

Living organ donation: ethical issues and mental health impacts

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Abstract

Organ transplantation improves quality of life and life expectancy, and can be a vital treatment for numerous diseases. However, Brazil faces a significant gap between organ demand and availability, with more than 45,000 people on the waiting list in 2024. Living organ donation has brought benefits such as reduced waiting time, but also raises important ethical concerns. Living donors must be evaluated to ensure their understanding of the risks and the absence of coercion. Psychosocial screening, conducted by trained professionals, can aid identify risks and assess donors' mental health. Psychiatrists and forensic psychiatrists play a key role in investigating motivations, emotional impact, and possible disorders, ensuring the decision is autonomous and informed. This study reviews practices, challenges, and advances, and highlights the importance of psychosocial evaluations in the living donation process.

Keywords: Organ Transplantation. Tissue and organ procurement. Living donors. Bioethics. Forensic psychiatry.

Resumo

Doação de órgãos por vivos: questões éticas e impactos na saúde mental

O transplante de órgãos melhora a qualidade e expectativa de vida e pode ser tratamento essencial contra inúmeras doenças. Contudo, o Brasil enfrenta significativa disparidade entre a demanda e a disponibilidade de órgãos, com mais de 45 mil pessoas na lista de espera em 2024. O transplante intervivos trouxe benefícios como menor tempo de espera, mas também desafios éticos importantes. Doadores vivos precisam ser avaliados para garantir a compreensão dos riscos e a ausência de coerção. A triagem psicossocial, realizada por profissionais treinados, pode auxiliar na identificação de riscos e na avaliação da saúde mental dos doadores. Psiquiatras e psiquiatras forenses desempenham o importante papel de investigar motivações, impacto emocional e possíveis transtornos e assegurar que a escolha seja autônoma e informada. Este estudo revisa práticas, desafios e avanços e destaca a importância das avaliações psicossociais para o processo de doação intervivos.

Palavras-chave: Transplante de órgãos. Obtenção de tecidos e órgãos. Doadores vivos. Bioética. Psiquiatria legal.

Resumen

Donación de órganos intervivos: cuestiones éticas e impactos en la salud mental

El trasplante de órganos mejora la calidad y la esperanza de vida, y puede ser un tratamiento esencial contra numerosas enfermedades. Brasil se enfrenta a una disparidad significativa entre la demanda y la disponibilidad de órganos, con más de 45.000 personas en lista de espera en 2024. El trasplante intervivos tiene ventajas como tiempos de espera más cortos e importantes desafíos éticos. Los donantes vivos deben ser evaluados para comprender los riesgos y expresar ausencia de coerción. El cribado psicossocial realizado por profesionales capacitados puede identificar los riesgos y evaluar la salud mental de los donantes. Los psiquiatras y los psiquiatras forenses desempeñan un papel clave por investigar las motivaciones, el impacto emocional y los posibles trastornos, y garantizar una elección autónoma y consentida. Este estudio examina las prácticas, los desafíos y los avances, y destaca la importancia de las evaluaciones psicossociales para el proceso de donaciones en vida.

Palabras clave: Trasplante de órganos. Obtencción de tejidos y órganos. Donadores vivos. Bioética. Psiquiatría legal.

The authors declare no conflict of interest.

During 2023, between January and September, 6,766 transplants were performed in Brazil, whereas, in the same period of the previous year, there were 6,055 transplants¹. Organ and tissue transplantation is currently an effective therapeutic option for several diseases, which improve both quality of life and life expectancy. Despite that, Brazil has a significant disproportion between the number of waiting list patients and the number of organs available for transplantation. According to Ministry of Health data, in December 2024, there were 45,228 people waiting for an organ transplant in the country².

The first transplant between living people in the world was of kidneys, between monozygotic twins, in 1954, at Peter Bent Brigham Hospital in Boston³. Thereafter, there became evident the bioethical complexity involved in the practice of transplants, initially due to the need to establish death criteria, with differentiation between cardiopulmonary and encephalic criteria. Subsequently, transplants considered the possibility of expanding the use of organs from living donors⁴.

In Brazil, the national public transplantation program was implemented in 1997, through Law 9,434/1997⁵, regulated by Decree 9,175/2017⁶, which provides for the removal of organs, tissues and parts of the human body for transplantation and treatment purposes. Brazilian law establishes that an individual can donate some organs while alive—provided that they are not life-supporting organs—for transplantation purposes. Family members of patients may donate provided that they are spouses or consanguineous relatives up to the fourth degree and provided that free decision-making is guaranteed. Individuals unrelated to the patient can also donate, but in this case the procedure in Brazil depends on legal authorization.

