

**ROLE OF SPECIALIZED TRAINING PROGRAMS  
IN ORGAN DONATION:  
PEDAGOGICAL APPROACH**

**Doktori (Ph.D.) értekezés**

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*In the memory of my beloved parents, who are always with  
me, beyond time and space*

## **Table of contents**

|    |   |    |
|----|---|----|
| 1. | Acknowledgement.....  | 5  |
| 2. | Introduction .....  | 6  |
| 3. | Hypotheses .....  | 9  |
| 4. | Methods .....   | 10 |
| 5. | Results .....   | 15 |
| 6. | Discussions .....   | 18 |
| 7. | References.....   | 22 |
| 8. | Articles published on the topic .....                       | 25 |
| 9. | Conferences/congresses where study results were presented . | 26 |

# 1. Acknowledgement

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## **2. Introduction**

Donation, as defined by WHO (2009) represents “donating human cells, tissues or organs intended for human applications”.

According to the data reported by the European Commission (2014) during the Journalist Workshop in Brussels, a total of over 63.000 patients were on organs’ waiting list in the European Union by (end of 2013) with an estimated number of 4.100 waiting list mortality (av. 11 patients per day). Long waiting times result in a deterioration of the patient’s condition or even death before surgery is possible. The increased comorbidity (incidence of diabetes, high blood pressure and ageing population in Europe) (World Health Organization. Data and statistics) leads to an increased demand of transplants. Moreover, a large variability between the different European member states in the availability of transplantable organs is reported (from 4.5 donors pmp in Greece to 35.7 in Spain in 2014) (Council of Europe and Organización Nacional de Trasplantes, 2015).

Organ shortage (Abouna, 2008; Uryuhara, Hasegawa, Takahashi et al, 2004; Roels, Cohen, Gachet & Miranda, 2002) is the major limiting factor for the further development of transplant programs worldwide. Participants to the third WHO Global Consultation on Organ Donation and Transplantation (WHO Global Consultation, 2011) ‘urged the WHO, its Member States and professionals in the field to regard organ donation and transplantation (D&T) as part of every nation’s responsibility to meet the health needs of its population in a comprehensive manner and address the conditions leading to transplantation from prevention to treatment’. The goal is to achieve self-sufficiency in D&T.

There are two types of donors: living and deceased. In all cases it is mandatory to follow all the legal and ethical requirements that exist in every country and it is the responsibility of the organ donor coordinator to meet them.

To accomplish efficiently their duties, organ donor coordinators, as well all health-care professionals involved in the D&T process should speak a common language. A basic terminology facilitating communication among professionals will allow the evaluation of the performance in the deceased donation process and the identification of areas for improvement. It will also make possible to compare the donation process among different centres, areas or even countries.

A panel of experts has designed a critical pathway as a tool that can be applicable to every country, region or specific hospital, regardless of the level of development of its healthcare system, or its baseline experience on deceased organ donation (Dominguez-Gil, Delmonico, Shaheen et al., 2011). This critical pathway establishes a basic terminology and provides a common systematic approach to the deceased organ donation process, considering both donations after brain death (DBD) and after circulatory death (DCD).

Major resolutions, recommendations, conventions, directives and further documents related to this field were issued by main bodies such as World Health Organization (WHO), Council of Europe (CE) and European Union (EU). Ethical standards of all aspects related to the D&T process have to be complied with.

The European Union (Directorate General for Health & Consumers. Health & Consumers Voice, 2009) undertook several initiatives in D&T addressing three different challenges in the European setting: 1.increasing organ availability, 2.improving quality and safety, and 3.enhancing the accessibility of transplantation systems. It has done this by supporting its member states in their efforts to implement Directive 2010/53/EU and the Action Plan on organ donation and transplantation (Commission of the European Communities 2008).

