

Attitudes of non-medical staff in hospitals in Spain, Mexico, Cuba and Costa Rica towards organ donation

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ABSTRACT

Introduction: Non-medical staff members in hospitals are highly credible at population level, and are a source of opinion even though they do not have sufficient medical training. **Objectives:** To analyse the attitudes of non-medical professionals of Spanish and Latin American hospitals towards organ donation and identify the factors that influence these attitudes. **Material and method:** Through the "Proyecto Colaborativo Internacional Donante" (International Collaborative Donor Project), a stratified random sample was selected from non-medical services of eleven hospitals: 3 Spanish (n=277), 5 Mexican (n=632), 2 Cuban (n=42) and 1 Costa Rican (n=101).

Results: Of the 1052 professionals surveyed, 72% (n=754) were in favour of donating an organ after death. By country, 98% of Cubans, 80% of Mexicans, 66% of Costa Ricans and 52% of Spanish were in favour ($P<.001$). The most influential variables were: 1) country, with results being more positive in Mexico (odds ratio [OR]=2.197), 2) believing in the possibility that they will require a transplant (OR=2.202), 3) having discussed the issue with their family (OR=3.23), 4) the positive attitude of their partner towards donation (OR=3.322), 5) not being concerned about possible mutilation of their body after donation (OR=3.378), 6) preferring options other than burial (OR=2.525), 7) accepting an autopsy (OR=2.958). **Conclusions:** The attitude of non-medical staff members of hospitals towards the donation of their own organs varies greatly depending on the country of the respondent. Psychosocial factors that influence these attitudes are similar to those described at the population level.

Keywords: Attitude. Organ donation. Non-healthcare hospital personnel.

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Actitud hacia la donación de órganos del personal no sanitario de hospitales de España, México, Cuba y Costa Rica**RESUMEN**

Introducción: El personal no sanitario de centros hospitalarios tiene una importante credibilidad a nivel poblacional, siendo un grupo generador de opinión sin formación sanitaria adecuada. **Objetivo:** Analizar la actitud hacia la donación de los órganos de los profesionales no sanitarios de hospitales españoles y latinoamericanos, y determinar los factores que condicionan dicha actitud. **Material y métodos:** Del Proyecto Colaborativo Internacional Donante se selecciona una muestra aleatoria y estratificada entre los servicios no sanitarios de once hospitales: 3 españoles ($n = 277$), 5 mexicanos ($n = 632$), 2 cubanos ($n = 42$) y 1 costarricense ($n = 101$). **Resultados:** De los 1052 profesionales encuestados, el 72 % ($n = 754$) está a favor de la donación de órganos tras fallecer. Por país, el 98 % de los cubanos están a favor, el 80 % de los mexicanos, el 66 % de los costarricenses y el 52 % de los españoles ($p < 0,001$). Las variables con más peso son: 1) país, siendo más favorable en México (odds ratio [OR] = 2,197); 2) creer en la posibilidad de necesitar un trasplante (OR = 2,202); 3) haber comentado el tema con la familia (OR = 3,23); 4) actitud favorable de la pareja hacia la donación (OR = 3,322); 5) no estar preocupado por la posible mutilación del cuerpo tras la donación (OR = 3,378); 6) preferir otras opciones distintas de la inhumación (OR = 2,525); 7) aceptar la realización de una autopsia (OR = 2,958). **Conclusiones:** La actitud hacia la donación de órganos propios entre el personal no sanitario de centros hospitalarios presenta variaciones importantes según el país del encuestado. Los factores psicosociales que condicionan dicha actitud son similares a los descritos a nivel poblacional.

Palabras clave: Actitud. Donación de órganos. Personal hospitalario no sanitario.

