

The attitude of nurses and student nurses towards transplantations

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Abstract

Introduction: Despite its usefulness has been internationally recorded, transplantation disturbs physical, psychological and social activities of individuals and their families, requiring additional adaptive interventions. Consequently, a supporting and advisory role of nursing staff (which is a part of the basic nursing care) for individuals and mostly for their families, is deemed necessary during all transplantation stages (before, during and after transplantation).

Material and methods: The aim of the present research was to determine and compare nursing staff and student nurses opinions about organ transplantation. A questionnaire with 22 close and open-ended questions was used. Our sample consisted of 320 subjects (160 nurses, 160 students nurses). SPSS software package, version 17.0, was used for statistical analysis.

Results: Both staff nurses (62%) and student nurses (68%) agree to become organ-donors, because they believe that they may save the life of another person (nurses 42%, students 75%), while 38% of the nurses and 32% of the students disagreed, because, among other reasons, they do not trust the process of donor selection (32% of the nurses) or they are in fear (17% of the students). It is important to mention that the vast majority of both groups are not aware of the Greek legislation about organ transplantations (62,5% of the nurses, 82% of the students).

Limitations: The main limitation of the present study is its small sample size.

Conclusions: Although nurses and student nurses accept to become organs donors, it appears that state and health organisations should move towards drastic measures concerning public education about transplantation.

Key words: education, nursing staff, society, transplantation

1. INTRODUCTION

Transplantations are among the greatest conquests of medicine in the 20th century and they are established as a therapeutic option. Transplantations of kidney, liver, heart, and lungs are considered today as a widely acceptable therapeutic domain of medicine. A big part of this success is mainly based on people who realise that they can help to save the life of another person. They are also a supreme life gift, and a message of hope, empathy and solidarity. A transplantation, that is the replacement of a human organ functioning insufficiently by another, healthy one, constitutes a critical occasion in the life of individual and his family. Each illness has consequences and it influences individuals and their family with a unique way. In other words, it disturbs physical and social activities and it requires adaptations that they need to be continued after the transplantation, as well. As a result, the role of nursing is particularly important, in this group of patients.

1.1 Literature Review

Today, transplantations are considered as routine, not experimental processes that offer a hope of life and ensure a better quality of life. Despite the advances in science and technology, there are important problems in transplantations deriving from their complex nature, with a considerable influence on the procedure (Stauroula and Gkovina, 2003).

In detail, despite that surgical techniques and immunosuppressant therapy are improving, making transplantations more effective, an important obstacle in the development of transplantation programs in Greece is the lack of donors. Unfortunately, in Greece, the idea of organs donation is not promoted, so that not enough are taking place. For instance, Greece is last in the number of transplantations among countries of European Union, without any encouraging trend. In our country, only 4.6 individuals per million of the population are organ donors, while in Spain, for example, the corresponding number is 46 (Papadimitriou, 1998). The causes of this unwillingness should be sought in the lack of information, in the lack of trust in institutions and in doctors, in the fear for organs sale and in the various prejudices that accompany the end of life (Imbrios, 2004).

In order to invert this negative situation, it appears that a strong campaign should be undertaken about organ donation and transplantations, as well as development of infrastructure for transplantation processes, with priority in the establishment of central coordination of transplantations. Nevertheless, growth and spread of transplantations do not depend only on scientific and technological progress, but, possibly more importantly, on sensitization and use of social institutions, mobilisation of the medical and nursing

staff and through acceptance of the concept of organ donation after death.

National Organism of Transplantations (NOT), founded in 1999, is moving towards this direction, aiming to contribute in national strategic planning of transplantations and in a transplantation project that will focus on global developments matching them with particular needs of our country (NOT, 2009).

Historically, the concept of transplantation is as old as mythology. The myth of Achilles describes the replacement of his heel with a giant bone graft; the myth of Icarus and Daidalos is about an effort for utilisation of an allogenic graft (Michalopoulou, 1999). Church history describes the miracle of Saint Kosmas and Saint Damianos, regarding transplantation of the lower limb of a dead Aegyptian to a Byzantine noble (Papadimitriou 1994, Giannopoulou 2004). Gasparo Tagliacozzi, an Italian plastic surgeon of the 16th century, was famous for a rhinoplastic technic, during which he used a skin graft taken the arm. This is still well known as the "Italian method" (Michalopoulou, 1999). Furthermore, the work of Alexis Carrel, on anastomosis of blood vessels, led to improvements in blood flow to the transplanted organ (Giannopoulou, 2004).

