



Knowledge and attitudes toward organ donation in healthcare undergraduate students in Italy

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Introduction

In the past two decades number of organ donors in Italy has increased reaching a value of 23 pmp in 2014, with huge disparities across different regions, and a still disappointing living donor activity. For deceased donors, objection of relatives to donation was 31% in 2014¹. Few studies have assessed healthcare students' knowledge and attitude on donation^{2,3}.

Materials and Methods

We administered a specific questionnaire to medical (MS) and nursing students (NS) at University of Modena and Reggio Emilia, Italy. 749 students (406 MS and 343 NS) completed the questionnaire; response rate was 91,9%.

Results

Questionnaire fields/items	Nursing students positive response	Medical students positive response
General knowledge		
1. Do you know somebody who received an organ?	18,9% (65/343)	19,5% (79/406)
1. Do you know somebody who is waiting for a transplant?	10,5% (36/343)	9,1% (37/406)
1. Do you know somebody who donated his organ/s?	14,9% (51/343)	11,3% (46/406)
1. Are you an organ donor?	20,1% (69/343)	22,9 (93/406)
Ethics and attitudes toward donation		
1. Are you in favor of organ donation?	96,2% (330/343)	97,8% (397/406)
1. Does your family agrees with you? *	65,9% (226/343)	73,4% (298/406)
1. Are you registered in any donation list?	21,9% (75/343)	24,9% (101/406)
1. Do you think it is important to save somebody's life?	96,9% (332/343)	97% (394/406)
1. Do you think transplantation may ameliorate life?	90,4% (310/343)	94,1% (382/406)
1. Do you think the body might be used for experimentation tests?***	19,5% (67/343)	10,8% (44/406)
1. Do you think there is much suffering for the caregiver?****	35,6% (122/343)	17,7% (72/406)
1. Do you think that donation is a moral obligation?	18,7% (64/343)	23,2% (94/406)
1. Do you think that donation is strictly connected to religion?****	13,4% (46/343)	5,1% (21/406)
1. Would you register yourself as an organ donor in your documents?	75,5% (259/343)	71,9% (292/406)
Brain death and transplantation		
1. Do you know what the term "brain death" means?	86,0% (205/343)	84,0% (341/406)
1. Do you know the procedure of organ transplantation?	36,7% (126/343)	33,5% (136/406)
1. Do you think that mechanical ventilation for patients in irreversible coma provokes suffering?****	19,8% (68/343)	6,2% (25/406)
1. Do you think medical personnel declares brain death prematurely?****	9,0% (31/343)	2,0% (8/406)
1. Is it sufficient to declare brain death in order to proceed to organ procurement?	23,9% (82/343)	25,6% (104/406)
1. Do you know if kidney transplantation is only performed from brain dead donors?	9,0% (31/343)	6,7% (27/406)
1. Do you think kidney transplantation has good results?****	58,3% (200/343)	74,4% (302/406)
1. If there is not 100% compatibility between donor and recipient do you think that kidney transplantation can be performed?****	16,9% (58/343)	37,7% (153/406)
1. Do you think that the technique for living and deceased donor kidney transplantation is the same?	9,9% (34/343)	9,4% (38/406)
1. Do you think that kidney transplantation from a living donor is more successful than from deceased donor?	24,2% (83/343)	26,1% (106/406)
1. Do you think that after kidney transplantation all patients are committed to take immunosuppressive treatment?***	46,7% (167/343)	61,6% (250/406)
1. Do you think that the risk of rejection in kidney transplantation is very high in the first year?*	49,3% (169/343)	41,6% (169/406)
1. Do you think that nurse care to transplanted patients is effective?*	62,4% (214/343)	51,7% (210/406)
1. Do you think that the information about donation and transplantation that you had in your lessons was sufficient?****	27,1% (93/343)	15,3% (62/406)
1. Did you ever searched the web for information concerning donation and transplantation?	39,4% (135/343)	42,1% (171/406)
1. Do you know the difference between persistent vegetative state and brain death?	64,7% (222/343)	58,1% (236/406)
1. Do you know the term "donation after brain death"? (or "heart beating donor")	59,5% (204/343)	59,9% (243/406)
1. Do you know the criteria used to define the condition of brain death?***	48,1% (165/343)	34,5% (140/406)

Although over 95% of students were in favor of donation (#5) only 21,9% of NS and 24,9% of MS reported to be registered as donors (#7); three fourth of students would register (#14). One quarter of students reported family disagreement about their view (#6). NS appeared more concerned about controversial issues of transplantation (use of body for experimentation, #10) and more unconfident with personnel involved in care of potential donors (premature declaration of brain death, #18). MS were more positive about feasibility and outcomes of kidney transplantation (#21, 22). 60% of students knew the term "donation after brain death" (#31) but only 40% were aware of the criteria used to define brain death (#32). Strikingly only 27,1% of NS and 15,3% of MS believed they had received sufficient information about donation and transplantation in lessons (#28). Backward logistic regression demonstrated that students who agreed their will with familiars (#6) and knew the definition "donation after brain death" (#31) were more likely to express the disposition of registering [OR (95% CI) respectively: 1,95 (1,36-2,78) and 2,02 (1,44-2,84), p<0,001], while those who showed distrust in the declaration of brain death (#18) were half-time less likely [OR (95% CI): 0,45 (0,23-0,91), p=0,026].

Conclusions

Students expressed a lack of knowledge, controversial attitudes on donation and strong need for education. Increasing awareness between healthcare undergraduate students is of paramount importance, since it may help rising donation rates and preventing relatives' opposition to organ recovery. Our University, as the majority of educational institutions in Italy, does not directly address training on organ donation and transplantation for healthcare students; an integrated curriculum that favors interpersonal discussion including practical aspects is urgently required.

Essential Bibliography

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