INTRODUCTION

The current rate of organ donation is insufficient to cover the basic solid organ transplantation requirements. Even Spain, with its high rate of deceased donor donations, has a relatively significant shortage of organs for transplantation, which is becoming increasingly marked due to the increase in indications for this form of therapy.¹

The donation process is multifactorial and many different aspects influence it. In this sense, professionals of medical centres play a fundamental role in its development. Thus, a negative attitude from these professionals may lead to a negative attitude in the general population.²⁻⁶ Non-medical hospital staff is a subgroup of professionals from medical centres that has not been very well studied in terms of donation and transplantation of organs. However, there are data that indicate that the percentage of this staff against or undecided on organ donation is relatively high.⁷ This matter is important, because they work in a medical centre and are a source of opinion. As such, they are highly credible in healthcare issues amongst the population, given their professional position. Nevertheless, they lack adequate training on donation and transplantation of organs.^{7,8}

The aim of this study was to analyse Spanish and Latin American non-medical hospital professionals' attitude towards the donation of their own organs and determine the factors that influence this attitude.

MATERIAL AND METHOD**1) Study population**

We selected eleven hospitals, three from Spain, five from Mexico, two from Cuba and one from Costa Rica, within the International Collaborative Donor Project. In the centres selected, a randomised sampling was carried out amongst the non-medical hospital staff, stratified by type of service, age and sex (Table 1). We considered as non-medical staff professionals who work in hospitals, but who do not have specific medical training.

2) Opinion survey and study variables

The attitude towards organ donation was assessed by a validated survey on psychosocial aspects of organ donation and transplantation.^{2,3} The questionnaire was completed anonymously and was self-administered. The questionnaires were distributed to two groups: 1) Non-medical staff who work in clinical services with a clinical activity; in these cases, we contacted a service administrator to distribute the questionnaire to non-medical staff in the area and 2) Non-

Table 1. Distribution of centres and professionals surveyed by type of medical centre and country

	Spain		Mexico		Cuba		Costa Rica		Total	
	Centers	n	Centers	n	Centers	n	Centers	n	Centers	n
Transplantation hospital	-	-	2	315	2	42	1	101	5	458
Donation hospital	2	146	1	220	-	-	-	-	3	366
Unrelated hospital	1	131	2	97	-	-	-	-	3	228
Total	3	277	5	632	2	42	2	101	11	1052

medical staff who work in hospital services without a medical activity, for whom we contacted the head of the service. In both cases, we explained the study to those contacted and they were responsible for distributing the survey in the selected shifts.

As a dependent variable, we studied the attitude towards donation of own organs after *exitus*. We grouped the independent variables for the study into seven categories: 1) demographic variable: country 2) sociopersonal variables: age, sex and civil status 3) work variables: having a university education, type of hospital, type of service offered where they work, work situation and work activity related to transplants 4) variables of knowledge and attitude towards the donation and transplantation of organs: personal experience of organ donation and transplantation, believing in the possibility that they will require a transplant in the future, understanding of the concept of brain death, attitude towards live kidney donations and attitude towards live liver donations 5) variables of social interaction and prosocial behaviour: attitude towards the donation of a family member's organ, speaking to family members about donation and transplantation, the partner's opinion about donation and transplantation and carrying out prosocial activities 6) religious variables: religion of the professional surveyed and their knowledge about the attitude of their religion towards donation and transplantation 7) variables of the attitude towards the body: concern about mutilation following donation, acceptance of cremation, acceptance of burial and acceptance of autopsy if necessary.

3) Statistics

The data were stored in a database and were analysed with the SPSS 15.0 statistical software. We used descriptive statistics and to compare the different variables, we applied the Student's *t* test and the χ^2 test, along with residual analysis. For the testing and assessing of multiple risks, we carried out a logistic regression analysis using the variables that had a statistically significant association in the bivariate analysis. *P* values <.05 were considered to be statistically significant.