Many years passed until organ transplantation became a reality in clinical practice. Clinical applications of transplantations essentially begin in 1953, when Murray performed successful kidney transplantations between twins (Papadimitriou, 1993). The long survival of the patients of Murray, who were tissue-compatible, proved the significance of immunobiologic reactions for the rejection of grafts and it led to the use of these techniques for other organs.

In Greece, the period of clinical transplantations begins in 1967, when professor Tountas performed the first successful kidney transplantation, in Thessaloniki. However, the great advance in our country was done in 1990, when a first successful liver transplantation was performed in Aretaiio Hospital. Since then, successful heart transplantation took place in Euaggelismos Hospital, and pancreatic transplantation in Laiko Hospital (Papadimitriou 1993, Michalopoulou 1999, Giannopoulou 2004, NOT 2009). In the same year, Greek government established the laws for the terms and conditions of transplantation surgeries (Papadimitriou, 1993).

In general, by the end of 2001, 940,563 organ transplantations had been performed worldwide, according to the International Registry of Transplantations. Today they exceed 1.000.000. Most transplantations regard kidneys (635,075), livers (200,179) and hearts (62,000) (Mavroforou, Giannoukas and Michalodimitrakis, 2004).

1.2 Low issues

For a transplantation, more than for any other medical

act, a legal frame is essential, where doctors will act in comfort, without dangers for prosecutions on possible illegal actions (Skalkeas, 1983).

In Greece, the most recent law (2737/99) accepts the concept of brain death, but responsibility for diagnosis is left on a team of doctors, including the doctor in charge of the patient, a neurosurgeon and an anaesthiologist (Papadimitriou, 1998). It is obvious that the law excludes even the exceptional case of an excessively eager doctor, protecting, in the same time, all doctors from malicious suspicions or accusations for premature or arbitrary acts. In Greece, transplantations from a living donor are allowed only for a therapeutic aim and there are explicit conditions on which they are performed; the essential condition for a cadaveric transplantation is the confirmation of brain death of the donor.

The operation for the organ removal is always performed in the hospital where the patient is admitted. This means that the surgical team for the organ removal should travel to the hospital where the donor is. The status of transplanted organs has a key role in the success of a transplantation.

1.3 The attitude of the nursing staff

Studies in Europe and Northern America have shown that managing the loss of a person, caring of a brain-dead donor and then asking the next of keens to agree to donate the organs of their beloved person is very stressful and it requires many emotional resources from the nurses (Imbrios, 2004). For this reason, nurses often hesitate to participate in the process of organ donation, because they are afraid to come in contact with the families (Tsakni, 2004). On the other hand, the more experienced they are, the more they are prone to be involved in the process of organ donation, having fewer problems during their participation (Imbrios, 2004). Personal attitude towards transplantations influences the way of communication with the patient and with the family. This is particularly important for the nursing staff, since the latter are the only health professionals who provide 24-hour bedside care to patients informing them about matters of prevention as well as management of their illness. The supporting role of the nursing staff is necessary in all stages of

transplantation (before, during and after the transplantation).

Nursing research in transplantations is limited in Greece. Consequently, the aim of the present research was to determine and compare the opinions of nursing staff and students' nurses about organ transplantation.

2. MATERIAL AND METHODS

2.1 Research Design

A descriptive design was used in order to determine and compare the opinions of nurses and student nurses about organ transplantation.

2.2 Sample

Sampling was done on a convenience basis, in two hospitals of Achaia Providence and in the University Hospital of the same area. The sample size was as large as possible to ensure reliability of the results (Burns, 2000). The sample included 320 individuals in total (160 nurses and 160 student nurses).

2.3 Research Tools

For data collection, a questionnaire was used which included 22 questions (closed and open-ended). The questions were designed to evaluate both the attitude of nurses and student nurses towards transplantation, and the causes for these answers. In other words, when a subject gave a positive or negative answer to a question, he was subsequently given an open-ended question regarding the reasons for this decision. In closed type questions, a 3-point scale was used (yes, no, I do not know).

