistan	100%	Muslim 98%
Sudan	100%	Muslim 98%
Algeria	99%	Muslim 98%
Philippines	94%	Catholic 85%, Protestant 11%
Japan	86%	Shinto 84%, Buddhist 98%
India	86%	Hindu 80%, Muslim 14%
Saudi Arabia	85%	Muslim 98%
Turkey	79%	Muslim 98%
Republic of Korea	69%	Buddhist 23%, Protestant 18%, Catholic 12%
Mexico	64%	Catholic 98%
Brazil	51%	Jewish 3%, Muslim 3%
Netherlands	46%	Catholic 29%, Protestant 22%
Canada	26%	Protestant 87%
Denmark	26%	Protestant 94%
Sweden	23%	Protestant 94%
Romania	23%	Orthodox Christian 87%
United Kingdom	23%	Protestant 68%, Catholic 14%
USA	22%	Protestant 40%, Catholic 21%
Switzerland	21%	Catholic 30%, Protestant 32%
Chile	21%	Catholic 78%, Protestants 18%

Figure 2: PRISMA flow chart



Turkey (7 studies)
A total of 3601 (165-1287) students, Islamic officials, Imams and members of the public were surveyed. 60% (mean) were willing to donate to a relative. 25% (mean) were willing to be deceased donors.

Saudi Arabia (5 studies)
A total of 2285 (225-648) students, clinic patients and members of the public were surveyed. 53% (mean) were willing to donate to a relative. 47% (mean) were willing to be deceased donors.

Pakistan (2 studies)
56% of medical students (n=158) were willing to be a kidney LD to a relative. Most lay public (n=105) did not know how Islam impacted donation. 14% felt that Sharia forbid living kidney donation.

India (1 study)
172 Hindus were interviewed and 54% considered being a living donor.

Hinduism:
87% believed that their religion allowed both LDT and DDT; the other 13% did not know.

Mexico (1 study)
91% of health care workers would be interested in LDT to a relative, 34% would consider unrelated living donor.

Catholicism:
Only 1% of felt like their religion forbid organ donation

Islam: Religious ideation is used as an explanation both for and against LDT and DDT. Across these studies, there was less motivation for DDT and less knowledge about it which is consistent with the low levels of DDT.

DISCUSSION

Countries such as Turkey, Saudi Arabia, and Pakistan have increased LDT partly due to low DDT rates. Those surveyed in these countries expressed the wish to help relatives through LDT. Islam emphasizes the importance of saving human life but local religious concerns about the medical criteria for death, informed consent, and bodily integrity at death contributed to the low DDT rates. The principle of "necessity overriding prohibition" in the Qur'an has been invoked to describe the rise in LDT.

Other Islamic countries may be able to advance transplantation through LDT as well. In India, Hindus believe in Dharma (righteous living) and Daan (selfless giving) which promotes LDT. Countries with presumed consent legislature ("opt out") like Spain, Portugal, and Austria tend to be Catholic and tend to have higher DDT but could advance LDT through local religious groups. A Jewish-based community organization in Israel, Matnam Chaim, has helped facilitate living kidney donor transplantation (Wasser, 2018). Jewish organizations in the US are doing similar work. The US has large Muslim and Hindu populations which could be similarly organized to increase LDT.

The limitations of the review were using a single search engine and a limited time period. The experience of minority religions within a dominant religion society were not explored. The differential between kidney and liver living donation was not explored.

Psychiatrists, psychologists, social workers, and transplant teams in countries with religious diversity will benefit from understanding religious motivation for LDT. Appreciation for diverse belief systems may contribute to increasing LDT.

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