RESULTS

1) Attitude towards organ donation

The total number of professionals surveyed was 1052, of which 277 corresponded to Spain, 632 to Mexico, 42 to Cuba and 101 to Costa Rica (Table 2). 72% (n=754) of those surveyed were for deceased donor donations. Amongst the most common reasons to be for donation was reciprocity (59%) and solidarity (50%). Of the remaining 28% (n=298), 7% (n=75) were against and 21% (n=223) were undecided, with the most common reasons for being against donations

being the fear of apparent death (40%) and the assertive negative (no, without any reason) (28%).

2) Factors that influence the attitude towards organ donation

Demographic variable

We observed a more positive attitude in professionals of Latin American centres than in those of Spanish centres (Table 2). Thus, 98% (n=41) of Cubans surveyed, 80% (n=503) of Mexicans and 66% (n=67) of Costa Ricans were for donation, compared to 52% (n=143) of Spanish (*P*<.001).

Sociopersonal variables

Age was associated with attitudes towards organ donation, with the mean age of those who were for donation being 36, compared to 33 for those who were against it (*P*<.001) (Table 2). With regard to sex, females had a more positive attitude than males (76% compared to 67%, *P*=.001).

Work variables

The type of hospital influenced the attitude of the surveyed professionals. As such, the most positive attitude was observed in those surveyed in hospitals related to transplantation (transplantation hospitals and/or organ donation hospitals), compared with those that were not related to transplantation (76% compared to 57%, *P*<.001) (Table 2). With regard to the type of service offered where they work, of the staff who worked in non-medical services, 64% of those surveyed were for deceased donor donations, compared with at least 80% of professionals who worked in clinical or hospital services (*P*<.001). Those surveyed who had a stable work situation were more for deceased donor donations than those who did not have a stable work situation (78% compared with 66%, *P*<.001). Lastly, we did not observe any difference with regard to working in services that carry out activities related to donation and transplantation (Table 2).

Variables of knowledge and attitude towards organ donation and transplantation

Having had personal experience with donation and transplantation (knowing friends and/or family members who were donors or who have received transplants) favours a positive attitude for organ donation, compared with those who did not have a personal experience (86% compared to 67%, *P*<.001) (Table 3). Those who were considering the possibility of requiring a transplant in

Table 2. Demographic, sociopersonal and work variables that influence the attitude towards organ donation in non-medical hospital staff in Spain and Latin America

Variable	For (n = 754; 72 %)	Against (n = 298; 28 %)	P ^a
Demographic			
Country:			
Spain (n = 277)	143 (52 %)	134 (48 %)	< 0.001
Mexico (n = 632)	503 (80 %)	129 (20 %)	
Cuba (n = 42)	41 (98 %)	1 (2 %)	
Costa Rica (n = 101)	67 (66 %)	34 (34 %)	
Sociopersonal			
Age: (35 ± 10 years)	36 ± 10 years	33 ± 10 years	< 0.001
Sex:			
Male (n = 485)	324 (67 %)	161 (33 %)	0.001
Female (n = 562)	427 (76 %)	135 (24 %)	
DNK/DNA (n = 5)	3	2	
Civil status:			
Single (n = 403)	274 (68 %)	129 (32 %)	0.088
Married (n = 571)	425 (74 %)	146 (26 %)	
Widowed. separated. divorced (n = 75)	53 (71 %)	22 (29 %)	
DNK/DNA (n = 3)	2	1	
Work			
Have university education:			
Non-medical s.-University education (n=172)	132 (77 %)	40 (23 %)	0.107
Non-medical s.-Non-university education (n=880)	622 (71 %)	258 (29 %)	
Type of hospital:			
Transplantation hospital (n=458)	347 (76 %)	111 (24 %)	< 0.001
Donation hospitals (n=366)	277 (76 %)	89 (24 %)	
Hospital not related to transplantation (n=228)	130 (57 %)	98 (43 %)	
Type of service offered where they work:			
Surgical (n = 80)	63 (79 %)	17 (21 %)	< 0.001
Medical (n = 268)	217 (81 %)	51 (19 %)	
Mother-child (n = 19)	17 (89 %)	2 (11 %)	
Central services (n = 95)	77 (81 %)	18 (19 %)	
Non-medical services (n = 590)	380 (64 %)	210 (36 %)	
Work situation:			
Permanent (n=430)	337 (78 %)	93 (22 %)	< 0.001
Temporary/contracted (n=595)	393 (66 %)	202 (34 %)	
DNK/DNA (n=27)	24	3	
Work activity related to donation and transplantation:			
Yes (n = 110)	81 (74 %)	29 (26 %)	0.629
No (n = 942)	673 (71 %)	269 (29 %)	

