

Organ Donation Culture in a Hospital Population

Cultura de donación de órganos en una población hospitalaria

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Summary

Objective: to analyze the organ donation culture in a hospital population. **Methods:** descriptive cross-sectional study conducted at the Zone General Hospital with Family Medicine No. 1 of the Mexican Institute of Social Security in Pachuca, Hidalgo, Mexico; from December 2023 to May 2024. A non-probabilistic sample composed by 384 people. The validated questionnaire “International Donor Collaborative Project on Organ Donation and Transplantation” was applied. Univariate analysis was performed using the SPSS v. 23 package to obtain simple frequencies and percentages. **Results:** it was identified that 75.3% of the participants would be willing to donate their organs, while 89.6%, and 84.9% would donate a kidney and part of the liver to a relative, respectively. In addition, 40.1% chose reciprocity as the reason why they would donate their organs, while 61.2% considered the possibility of donating the organs of a family member. Regarding the perceptions of their relatives on the subject, 66.7% said they did not know their father’s opinion, while 62.5%, and 66.4% did not know their mother’s and partner’s opinion, respectively. **Conclusion:** the culture of organ donation was favorable in three quarters of the respondents; this percentage increases when it comes to donating for a family member. The main reason why respondents would be willing to donate their organs was reciprocity.

Key words: Tissue and Organ Procurement; Organs; Tissues; Culture; Organ Transplantation.

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Resumen

Objetivo: analizar la cultura de donación de órganos en una población hospitalaria. **Métodos:** estudio transversal descriptivo realizado en el Hospital General de Zona con Medicina Familiar No. 1 del Instituto Mexicano del Seguro Social en Pachuca, Hidalgo, México; de diciembre 2023 a mayo 2024. Participaron 384 personas mediante muestreo no probabilístico. Se aplicó el cuestionario validado: “Proyecto Colaborativo Internacional Donante sobre Donación y Trasplante de Órganos”. Se realizó análisis univariado mediante el paquete SPSS v. 23 para obtener frecuencias simples y porcentajes. **Resultados:** se identificó que 75.3% de los participantes estaría dispuesto a donar sus órganos, mientras que 89.6% y 84.9% donaría un riñón y parte del hígado a un familiar, respectivamente. Además, 40.1% eligió la reciprocidad como motivo por el que donaría sus órganos, mientras que 61.2% consideró la posibilidad de donar los órganos de un familiar. En cuanto a las percepciones de sus familiares sobre el tema 66.7% refirió desconocer la opinión de su padre, mientras 62.5% y 66.4% desconocían la opinión de su madre y su pareja, respectivamente. **Conclusión:** la cultura de donación de órganos fue favorable en tres cuartas partes de los encuestados, este porcentaje aumenta cuando se trata de donar para un familiar. El principal motivo por el cual los encuestados estarían dispuestos a donar sus órganos fue la reciprocidad.

Palabras clave: Obtención de tejidos y órganos, órganos, tejidos, cultura, trasplante de órganos.

Introduction

Organ transplantation has stood one of the greatest medical advances of the last century, providing a solution for thousands of people with end-stage organ failure. This intervention not only improves the quality of life of the recipients, but also implies potential economic savings for the health sector compared to long-term substitute treatments.^{1,2} However, organ shortage is a challenge worldwide, the waiting lists to receive an organ are long and continue to grow every year, mainly due to the insufficient number of available donors. In Mexico, the National Transplant Center (CENTRA) estimates that more than 23,000 people are waiting for an organ.³⁻⁵

The culture of organ donation has made it possible to improve the health and quality of life of recipients through transplantation.⁶ In our country, the State of Mexico, and Mexico City stand out as leaders in organ donation and transplantation, with 524 and 458 donations, respectively, in 2023.