2.4 Procedure

In the first page of the questionnaire, explanations were given regarding the aim of the research, anonymity and volunteer participating. The completion of the questionnaire took 10-15 minutes.

2.5 Statistical Analysis

The statistical software SPSS 17 was used to analyse data. A level of significance (p) <0.05 was used.

3. RESULTS

3.1 Nurses

Most nurses were 30-40 year-old ($X=34.6$ years),

TABLE 1: The attitude of nurses towards organ donation

ANSWER	NUMBER	PERCENTAGE	REASONS
YES I would agree to become an organ-donor	99	62	YES, because I believe that it can save a life (42%)
NO I would not become	61	38	NO, because I do not trust the process of organ removal (26%)

TABLE 2: Usefulness of transplantations

ANSWER	N	%
They save lives	53	33
They give life a chance	14	9
Useful and necessary	21	13
Undeniable, but with a lot of gaps	6	4
I do not know	8	5
A life gift	14	9
No comment	44	27

women (70%), and higher education graduates (60,5%). Sixty per cent of nurses were married, working for more than 10 years ($X=12.4$ years). It is important to report that 84% were not current or past employees in a department for kidney diseases. The vast majority of the nurses (95%) had not worked either as member of a team that performs organ removal for transplantation, or in an Intensive Care Unit (ICU) (85%).

Most nurses (62%) agreed to become organ donors because they believe that in this way they may save a life (42%). On the opposite, 38% hesitate because they do not trust the process of organ removal (26%).

Importantly, a large percentage of nurses (62,5%) are not aware of the Greek legislation about transplantations; from those aware, half of them believe that present legislation is not safe. Importantly, most nurses (55%) answered that they would give their consent for organ removal if they had a family member hospitalised in the ICU, while 45% answered negatively. Nurses prefer that organ removal be performed after brain dead (cadaveric donor) (53%), in comparison to organ removal from healthy volunteers (39%).

Most nurses answered that transplantations save lives (33%), they are useful and necessary (13%), they are a life gift (9%), and they give life a chance (9%).

In the hypothetical question, "what would you prefer if you suffered from a kidney disease", nurses answered that they would prefer to find quickly a graft and have a transplantation (92%), while 8% answered that they would prefer to be treated by chronic haemodialysis.

3.2 Student nurses

The majority of students were women (81%), not been placed (during their undergraduate years) in a renal department (90%) and had not attended a surgery of organ removal (99%).

Most student nurses (68%) would agree to become organ donors, because they believe that in this way they may save a life (75%), while 32% of them answered negatively because of fear (17%).

The vast majority of students (82%) are not aware of the Greek legislation about transplantations. Also, they would give their consent for organ removal for a transplantation (59%), if they had a family member in the ICU, while 41% answered negatively. Moreover, most students answered that organ removal from a brain-dead person (cadaveric donor) is preferable (72%), compared to removal from a healthy volunteer (23%). Most students nurses believe that transplantations save lives (40%), they are useful and necessary (18%), and they give life a chance (10%). Finally, in the hypothetical question, "what would you prefer if you suffered from a kidney disease", the vast majority of students answered that they wish they could readily find a graft for transplantation (98%).

Using the method of chi-square test (χ^2), to examine if there are statistical differences between the answers of both group, we did not found a significant difference in most questions ($p>0.05$). Only in two questions we found a significant difference; the reason for which they would agree or disagree to become an organ donor ($\chi^2=8.15$, $df=158$, $p<0.05$) and whether they were aware of the legislation on transplantations ($\chi^2=14$, $df=158$, $p<0.05$).

TABLE 3: The attitude of students nurses regarding organs donation

ANSWER	N	%	REASONS
YES I would agree to become an organ-donor	108	68	YES, because I believe that it can save a life (75%)
NO I would not become	52	32	NO, because I do not trust the process of organ removal (25%)

TABLE 4: Usefulness of transplantations

ANSWER	N	%
They save lives	64	40
They give life a chance	17	10
Useful and necessary	28	18
Undeniable, but with a lot of gaps	2	1
I do not know	4	2
A life gift	10	8
No comment	35	21

4. DISCUSSION

It is generally accepted that transplantations constitute an admirable medical and therapeutic practice, which saves a life or improves patients' health. Without them, certain diseases would lead to death, or to an unbearable life of the patients.