^a Significance level: P<.005. DNK/DNA: did not know/did not answer.

the future if it were necessary were more for a deceased donor donation than those who were not considering it (82% compared to 60%), $P<.001$). Those surveyed who understood the concept of brain death were more for deceased donor donations than those whose idea was erroneous or who did not understand the concept (78% compared to 66%, $P<.001$), although it is necessary to highlight that only 41% knew it or accepted it as the death of the individual. There was also a close relationship between the attitude towards deceased donor donation and the attitude towards live kidney donor donation (91% compared to 31%, $P<.001$) and a live liver donation (89% compared to 39%, $P<.001$).

Social interaction and prosocial behaviour variables

We observed that those who would authorise the donation of a family member's organ in the event of *exitus* were more in favour than those who would not donate (92% compared to 49%, $P<.001$) (Table 4). Having discussed with family members the issue of donation and transplantation favoured a positive attitude towards both (85% compared to 47%, $P<.001$), as well as having a partner with a positive attitude towards donation and transplantation (78% compared to 52%, $P<.001$). With respect to the variables of prosocial behaviour, those who carried out altruistic activities had a more positive attitude (80% compared to 59%, $P<.001$).

Table 3. Variables of knowledge and attitude that influence the attitude towards the donation and transplantation of organs in non-medical hospital staff in Spain and Latin America

Variable	For (n = 754; 72 %)	Against (n = 298; 28 %)	P^a
Personal experience with donation and transplantation:			
Yes (n = 282)	243 (86 %)	39 (14 %)	< 0.001
No (n = 766)	510 (67 %)	256 (33 %)	
DNK/DNA (n = 4)	1	3	
Possibility of requiring a transplant:			
Yes (n = 550)	449 (82 %)	101 (18 %)	< 0.001
No (n = 19)	14 (74 %)	5 (26 %)	
Doubts (n = 481)	289 (60 %)	192 (40 %)	
DNK/DNA (n = 2)	2	-	
Understanding of the concept of brain death:			
They understand the concept (n=431)	337 (78 %)	94 (22 %)	< 0.001
They do not understand the concept (n=454)	306 (67 %)	148 (33 %)	
Erroneous understanding of brain death (n=166)	110 (66 %)	56 (34 %)	
DNK/DNA (n = 1)	1	-	
Attitude towards live kidney donations:			
Yes (n = 298)	271 (91 %)	27 (9 %)	< 0.001
Yes . only related (n = 552)	376 (68 %)	176 (32 %)	
Never (n = 78)	24 (31 %)	54 (69 %)	
Undecided (n = 23)	16 (70 %)	7 (30 %)	
DNK/DNA (n = 101)	---	---	
Attitude towards live liver donations:			
Yes (n = 299)	266 (89 %)	33 (11 %)	< 0.001
Yes .only related (n = 519)	363 (70 %)	156 (30 %)	
Never (n = 105)	41 (39 %)	64 (61 %)	
Undecided (n = 28)	17 (61 %)	11 (39 %)	
DNK/DNA (n = 101)	---	---	

^a Significance level: $P<.005$. DNK/DNA: did not know/did not answer.

Table 4. Social interaction and prosocial behaviour variables that influence the attitude towards organ donation in non-medical hospital staff in Spain and Latin America.