One of the pivotal elements identified as a key success factor in organ donation is the training of healthcare professionals involved in the process, towards skills, competences and awareness (Shafer, Wagner, Chessare,

Zampielo, Macbride, Perdue et al., 2006; Taylor & McGaw, 1998; Van Gelder et al., 2008).

Transplant Procurement Management (TPM), one of the largest and most international training programs in D&T as well as tissue banking was launched in 1991 under the auspices of University of Barcelona (UB), Spain, and with the support of the Spanish National Transplant Organization (ONT), gained the recognition of the Transplant Committee of the Council of Europe in 1994, and was awarded the "TTS-Genzyme Award for Education and Training in Transplantation" by "The Transplantation Society" (TTS) in 2008 (Paez et al., 2003).

TPM offers specialized courses (face to face and online) at five different levels following a progressive level of expertise, different aims and length: New vital cycle (Awareness, 8h); Introductory (Motivation, 12h); Intermediate (Collaboration, 24h); Advanced (Fine-tuning, 40h); Postgraduate diploma (Specialization, 375h) and Master degree (Experts, 1500h).

TPM has considered various **pedagogical paradigms** in its trainings, of which some imply teacher intervention while others do not require any teacher intervention of any kind (<http://tpm-dti.com/en-training/>).

### **3. Hypotheses**

#### Hypothesis 1

Increased awareness, knowledge, commitment and skills provided through education among health care professionals impact positively the organ donation activity and its parameters.

#### Hypothesis 2

Specialized training programs such as TPM have positive perceived benefits in the areas of career, collaboration, skills and ability in organ donation.

## **4. Methods**

Two complementary research studies were conducted as following:

1. European Training Program on Organ Donation (ETPOD)
2. Organ Donation Training and Systems Evaluation (ODTaSE).

Whereas the first study (ETPOD) was designed to produce and implement a three-level specialized training methodology and measure its impact on organ donation figures, the second study sought to explore how specialized training programs such as TPM, and their benefits are perceived by participants. Previous findings (Rusesll & Van Gelder, 2008) support Herzberg's theory of motivation, and showed that "motivators leading to job satisfaction [among transplant nurses] include achievement, recognition, the work itself, responsibility and advancement". In our study, the influence of training was rated on 12 different items, including "motivation to work in donation and transplantation".

As the methodologies used in the two studies are different, they will be detailed separately.

### **ETPOD**

The project (Manyalich, Guasch, Paez, Valero & Istrate, 2013) included 17 partner countries, 20 partner organizations from State agencies to universities, and 25 target areas (TAs) within Europe and Turkey. TPM along with IL3 (Institute for Lifelong Learning), UB, coordinated the development and implementation of the educational initiative.

The representatives of the ETPOD consortium were divided into four working groups.

Working group (WG) 1 analyzed the European current practices on organ donation within two areas: training needs and donation rates. A comparative analysis was performed, comparing organ donation rates before and after the implementation of the training programs in the 25 different TAs in accordance with their organizational structure and resources available.

On the basis of its results, the other 3 WGs identified three different professional levels: junior organ donor coordinators, senior organ donor

coordinators and health care managers, and three training programs were set accordingly.

The educational methodology employed various pedagogical paradigms, mostly teacher managed. A learner centered, constructivist approach overlapping with a post-industrial approach was applied in both components of blended learning, face to face (F2F) and online (OL), to actively involve participants in the construction of their own knowledge based on their prior experience, as well as to facilitate personal interactions, networking, data-gathering and problem-solving during and after the training. However, elements of experiential learning were also considered for the design of a suitable learning environment.

Different instructional designs were also used such as ADDIE (analysis, design, development, implementation and evaluation), further improved with ASSURE (analyse learners and know your audience; state objectives; select and use instructional methods, media, and materials; require learner participation and last but not least evaluate and revise) for the OL training and 4C/ID (Four Component Instructional Design Model ) for F2F.

The audience for each level, learning goals, location, technology and digital skills, as well as resources available was assessed. Differences between F2F and OL training methodologies were considered.