Other states such as Campeche and Oaxaca registered four and one donation, respectively, in the same period. This remarkable difference underscores the urgent need to promote the culture of organ donation in a more coordinated and widespread manner throughout the country.^{7,8}

Despite growing general support for organ donation in society, many people who wish to donate do not register in databases or discuss their wishes with family members. This lack of communication can result in missed donation opportunities due to family hesitancy or refusal at critical times.⁹

In Mexican population, organ donation depends on a number of sociocultural factors, such as schooling,

religion, age, education on this matter, family attitudes, and individual participation and decisions. In addition, the lack of accurate information about brain death, concerns about handling the body, funeral rituals, and reactions to death also play an important role in the decision to donate;^{10,11} reasons that contribute to the low percentage of families who give their consent.¹² The aim of this study was to evaluate the impact of these factors on organ donation in Mexico.

In light of the above, the aim of the present study was to analyze the culture of organ donation in a hospital population.

Methods

A descriptive cross-sectional study conducted from December 2023 to May 2024 at the Zone General Hospital with Family Medicine (HGZMF) No. 1, of the Mexican Institute of Social Security (IMSS) in Pachuca, Hidalgo. The sample size was calculated using a formula for infinite populations, establishing a 95% confidence interval, and a precision of 5%. This resulted in a total of 384 participants. Non-probabilistic convenience sampling was performed.

The inclusion criteria were to be health staff or population assigned to HGZMF No. 1, both genders, aged between 18 and 85 years, and who agreed to participate in the study by signing an informed consent form. Patients on the waiting list for organ or tissue transplantation were excluded. Patients who did not complete the questionnaires were excluded.

An identification form designed by the researchers and the validated International Collaborative Donor Project on Organ Donation and Transplantation questionnaire (Cronbach's alpha 0.92),

was used consisting of 34 multiple-choice items. The questionnaire addresses the following dimensions: sociodemographic aspects, attitudes toward organ donation, attitudes toward the body, prosocial behavior, knowledge and information about organ donation, and family and social interactions.^{13,14} The instrument does not give specific scores, but uses multiple-choice responses to assess attitudes toward organ donation. A higher number of positive responses reflects a more positive attitude. The results were analyzed according to the distribution of responses, which allows us to identify trends in the culture of donation and highlight areas that require greater attention in education and awareness.

Sociodemographic aspects such as age, gender, occupation, level of education, and religion were assessed. Attitudes toward organ donation included willingness to donate, history of blood donation, willingness to donate or receive organs from a family member, and reasons for donation. Concern about the state of the body and choice of final disposition after death were also examined. Prosocial behavior included participation in volunteer activities. Knowledge about donation included the future need for an organ, the information received (positive or negative), and the understanding of the risk of living donation and the concept of brain death. In terms of family and social interactions, we looked at whether participants knew donors or recipients and whether they discussed the issue with family, friends or partners, as well as their opinions.

Univariate analysis was performed to obtain simple frequencies and percentages. Data were recorded in a Microsoft Excel database, and then exported and analyzed using spss v. 23 software.

The research project was approved by the local research committee and complies with current IMSS regulations.

Results

A total of 384 questionnaires were collected, of which 43% (n= 165) were from people aged 18-39 years, 37% (n= 142) from people aged 40-59 years, and 20.1% (n= 77) from people over 60 years. Of the total, 66.1% (n= 254) were female, and 33.9% (n= 130) were male. Regarding occupation, 32.3% (n= 124) reported to be health workers, while 67.7% (n= 260) had other jobs. Regarding the level of education, 4.7% (n= 18) had no education, 10.2% (n= 39) had primary education as the highest level, 20.1% (n= 77) had high school education, 27.9% (n= 107) had a bachelor's degree, 28.6% (n= 110) had a master's degree, 8.1% (n= 31) had a doctorate degree and 0.5% (n= 2) a doctorate degree. Catholics predominated with 77.6% (see Table 1).

Regarding attitudes toward organ donation, 75.3% (n= 289) would be willing to donate their organs (see Table 2); 61.2% (n= 235) would donate a kidney

to a person in need, and up to 89.6% (n= 344) would do so for a family member.

On the other hand, 62.5% (n= 240) would donate a part of their liver to a person in need, and 84.9% (n= 326) would donate it to a family member. In addition, 27.3% (n= 105) reported having ever donated blood, of this percentage, 6.5% (n= 25) indicated that they do it regularly and 20.8% (n= 80) occasionally.