Despite that organ donation had been enthusiastically accepted in Greece at first place, presently the lack of grafts is an important barrier to the development of transplantation programs. Main points of criticism about transplantations in our country include the possibility of an unfaithful implementation of brain-death criteria, possible organ trade, uncontrollable and speculative promotion by the media of certain doctors and transplantation centres, unfair allocation of grafts, violation of the list of candidates and finally, the issue of "assumed consent" (Gerolouka-Kostopanagioutou, 2000).

Nursing research in Greece regarding transplantations is limited. Our research evaluated nurse's and student nurses' opinions about transplantations, and investigated the reasons for these opinions, as well as possible correlations of the opinions between nurses and students.

International literature shows that in western countries, the general population and health professionals have a positive opinion about transplantations from cadaveric donors. However, a negative finding is that even in Spain, the first country in cadaveric donors within European Union, where most people have a positive opinion about transplantations, a very small percentage is actually registered as cadaveric donors. In fact, Martinez, Martin and Lopez (1995), in their report, showed that in Spain, 65% of the general population is positive about transplantations. Among them, only 6,1% is registered as a cadaveric donor. The main reasons for not registering were 1) that they did not know how to do so (34%) and 2) the fear for a possible violation of death criteria (24%). Ninety three percent of them would donate for transplantation the organs of a dead relative of their own.

In Italy, a research by Pugliese et al (2001), on hospital

workers, showed that an overwhelming percentage (93,6%) was positive towards transplantations from cadaveric donors for humanitarian reasons. Their results are similar with those of the present study. A very interesting finding from a study of Begh et al (2005), in Denmark, is that the percentage of positive opinions (49%) about transplantations by cadaveric donors among ICU health care professionals of 15 hospitals, is considerably smaller than the respective percentage in the general population (74%). This finding, which has also been observed in France (Houssin, 1998), was investigated by Wamser et al (1994), in a study in ICUs of Austrian hospitals. It was found that negative attitudes among health care professionals in ICU is due to the additional work pressure that transplantations impose on them, the lack of staff and the lack of essential help through a coordination centre.

Nevertheless, the situation in Islamic countries seems different. Due to religious reasons, the attitude of Islamists towards transplantations is negative (Syed, 1998). In Tunisia, for example, the percentage of health care professionals who are positive about transplantations from cadaveric donors is 45%. The negative opinions are based on three main reasons: religious (26,4%), personal (20,9%) and moral (10%) (Tebourski et al, 2003).

In the present study, the largest percentage of nurses (62%) and students (68%) answered affirmatively that would agree to become an organ donor, because they believe that they may thus save a life (humanitarian reasons). This is also the main reason reported in international literature (Martinez, Martin and Lopez 1995, Pugliese et al 2001). Nevertheless, things are different in practice, since the number of donors (annually) is very small, while the needs for grafts are imperative. Indeed, while the majority of participants recognize the usefulness and necessity of transplantations, we noticed reservations regarding the safety and legislation of processes concerning diagnosis of brain death.

A small percentage of our sample (37,5% of nurses

and 18% of students) is aware of the legislation on transplantations. Consequently, we may assume that the level of public awareness is still smaller. It appears that the state and the official institutions should be sensitised and take effective measures about public education. We need to secure the prestige of transplantations against undermining processes, such as organ trade, violation of lists, conflict between personal interests, selfish behaviours, and violations by the media.

In addition, in nursing schools, there should be courses that focus on increasing students' awareness regarding transplantation. Growth and development of transplantations are not only depended on scientific and technological progress, but mainly on sensitization of social institutions, of the medical and nursing staff, as well as on every single citizen, through factual acceptance of organ donation.

5. LIMITATIONS

The first limitation of the present study is the small sample size. Although this study offers important results regarding the attitude of nurses and student nurses about transplantations, a larger sample should be used in future. In addition, the questionnaire was used in pilot way, and therefore it needs to be used in a larger sample.