Living kidney transplant is currently the most performed worldwide and provides significant benefits to recipients, such as the possibility of choosing the most appropriate time for surgery, shorter hemodialysis process and shorter waiting time, in addition to adequate pre-operative preparation. In the case of the liver, the only transplantable organ that can regenerate, surgery is more challenging and poses greater risks

for donors; however, it still provides advantages such as planned procedure, shorter waiting time and less impaired liver function. Most donors are consanguineous relatives, which increases compatibility and reduces the risk of graft rejection. In comparing living kidney and liver transplants, the differences relate to the short and long terms. Kidney removal surgery has a lower risk in the short term than the liver portion removal surgery. However, in the long term, the relation is reversed. Kidney removal causes permanent injury to the donor, while the liver can regenerate in a relatively short period. On the other hand, lung transplantation—although a double-organ—is considered more complex, less frequent and, due to these characteristics, presents less favorable results compared to kidney or liver transplantation⁷.

Method

This study proposes an updated review of the theme based on data obtained from the main bibliographic works written in Portuguese and English, in addition to the references resulting from a search for the descriptors “organ donor,” “psychosocial assessment,” and “organ donor psychiatry” in the PubMed and SciELO databases. The consultation was held between November and December 2024. No study publication period limit was used for inclusion or exclusion in this study.

No approval from a research ethics committee was necessary, as the information used in this study is public.

Ethical issues

Ethical issues related to transplants with living donors, especially those without a relation to the recipient, lead to intense debates among health professionals, bioethicists and society in general. There is no international consensus on mandatory psychological assessment in the pre- and post-transplant periods for donors and recipients. Even so, it is essential to analyze aspects such as financial conditions, family

history of mental disorders, use of psychotropic substances, presence of coercive behaviors and emotional state to ensure that both parties understand the risks and benefits involved in the donation and in the surgical procedure. It is equally fundamental to understand that, for the recipient patient, the procedure is a necessity, while, for the donor, it is a possibility. Necessity restricts freedom of choice, unlike possibility, which implies freedom of choice⁴.

Transplant programs have major responsibility for living donors as they face the risks of a surgery with no direct medical benefits for them. Therefore, it is important to adopt selection criteria that ensure that candidates are in good health to undergo an elective procedure. In addition, considering that psychological and behavioral well-being and social support are essential for recovery and for dealing with possible surgery complications, psychosocial assessment should be adopted during the living donor screening and selection process. It is essential to understand that, in living transplants, donors are patients similarly to recipients⁸.

Living organ donation involves risks for donors; therefore, it is essential to verify the authenticity of the offer before accepting it. The consent process, widely required for transplantation, was established for this purpose. Its main elements include: 1) capacity, 2) provision of information, 3) understanding, 4) freedom of choice, and 5) consent. The consent process is aimed at ensuring that the choice is autonomous, promoting protection against exploitation, and ensuring the understanding of the act by the donor⁹.

Health care professionals working with living donors need to consider various ethical aspects during their assessment process. Ensuring that donors have a clear understanding of the risks and benefits of the surgery—for them and for recipients—is fundamental for the consent process. It is also important to trace possible situations of donor coercion or manipulation, which, when proven, can lead to their exclusion. Both psychiatrists and other mental health specialists play an important role in protecting the ethical principle of beneficence and should help

donors make a safe and informed decision to help another human being⁴.

Donor assessment process

Complete living donor assessments are essential to predict which patients will have positive or negative experiences and outcomes with donation, and, therefore, psychosocial risk factors, in addition to medical factors, should be considered during the evaluation of potential donors¹⁰.

Psychiatric assessment is widely adopted to assess the fitness of kidney recipient candidates. It emphasizes psychiatric disorders, the history of compliance with medical guidelines, and social support networks that can affect adherence¹¹. There are several tools used to assess recipients in clinical practice, such as the Stanford Integrated Psychosocial Assessment for Transplantation¹², the Psychosocial Assessment of Candidates for Transplantation¹³ and the Transplant Evaluation Rating Scale¹⁴. An online survey conducted in 45 countries showed that 60% of transplant centers perform standard psychological assessment prior to donation¹⁵.

Conducting comprehensive living donor psychosocial assessment is crucial for tracing which patients may have positive or negative donation-related experiences and outcomes. Generally, the process involves clinical interviews aimed at investigating possible underlying psychosocial stressors and psychological conditions that could make the procedure risky. However, there is no standardized method for conducting these assessments, which vary between professionals and institutions, even for the same patient. In addition, validated psychometric instruments that accurately measure donation-associated psychosocial risks are not available. Consequently, the screening and approval/rejection process for potential donors varies significantly between institutions^{8,16}.