Variable	For (n = 754; 72 %)	Against (n = 298; 28 %)	P ^a
Attitude towards donation of a family member's organ:			
Would donate (n = 424)	389 (92 %)	35 (8 %)	< 0.001
Would not donate (n = 99)	48 (49 %)	51 (51 %)	
Would respect their opinion (n = 520)	313 (60 %)	207 (40 %)	
DNK/DNA (n = 9)	4	5	
Family discussion about donation and transplantation:			
Yes (n = 677)	576 (85 %)	101 (15 %)	< 0.001
No (n = 371)	176 (47 %)	195 (53 %)	
DNK/DNA (n = 4)	2	2	
Opinion of partner towards donation and transplantation:			
Yes. for (n=515)	402 (78 %)	113 (22 %)	< 0.001
I do not know their opinion (n=289)	164 (57 %)	125 (43 %)	
Yes. against (n=29)	15 (52 %)	14 (48 %)	
I do not have a partner (n=189)	150 (79 %)	39 (21 %)	
DNK/DNA (n=30)	23	7	
Carry out prosocial activities:			
Yes (n = 252)	202 (80 %)	50 (20 %)	< 0.001
No (n = 80)	47 (59 %)	33 (41 %)	
No. but I would like to (n = 693)	489 (71 %)	204 (29 %)	
DNK/DNA (n = 27)	16	11	

^a Significance level: $p < .005$. DNK/DNA: did not know/did not answer.

Religious variables

Atheists and agnostics surveyed were those most in favour of this type of donation (85%), followed by Catholics (71%) ($P=.021$) (Table 5). We did not observe that being aware of the positive attitude of the church promoted a more positive attitude amongst its members.

Variables of attitude towards the body

Of the non-medical staff surveyed, those who were not concerned about the potential mutilation of their body after donation were more in favour of organ donation (81% compared to 49%, $P < .001$) (Table 5). We also observed a more positive attitude amongst those who would not accept burial of their body after death compared with those who

would (83% compared to 58%), $P < .001$). Furthermore, those who would accept an autopsy if it were necessary had a more positive attitude towards a deceased donor donation (81% compared to 69%, $P < .001$).

3) Multivariate analysis

In the multivariate analysis (Table 6), the variables that carried more weight in the attitude towards deceased donor organ donation were: 1) country, with it being most positive in Mexico (odds ratio [OR]=2.197, $P=.001$) 2) believing in the possibility of requiring a transplant in the future (OR=2.202, $P < .001$) 3) having discussed donation and transplantation with family members (OR=3.623, $P < .001$) 4) the positive attitude of partners towards donation and transplantation (OR=3.322, $P=.019$) or not having a partner (OR=4.504, $P=.005$) 5) not being concerned

Table 5. Variables of religion and attitude towards the body that influence the attitude towards organ donation in non-medical hospital staff in Spain and Latin America

Variable	For (n = 850; 89 %)	Against (n = 101; 11 %)	P ^a
Religion			
Religion of the individual surveyed:			
Catholic (n = 927)	656 (71 %)	271 (29 %)	0.021
Other (n = 39)	25 (64 %)	14 (36 %)	
Atheist/agnostic (n = 73)	62 (85 %)	11 (15 %)	
DMK/DNA (n = 13)	11	2	
Know the attitude of their religion towards donation and transplantation:			
Yes, for (n = 496)	363 (73 %)	133 (27 %)	0.053
Yes, against (n = 39)	22 (56 %)	17 (44 %)	
I do not know it (n = 420)	290 (69 %)	130 (31 %)	
DNK/DNA (n = 11)	6	5	
Attitude towards their body			
Concern about mutilation following donation:			
It concerns me (n = 266)	131 (49 %)	135 (51 %)	< 0.001
I am not concerned (n = 751)	605 (81 %)	146 (19 %)	
DNK/DNA (n = 35)	18	17	
Acceptance of cremation:			
Yes (n = 404)	289 (72 %)	115 (28 %)	0.888
No (n = 645)	464 (72 %)	181 (28 %)	
DNK/DNA (n = 3)	1	2	
Acceptance of burial:			
Yes (n = 469)	273 (58 %)	196 (42 %)	< 0.001
No (n = 580)	480 (83 %)	100 (17 %)	
DNK/DNA (n = 3)	1	2	
Acceptance of an autopsy if necessary::			
Yes (n = 254)	205 (81 %)	49 (19 %)	< 0.001
No (n = 795)	548 (69 %)	247 (31 %)	
DNK/DNA (n = 3)	1	2	