In addition, 61.2% (n= 235) considered the possibility of donating the organs of a family member. Faced with the hypothetical question of needing an organ in the future, 73.4% (n= 282) would accept a kidney from a relative, while 68.8% (n= 264) would accept a part of a relative's liver. Reciprocity was the main reason why respondents would be willing to donate their organs (see Table 3).

Regarding attitude about the body, 70.6% (n= 271) indicated that they did not care if their body was scarred or mutilated after organ donation. Regarding the destination of the body after death, 54.9% (n= 211) indicated that they would prefer cremation, while 22.1% (n= 85) burial.

Table 1. Participants' Religion

	Frequency	Percentage	Cumulative Percentage
Practicing Catholic	126	32.8	32.8
Non-practicing Catholic	172	44.8	77.6
Non-Catholic	62	16.1	93.8
Agnostic-atheist	24	6.3	100.0
Total	384	100.0	

Table 2. Ability to Donate One’s Own Organs, According to the Opinion of the Participating Population

	Frequency	Percentage	Cumulative Percentage
Yes	289	75.3	75.3
No	40	10.4	85.7
Doubtful	55	14.3	100.0
Total	384	100.0	

Table 3. Reasons for Organ Donation in the Participating Population

Reason for Organ Donation	Answers	
	Frequency	Percentage
Moral Obligation	29	5.9%
Solidarity	168	34.4%
To survive one’s death	18	3.7%
For religious reasons	9	1.8%
Because it is free	2	0.4%
For reciprocity	196	40.1%
Other	39	8.0%
Against	28	5.7%
Total responses from 384 participants	489	100.0%

Table 4. Means Through which They Received “Positive” or “Negative” Information on Organ Donation

Media Information	Answers	
	Frequency	Percentage
Through television (positive information)	206	21.3%
Through television (negative information)	18	1.8%
Through radio (positive information)	72	7.3%
Through radio (negative information)	11	1.1%
Through magazines, books or brochures (positive information)	76	7.8%
Through magazines, books or brochures (negative information)	5	0.5%
Through the press (positive information)	20	2.0%
Through the press (negative information)	8	0.8%
Through movies (positive information)	44	4.5%
Through movies (negative information)	9	0.9%
Through friends (positive information)	58	5.9%
Through friends (negative information)	15	1.5%
Through family (positive information)	67	6.8%
Through family (negative information)	14	1.4%
Through the billboards (positive information)	35	3.6%
Through the billboards (negative information)	10	1.0%
Through health personnel or physicians (positive information)	193	19.7%
Through health personnel or physicians (negative information)	4	0.4%
Through schools (positive information)	34	3.5%
Through schools (negative information)	8	0.8%
Through talks in other centres (positive information)	33	3.4%
Through talks in other centres (negative information)	5	0.5%
Through no information media	17	1.7%
Through other information media (positive information)	12	1.2%
Through other means of information (negative information)	3	0.3%
Total	980	100.0%

Twenty-seven percent (n=91) expressed having participated in volunteer or social assistance activities, of this percentage, 6.5% (n=25) do so regularly, and 17.2% (n=66) do so occasionally; while 61.5% (n=236) have not done so but would be willing to participate.

Regarding knowledge or information about organ donation, 73.4% (n=282) considered that there is a possibility of needing an organ in the future. Regarding the means through which they received information about organ donation, 980 responses were recorded, since most of the respondents chose more than one option. Of these, 21.3% (n=206 responses) chose television as a source of positive information, followed by 19.7% (n=193 responses) who chose health personnel or physicians as a means of positive information (see Table 4).

Regarding the level of risk associated with living organ donation, 47.4% (n=182) considered it “somewhat” risky to donate a kidney, and 45.1% (n=173) considered it “somewhat” risky to donate part of a liver. In addition, 71.1% (n=273) recognized that a person diagnosed with brain death cannot recover and live a normal life.

In terms of family and social interactions, 74.5% (n=286) of participants did not know anyone who had needed or received an organ, while 84.6% (n=325) did not know anyone who had donated their organs. In addition, 54.9% (n=211) had not discussed the issue with their family, and 57.8% (n=222) had not discussed the issue with their friends. Finally, when evaluating the perception of their relatives, 66.7% (n=256) did not know their father’s opinion on the subject, 62.5% (n=240) did not know their mother’s opinion, and 66.4% (n=255) did not know their partner’s opinion; of

these three groups, mothers, when they knew their opinion on organ donation, showed a more positive attitude compared to the others.