### **1. Essentials in Organ Donation** (OL and F2F)

Objectives:

To train healthcare professionals as advocates of organ donation programs within local areas or hospitals, in their own language and in alignment with their current medical practice and legislation

To provide participants with the knowledge and skills required to replicate the educational training program

To design appropriate educational material necessary to implement seminars on organ donation, the so called Essentials in Organ Donation (EODs)

The program was designed and developed as a cascade blended training, and consisting of two steps as following:

1st step. *Training for Trainers* (OL and F2F).

2<sup>nd</sup> step. *EODs*, 8-academic-hour seminars to be implemented by the senior organ donor coordinators after completing the training for trainers program.

## **2. Professional Training on Organ Donation (OL and F2F)**

Objective: to provide participants with the fundamental knowledge, goals and sequence of actions to achieve organ recovery with optimal efficiency. It addressed junior organ donor coordinators or due to join a Transplant Coordination Office.

## **3. Organ Donation Quality Management (F2F)**

Objective: to provide managers of national, regional, and local organ recovery organizations with the skills required to efficiently organize, manage, and evaluate a transplant area to increase organ donation in the TAs as well as to promote the implementation and assessment of quality and safety measures.

At each educational level, instructional materials were revised and validated before implementing. Different evaluations were carried out: evaluation of training quality, evaluation of learners' knowledge and evaluation of training impact.

To assess the impact of the training program, the 2007 related data (S1) were compared with the data for 2009 (S2). To analyze the changes occurred, understand the relation among the different factors and the mutual influence, two main groups of variables were considered, such as those related to organization (existence of training activity in TAs and the number of donor coordinators employed part time or full time) and donation process (total number of diagnosed brain deaths, total number of refusals, total number of utilized donors, and total number of organs recovered).

Univariate statistical analysis using Fisher-exact and Student t-paired tests was used to compare data. A Spearman test was used to analyze the correlation between factors. P-value equal to or smaller than 0.05 (5%) was seen as statistically significant. All statistical tests were performed using the SPSS® software version 15 (SPSS Inc., Chicago, IL, USA).

## **ODTaSE**

As for the ODTaSE study (Istrate et al., 2015), it investigated the perceived benefits of TPM specialized training programs (including the ETPOD educational initiative) on professional competence development and career evolutions of D&T related health care workers.

The study methodology included the development in 5 languages (English, Spanish, Italian, French and Portuguese) of a **web-based questionnaire** with 49 multiple choice, open answer, rating scales and agreement scales questions was developed. This study reported on a subset of questions from this survey dealing with the objective of the study. The study was approved by Institutional review boards (IRBs) at the UB, Spain, and Purdue University (PU), USA. The time required to complete the survey was recorded as approximately 15-20 minutes. A pilot test was performed on a sample of ten subjects. No survey pitfalls were reported.

All contacts available in the TPM database were contacted in 2012. A total of 6839 subjects who had participated in TPM or related training courses were emailed a cover letter and link to the online survey. They were also asked to forward the link to other individuals active in D&T. Two reminding emails were sent in the following month. Additionally, links were posted on Facebook ([www.facebook.com/transplantprocurementmanagement](http://www.facebook.com/transplantprocurementmanagement)) and handed out at organ donation meetings and congresses.

The participation in the study was voluntary. There were no direct benefits and no compensation.

Participants were asked to select the training they believed was most influential in considering their responses to the remaining survey items. Participants who selected TPM were asked to specify which courses they had attended. The types of courses were grouped in terms of similarity and given a categorical ranking from 1 - 7 based on how advanced and intensive the training was, with a ranking of 1 being the most advanced (the Master course in Donation 1, introductory F2F 2, intermediate F2F 3, advanced F2F 4, essentials in donation 5, blended (BL): OL and F2F 6, and OL courses 7). In case of multiple courses for one subject, the more advanced training category was used in our analyses.