^a Significance level: $p < .005$. DNK/DNA: did not know/did not answer.

about the potential mutilation of their body after donation (OR=3.378, $P < .001$) 6) the preference of options different to burial of the body after *exitus* (OR=2.525, $P < .001$) and 7) the acceptance of an autopsy if necessary (OR=2.958, $P < .001$).

DISCUSSION

Non-medical professionals working in hospitals, despite the lack of healthcare training, are a group with a social

influence. Working in a medical centre gives them credibility amongst the population, regardless of their training. This is important, because not only medical staff members are directly responsible for promoting an accepted therapeutic service such as transplantation, but also the rest of the staff. As such, if a person working in a medical centre, and even more so, a transplantation centre or an organ donation centre has a negative attitude, this will create fear amongst the general population with regard to this form of treatment.^{3,6-9}

Table 6. Variables that influence the attitude towards organ donation in non-medical hospital staff in Spain and Latin America. Multivariate study

Variable	Regression coefficient (β)	Standard deviation	Odds ratio (confidence intervals)	P ^a
Country				
Spain (n = 277)			1	
Mexico (n = 632)	0.787	0.236	2.197 (3.484-1.385)	0.001
Cuba (n = 42)	7.978	9.774	0.000 (0.000-71 583.474)	0.414
Costa Rica (n = 101)	0.499	0.367	1.647 (3.378-0.801)	0.174
Possibility of requiring a transplant:				
Doubts (n = 481)			1	
Yes (n = 550)	0.790	0.205	2.202 (3.289-1.474)	< 0.001
No (n = 19)	2.220	1.166	9.174 (90.909-0.937)	0.057
Discuss donation and transplantation with family:				
No (n = 371)			1	
Yes (n = 677)	1.287	0.198	3.623 (5.347-2.457)	< 0.001
Attitude of partner towards donation and transplantation:				
Yes. against (n=29)			1	
Yes. for (n=515)	1.201	0.510	3.322 (9.009-1.221)	0.019
I do not know (n=289)	0.515	0.514	1.675 (4.587-0.611)	0.316
I do not have a partner (n=189)	1.505	0.541	4.504 (12.987-1.560)	0.005
Concern about mutilation following donation:				
It concerns me (n=266)			1	
I am not concerned (n=751)	1.218	0.204	3.378 (5.050-2.267)	< 0.001
Acceptance of cremation				
Yes (n = 469)			1	
No (n = 580)	0.926	0.198	2.525 (3.717-1.709)	< 0.001
Acceptance of an autopsy if it were necessary:				
No (n = 795)			1	
Yes (n = 254)	1.086	0.232	2.958 (4.672-0.532)	< 0.001

^a Significance level: p<.005. DNK/DNA: did not know/did not answer.

Therefore, although initially psychosocial studies focused mainly on the general population, it was then seen as important to extend these studies to medical centre professionals.^{3,10,11} The first data for non-medical professionals in Spain displayed a similar attitude to that described at the population level (64% compared to 63%).^{7,12} This is concerning, given that their work situation makes them a source of opinion among the population. However, our study shows that the data are not fully generalizable. A wide variability was detected between different centres and countries. In this regard, we observed that in Spanish centres, the attitude was worse

than that previously reported, and more negative than that described in the general population (52% compared to 63%). However, in Latin American hospitals, the attitude was much more positive, as is displayed in Table 2. Thus, 80% in Mexico, 98% in Cuba and 66% in Costa Rica were for organ donation and transplantation.