To improve the pre-transplant clinical living donor psychosocial assessment, standardized and validated instruments were created to ensure that

all relevant aspects are considered, to measure the level of psychosocial adequacy of potential donors, and to enable comparisons between different professionals and institutions. One of these assessment proposals is The Live Donor Assessment Tool (LDAT), developed by a group of researchers from the United States in 2015, which was submitted to extensive tests and was demonstrated to be reliable in quantifying the degree of psychosocial adequacy in relation to the risk of potential donors¹⁷. The tool consists of 29 items considered important, based on specialist opinion and/or empirical research, for inclusion in donor psychosocial assessment. These items are distributed into nine domains: motivations for donation; knowledge about the donation process; relationship with the recipient; support available to the donor; donor feelings about the donation; post-donation expectations; stability in life; psychiatric history; and alcohol and substance use. Individual items are scored from 0 to 3, all with equal weight, and higher numbers correspond to lower psychosocial risk. The total score, which ranges from 0 to 82, represents the general psychosocial risk and can be used to guide practice and improve care both before and after donation, in addition to the conventional psychosocial assessment¹⁷.

The LDAT was later evaluated and validated by different research groups around the world and several transplant centers for potential kidney and liver donors. The LDAT scores differentiated the accepted and rejected groups and robustly predicted the clinical decision^{10,18,19}.

The purpose of the LDAT is not to disqualify more candidates than traditional psychosocial assessment or the conventional risk classification system (low, moderate or high); that is, the objective is not to hinder the donation of organs by living donors. On the contrary, it can be used as a practical tool to trace specific interventions before the donation and thus help make candidates viable. For example, living donors with deficient knowledge may be referred to receive more information, and those with inadequate support may have the process suspended until the provision of the resources necessary for their adequate protection¹⁹.

Mental health impacts

Although living organ donors are essential participants in the transplantation process, the literature on the psychiatric complications and psychological impacts of donation on donors is quite limited²⁰.

There are studies that assess specific mental health outcomes. A meta-analysis, published in 2021, sought to assess the occurrence of depression, anxiety, and other psychological outcomes in living organ donors. In this review, 71% of the studies that compared the prevalence rates between the pre- and post-transplant periods concluded that there was no significant difference in relation to depression. In addition, 71% of the studies comparing rates between donors and the general population found that the prevalence of depression was lower among donors. Furthermore, 57% of the studies indicated reduced anxiety levels after transplantation, in the comparison between the pre- and post-transplant periods. Of the studies, 43% concluded that donors had lower anxiety rates than the general population, while 29% indicated that there were no significant differences between the two groups^{21,22}.

The results indicate that, post-donation, donor depression and anxiety levels tend to remain stable compared to the pre-donation period and that the prevalence of these disorders in donors after donation may be lower than that observed in the general population. Donor altruism can act to reduce the anxiety observed, in addition to being an important factor for donor satisfaction after transplantation. This satisfaction may be associated with the donor's perception that they did everything they could to help the recipient^{20,21}.

Some guidelines treat pre-existing psychotic disorders as contraindications for transplants, although the available evidence is insufficient to affirm that psychotic disorders increase the risk of unfavorable outcomes in transplants or compromise adherence to medication use. Recent studies indicate consensus that psychiatric disorders must be properly controlled before transplantation. In addition, it is essential to strengthen psychosocial support for patients to face the challenges of transplantation and properly adhere to follow-up care²².

Although several studies indicate that psychiatric disorder or mood disorder history is an important risk factor for the psychological outcomes of donors, there is not sufficient information for definitive conclusions about the differences in the prevalence of psychiatric outcomes between donors with and without a history of mental health disorders. Currently, there is no consensus on the eligibility of donors with a psychiatric history for organ donation. Some transplant centers consider this history a contraindication, due to the risk of relapse associated with the transplant process, while others accept these individuals as donors, provided that they maintain stability for a long period and follow the appropriate guidelines^{23,24}.

Role of the forensic psychiatrist in the assessment team

Mental health professionals, such as psychologists, psychiatrists and forensic psychiatrists, among others, have the role of helping in the assessment and preparation of patients and living donors for possible transplantation or donation procedures, and of dealing with behavioral and psychiatric issues that may arise during the process. A detailed psychosocial assessment prior to transplantation contributes toward a more complete understanding of expectations and needs, which are often conflicting, among transplant candidates, donors, caregivers, and the transplant team.