Discussion

The results of the research suggest that, in general, the surveyed population has a certain level of knowledge about organ donation, but it seems that the culture surrounding this topic is not completely ingrained. It was observed that a low percentage of participants have discussed the topic with their family or friends and very few know the opinion of their parents and/or partner, which can probably be attributed to the taboo that exists in Mexico around talking about death and the options that exist for the body after death, possibly due to religious considerations that promote the complete burial of the deceased.¹⁵

Religion has been the subject of numerous studies and has been raised as a possible negative factor influencing willingness to donate, but it is important to emphasize that the Vatican has endorsed organ donation as an act of love and charity, so the Catholic religion should not be seen as an obstacle.^{16,17} In the present work, the majority of respondents identified themselves as Catholic (Table 1). It is possible that these participants are aware of the Vatican’s position; however, it is also likely that other more influential variables are driving the decision to donate.

As in previous studies, the culture of organ donation in the Mexican population was found to be positive in more than 70% of the participants (Table 2). Although no direct relationship was found between socio-demographic variables such as age, gender, education level, occupation, marital status or religion

and willingness to donate organs, these variables may have an indirect influence on individual decisions at a given time.⁷

With regard to organ donation, specifically a kidney and/or part of the liver, it was found that the willingness to donate increases when it is for a family member. However, this increase cannot be attributed to socio-cultural variables but seems to be mainly influenced by positive values and a sense of family unity.

Despite the fact that organ donation has been promoted for many years at all levels of health care, it was found that television was the most used means of information, ahead of health professionals (Table 3). This finding is consistent with results reported by other authors,¹⁴ and suggests that the educational activities offered by health institutions may not be sufficient to have a significant impact on the studied populations.

The fact that the main reason for organ donation is reciprocity and solidarity, supported by data from other studies, leads us to reflect on the existence of positive values and attitudes in the populations studied, and reinforces that organ donation is an altruistic act.¹³

Regarding family and social interactions, some authors have reported that there is a low percentage of people who have discussed the topic of organ donation with their family, partner or friends.¹⁴ A similar trend was observed in this research, which is worrisome, since one of the main causes of the lack of donors at present is indecision or family refusal. This situation could be mitigated if there were a greater culture of dialogue on these issues with family, partners, or friends, considering that in critical moments they will be the ones to make the decision to donate organs in the absence of prior express consent from the potential donor.

It was also identified that just over 70% of participants understand the concept of brain death. It is essential that the population has this knowledge in order to increase multi-organ donation rates. However, despite this level of understanding, many donation opportunities may currently be missed. It has been suggested that other factors, such as the persistence of false hopes, lack of trust in health personnel, and fear of mutilation of the donor's body, among others, may influence the willingness to donate organs.¹⁸

Spain, recognized as a world leader in organ donation, together with the United States, has successfully implemented effective models in this area. This underscores the need for our country to continue moving in this direction. To achieve this, it is essential to maintain a constant and sustained effort to proactively identify donors and convert them into effective donors.^{19,20}

Conclusions

It was identified that although the majority of participants are willing to donate organs, this predisposition does not always translate into donation rates, since the needs are not completely covered. It was observed that the culture of organ donation is influenced by several variables, many of which depend on the sociodemographic context, while others play a crucial role in the act of donation. Therefore, promoting educational and awareness programs, as well as fostering effective communication in the family and social sphere, could contribute to increasing organ donation rates in the country.

Authors' Contribution

E V-J: conceptualization, development, writing, data analysis, discussion of results, and preparation of the paper

for submission for publication, M H-M writing, data analysis, discussion of results, and preparation of the paper for submission for publication, BG F-C: conceptualization, development, and writing, U F-C: discussion of results and writing. All authors critically reviewed the document and approve the publication of this paper.

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Conflicts of Interest

The authors declare that they have no conflicts of interest.

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