The data from Cuba should possibly be taken with certain reservations, since it may be distorted. The number of professionals surveyed from Cuban hospitals was low and it is well-known that in smaller groups, the attitude of a few can have a significant influence on

the overall attitude. However, we should highlight that the positive attitude described in Cuban professionals corresponds to the low family negative rates that exist in this country.¹³

We have to highlight the large discrepancy between the attitude and the real rates of deceased donor organ donations in each country.¹ In Spain, where there are higher rates of deceased donor donations, the attitude is less positive. It seems that viewing donation as a normal and familiar clinical act makes people think about the subject and there are fears and indecisions that would not have previously been considered, especially in groups such as those that we are studying, who experience the process in their work activity, but without having the necessary training to understand it.^{3,7,14}

We also have to bear in mind the influence of the type of hospital and the service in which the professionals work. In hospitals related to transplantation,^{3,6,9} non-medical professionals have a more positive attitude than those who work in hospitals that are unrelated to transplantation. Furthermore, professionals who work in clinical services have a more positive attitude (80%) than those surveyed who work in non-clinical services (cleaning, cooking, etc.), where only 64% are for donation and transplantation. These two aspects may justify, in part, the differences between countries; those surveyed from Cuban hospitals worked in clinical services of transplantation hospitals. However, as we can observe in Table 6, the multivariate study shows that the country is an independent factor that has an influence on attitude.

At the population level, different psychosocial factors have been described that influence opinions on organ donation and transplantation,^{10,12,15-21} and most occur amongst non-medical hospital professionals.⁷ It is necessary to keep in mind that these groups are comparable, except in terms of their workplace.

We must comment on one aspect, which is that at the population level, most studies show that younger people are more in favour.^{2,3,7,16} Nevertheless, our study showed that non-medical professionals who were in favour were older than those who were not. Perhaps, this can be explained by the mean age of the population being surveyed being 35 years of age and that the mean range between those for and those against is around thirty years of age.

It is also interesting to note that, in spite of the fact that the professionals surveyed work in medical centres, only 41% understood the concept of brain death.⁷ This finding is consistent with the main reason admitted

for not donating organs, which is the fear of apparent death.⁷ This aspect usually indicates insecurity and a lack of information about the diagnostic criteria more than ethical or religious criteria. As such, the information about brain death is important among these groups.^{5,22-24}

Previous experience with donation and/or transplantation of organs at the population level and in medical centres was a factor associated with the attitude towards donation.^{3,7,10,12,16} As such, knowing a neighbour, friend or family member who received a transplant sensitised and frequently encouraged people to have a positive attitude towards donation.

The fear of having one's body used after death is another factor that was a barrier to organ donation.^{3,15,25,26} Different authors show that the concern amongst hospital staff about the appearance of the corpse following an extraction of organs is an important factor.^{2-4,27} As such, those who had a negative attitude towards donation feared disfigurement of their body to a greater degree and preferred the body to be whole and to remain intact after death. As such, our data show that being against autopsies and cremation of the body was usually a factor that inhibited organ donation.

Another fundamental factor, as well as in the population, was the family and partner of the surveyed individual. Thus, those surveyed who had a partner with a positive attitude would also have a positive attitude towards donation and vice-versa; if their partner was not for it, neither would they be. It would seem to be beneficial, however, to encourage dialogue about donation and transplantation within family circles. In this sense, raising the issue of donation with family members is another factor that favoured donation,^{12,28} and as our data show, those surveyed who had raised the issue of donation with their family and had discussed it had a more positive attitude, similarly to that found in other studies.

In conclusion, the attitude towards organ donation of Spanish and Latin American non-medical hospital staff varied a lot in accordance with the country and type of hospital in which they worked. We must highlight the discrepancy between attitudes and real rates of deceased donor donations in each country. The factors that influence these attitudes were similar to those described at the population level.

Conflicts of interest

The authors declare that they have no conflicts of interest related to the contents of this article.

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