Respondents were asked to rate the influence of trainings on 12 different items, including "respect from peers", "advantages in promotions",

"technical skills", "knowledge", "networking ability", "motivation to work in D&T", "collaborative opportunities", "ability to change policies", "ability to change practices", "desire to innovate", and "communication skills related to D&T".

For most questions, the analysis and reporting focused on professionals who are still active in donation.

All data were collected by means of Qualtrics (Provo, Utah, USA) web-based survey software and kept confidential through personal password control. Additionally, all responses were anonymous and no identifiable information was collected in this regard.

**Two main research questions** were identified for the current study:

*Research Question 1 (RQ1):* "What is the perceived influence of specialized training programs on career, collaboration, and skills and ability in D&T?"

RQ1 was subject to descriptive data analysis, plotting frequencies, percentages and means, and referred to all participants who answered the survey items, regardless of which training they selected as being most influential.

*Research question 2 (RQ2):* "Do the different types of training programs (OL, F2F, local/national/international etc.) and individual characteristics (gender, position at time of training) have different perceived influences on competences (career, collaboration, skills and ability) in D&T?"

In RQ2 descriptive data were added a series of analyses performed using General Linear Model univariate analysis run on types of TPM trainings, gender, and position at time of training on the dependent variables presented above. A value of  $p < 0.05$  was considered as statistically significant. All statistical tests were performed using the SPSS® software version 21 (SPSS Inc., Chicago, IL, USA).

## **5. Results**

### **ETPOD**

Data from 220 hospitals in 25 TAs were analyzed by working group 1. TAs were of different sizes, with a population ranging from 500.000 to 4.000.000 inhabitants. The number of hospitals per TA varied considerably. These figures include a high number of hospitals with no donation potentiality. The number of ICU beds and brain deaths reported in the ICU differed between TAs.

Comparing the data collected before and after the implementation of the educational program, there were no differences in TA population, number of hospital beds, number of ICU beds, neurosurgical units or professionals devoted to donation, and TA deaths. Although the number of brain death cases diagnosed increased, the difference was not statistically significant.

The number of utilized donors identified increased from  $15.7 \pm 14.3$  (95% CI: 9.8–21.6) in January–June 2007 (survey S1) to  $20.0 \pm 17.1$  (95% CI: 13–27.1) in January–June 2009 (survey S2) ( $P = 0.014$ ) and the number of organs recovered increased from  $49.7 \pm 48.5$  (95% CI: 29.6–69.7) in S1 to  $59.3 \pm 52.1$  (95% CI: 37.8–80.8) in S2 ( $P = 0.044$ ). In 16 (64%) TAs, the number of utilized donors detected increased, in two remained unchanged and it decreased in seven.

The number of organs recovered increased in 19 (76%) TAs, remained unchanged in one and decreased in five. No relationship could be found between the profile of the TAs and their results.

### **ODTaSE**

Within the second study the following results were obtained:

Out of the total of subjects contacted, 1102 participants (16.1%) agreed to take the survey. Of those who completed the survey, 890 respondents (80.8%) provided information about their participation in training processes, and 794 participants (72.1%) reported still being active in donation. Of those that reported gender, 252 were male (42%) and 355 were female (58%).

Eighty-seven percent of participants reporting position at the time of training consisted of as following: 306 (41%) medical doctors (MDs), 318 (42%) registered nurses (RNs), 23 (3%) non-medical PhD, 12 (2%) biologists, 4 (1%) lab technicians, and 5 (1%) social workers. Other positions reported (13%) were non-MD/RN-organ donor/transplant coordinators (n = 23), psychologists, hospital director, paramedics, quality control, and positions in tissue banks.