The decision to donate an organ is difficult. Usually, the donor is a patient's family member, with whom they have an emotional bond and who offered, apparently, voluntarily to be a donor. In pre-donation psychiatric assessments, the goal should be making decisions in line with the donor's best interest. Initially, psychiatric interviews can be conducted separately with the donor and the recipient, and then conducted jointly. The purpose of the assessment is to address important aspects of the donation process. It is necessary to verify whether the donor has the capacity to give valid consent and is aware of the post-operative risks. Psychiatrists should also investigate the impact of the donation, that is, whether it will affect the

health of the donor, their work capacity, among others. Finally, it is essential to understand the motivation for the donation and the nature of the relationship between donor and recipient²⁵.

Psychiatry consultation benefits donors, especially by helping them fully understand their motivations for the procedure. Unconscious feelings toward the organ recipient can be explored, as well as unrealistic expectations the donor may have about the recipient. In case the donor opts out, this can lead to negative reactions in the recipient and others involved. In this case, the donor must be considered unfit for donation for medical reasons, regardless of the cause for opting out²⁵.

In addition, psychiatric assessments are important to trace individuals with significant mental risk factors that make them unsuitable as living donors. Patients with chronic psychosis, severe intellectual disability, severe mood disorders, substance abuse, or severe personality disorders are generally not considered good candidates for organ donation, as these conditions can compromise their ability to make rational, well-informed decisions about the procedure. Although a history of severe mental or emotional instability is often seen as a contraindication to donation, it does not preclude it. For example, a potential donor who has maintained stability over an extended period may be considered suitable. Therefore, donation approval must be understood as a process and, in addition, individualized²³.

Aspects that are frequently analyzed during the psychosocial assessment include: 1) the bond with the recipient, 2) the reasons for the decision to donate, 3) the donor's understanding of the surgery and involved risks, 4) the ability to make informed decisions, 5) the recipient's level of knowledge about the surgery and possible alternatives to living donation, 6) the presence of any form of coercion, 7) signs of psychiatric disorders, 8) evidence of abuse or dependence on alcohol and other substances, 9) financial factors and the economic impact of the surgery, 10) the available family support, 11) the understanding that it is possible to opt out of the process and 12) the possible implications for obtaining insurance in the future²³.

Cognitive function assessment in transplant candidates is crucial to trace potential impairments that may impair the patients' capacity to understand and participate in the decision-making process prior to surgery and, if these impairments are permanent, to understand and adhere to post-transplant treatment guidelines. Psychiatrists and, in particular, forensic psychiatrists play an important role in tracing cognitive impairments, since cognitive assessment is an essential part of the complete psychiatric assessment²⁶.

Even after deciding to proceed with the transplant, the donor may need psychiatric support—for example, to manage pre-surgery anxiety with the possibility of the remaining kidney having problems. In addition, the donor, regardless of whether they have a biological or emotional bond with the recipient, may face conflicting doubts or feelings about the decision, especially if they imagine that someone such as a relative or child may one day need the donated organ. While these concerns and anxieties are natural, it is important to properly address them with the donor before they proceed with the donation process²³.

Final considerations

Organ and tissue transplantation represents an indispensable solution in the treatment of various health conditions, although it still faces significant challenges, such as insufficient donors and complex procedures.

Living donor psychosocial assessment should address important issues such as consent, motivation

for donation, and the donor decision-making process, in addition to financial and emotional support, behavioral and psychological health, and the donor-recipient relationship⁸. The assessment of these individuals by forensic psychiatry professionals can corroborate the potential donor's capacity to make decisions, in addition to aiding trace individuals with mental risk factors that are significant for donation.

The psychosocial assessment should consider the physical, financial and emotional support available to the donor and verify whether the donor's planning for surgery and recovery is realistic. Complications—if they arise—can cause distress, especially if there is no adequate plan to cope with a prolonged recovery. Developing psychosocial assessment tools, such as the Live Donor Assessment Tool, is an important step toward ensuring that the process is carried out ethically, safely and efficiently for both donors and recipients.

Finally, it is essential to consider the support of close people to the decision to donate: does the donor have the support of these people or is the donor acting against the will of individuals who have a legitimate interest in the outcome of this autonomous choice? Such assessments are essential to ensure donor safety and well-being. Initiatives that standardize such assessments are necessary for developing the practice and strengthening the trust in the donation system, as they have potential to reduce inequalities in access to and increase the efficiency of transplants, benefiting thousands of patients who are waiting for a new chance of living life.

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Data availability: All data used or generated in this study are described and presented in full in the body of the article.

Editor in charge: Dilza Teresinha Ambrós Ribeiro

Received: 1.30.2025

Reviewed: 3.27.2025

Approved: 4.9.2025