6. CONCLUSIONS

The reasons for lack of grafts in Greece include not sufficient awareness regarding the meaning and importance of the concept of organ donation. We hope that our country will accomplish its target to achieve the rates of success of other countries in sensitization of their citizens in this project. Nevertheless, sensitization of society about transplantations should be cultivated in conditions excluding sentimental approaches or philosophical reflections, being certain that donors have full conscience of this initiative.

References

1. Σταυρούλα Α, Γκοβίνα Ο. Ο νοσηλευτικός ρόλος στη ψυχική υγεία

- των ασθενών με μεταμόσχευση οργάνων. *Νοσηλευτική* 2003; 42(4): 445-450.
2. www.eom.gr (Εθνικός Οργανισμός Μεταμοσχεύσεων), 9/11/2009.
3. Αλκιβιάδης Κ. Μεταμοσχεύσεις Ιστών και οργάνων: Δώρο ζωής. Αθήνα, 2004.
4. Γιαννοπούλου Α. Διλήμματα και προβληματισμοί στη σύγχρονη νοσηλευτική. Η ΤΑΒΙΘΑ, Φιλοθέη, 2004.
5. Μιχαλοπούλου Σ. Μεταμόσχευση οργάνων. Σημειώσεις μαθήματος, ΑΤΕΙ Πάτρας, 1999.
6. Παπαδημητρίου Ι. Μεταμοσχεύσεις. 1η έκδοση, Η ΤΑΒΙΘΑ, Αθήνα, 1993.
7. Σκαλκέας Γ. Προσφορά Ζωής – Μεταμοσχεύσεις οργάνων. Αθήνα, 1983.
8. Παπαδημητρίου Ι. Μεταμοσχεύσεις. 2η έκδοση, Η ΤΑΒΙΘΑ, Αθήνα, 1998.
9. Burns R. Introduction to research methods. Sage Publications, London, 2000.
10. Ίμβριος Γ. Νεφρική μεταμόσχευση από πτωματικό δότη: τα υπέρ και τα κατά. *Dialysis Living* 2004, 11: 39-42.
11. Τσακνή Α. Προσέγγιση και προετοιμασία του οικογενειακού περιβάλλοντος. *Dialysis Living* 2004, 12: 49-54.
12. Γερολουκά – Κωστοπαναγιώτου Γ. Εγκεφαλικός θάνατος και φροντίδα του δότη οργάνων. Ήλιον, Αθήνα, 2000.
13. Μανροφόρου Α, Γιαννουκάς Α, Michalodimitrakis E. Organ and tissue transplantation in Greece: the law and an insight into the social context. *Medical Law* 2004, 23(1):111-125
14. Martinez JM, Martin A, Lopez JS. Spanish public opinion concerning organ donation and transplantation. *Medical Clinic* 1995, 105(11):416-417.
15. Syed J. Islamic views on organ donation. *Journal of Transplantation Coordination* 1998, 8(3):157-160.
16. Pugliese MR, Degli Esposti D, Venturoli N, Mazzeti Gaito P, Dormi A, Ghiraldini A, Costa AN, Ridolfi L. Hospital Attitude survey on organ donation in the Emilia – Romagna region, Italy. *Transplantation*. International 2001, 14(6): 411-419.
17. Bogh L, Madsen M. Attitudes, Knowledge, and Proficiency in Relation to Organ Donation: A Questionnaire-Based Analysis in Donor Hospitals in Northern Denmark. *Transplantation*. International 2005, 37 (8): 3256-3260.
18. Houssin D. Organ donation in France: current situation and perspectives. *Nephrology Medicine* 1998, 27(4):172-175.
19. Wamser P, Goetzinger P, Barlan M, Gnant M, Hoelzenbein T, Watschinger B, Muehlbacher F. Reasons for 50% reduction in the number of organ donors within 2 years – opinion poll amongst all ICUs of a transplant centre. *Transplantation International* 1994, 7 (1): 668-671.
20. Tebourski F, Jaouadi N, Ben Alaya D, Benamar – Elgaaid A, Ayed M. Attitude of health personnel to organ donation and transplantation. *Nephrology Medicine* 2003, 81(7): 482-487.