Respondents reported participating in 1498 training courses in 46 countries, with many respondents reporting participating in multiple courses. Participants were from 46 countries, with the most participants responding from Italy (n = 349), Spain (n = 173), France (n = 132), Portugal (n = 47), Brazil (n = 38), Turkey (n = 19), Lebanon (n = 10), and Panama (n = 10). Eighty-seven percent (n = 910) of respondents reported participating in a TPM course (45% attended TPM training programs only whereas 42% reported to have participated in TPM and other training programs) and 9% in non-TPM courses. Forty-seven respondents (4%) indicated they had not participated in any training courses and were not included in further responses.

Eighty-three percent of respondents selected TPM courses as their most influential and 17% selected other training programs. Thus, even though 42% of individuals who participated in TPM courses participated in non-TPM trainings as well, 95% of individuals who had taken a TPM course found TPM courses the most influential.

The perceived influence of specialized training programs on career, collaboration, and skills and ability in D&T (RQ1) varies from 46% ( $2.46 \pm 0.15$ ) in advantages in promotions to 91% ( $3.98 \pm 0.82$ ) in desire to innovate for donation/transplantation, 92% ( $4.23 \pm 1.14$ ) in motivation to work in donation/transplantation, 93% ( $4.15 \pm 0.96$ ) in technical skills for donation/transplantation, and 98% ( $4.45 \pm 1.24$ ) in knowledge of donation/transplantation.

Given the small number selected for some training programs other than TPM as being most influential, only TPM trainings were selected for analysis of RQ2.

Males reported greater influence of trainings than females on "respect from peers" (Males:  $3.4 \pm 1.5$ ; females:  $3.0 \pm 1.4$ ;  $p = .025$ ) and "networking ability" (males:  $3.8 \pm 1.2$ ; females:  $3.4 \pm 1.1$ ;  $p = 0.033$ ) across all TPM trainings. No effect of gender was found in other items analysis.

There were significant effect of Position at time of training on "technical skills for D&T" ( $p = .001$ ), "knowledge of D&T" ( $p = .029$ ), "attitude toward donation" ( $p = .002$ ), "motivation to work in D&T" ( $p < .001$ ), "collaborative opportunities" ( $p < .001$ ), "ability to change practice" ( $p < .001$ ), "ability to change policy" ( $p = .004$ ), "desire to innovate" ( $p = .006$ ) and communication skills ( $p = .001$ ).

MDs report the highest influence on most of the items listed such as: attitude toward donation, motivation to work in D&T, ability to change practice and ability to change policy. Apart from MDs, RNs and social workers perceived the trainings to have the most influence on "ability to change policy" and "motivation to work" in D&T. Social workers reported the most "collaborative opportunities". However, lab technicians and biologists reported the lowest levels of perceived influence on all the above mentioned items.

A significant interaction effect with Position at time of training and Type of training on "respect from peers" ( $p = .022$ ) and "advantages to promotion" ( $p = .011$ ) was reported. MD perceived more benefit on "advantages to promotion" from TPM Masters/International course than RNs did. Nevertheless, MD and RN found the advanced trainings less beneficial than the "Other" category did.

Significant interaction effect with Position at time of training and Type of training were also reported on "networking ability" ( $p = .017$ ). MD and non-medical Ph.D. report higher levels of networking ability in TPM Masters/International courses, but slightly lower than RN and social workers in the advanced courses.

Finally, significant interaction effects with Position at time of training and Type of training were further reported on "collaborative opportunities" ( $p = .033$ ), with MD reporting the highest collaborative opportunities in the TPM Masters/International course, and RN and social workers in the advanced F2F training.

## 6. Discussions

To conclude, **Hypothesis 1. "Increased awareness, knowledge, commitment and skills provided through education among health care professionals impact positively the organ donation activity and its parameters"** is correct.

**ETPOD** was a successful training program by having created quality educational materials with the support of the project participating organizations and the recognition of the European Commission through its 'Action Plan on Organ Donation and Transplantation (2009–2015)'. It resulted in identifying the educational needs of healthcare professionals involved in organ donation and implementing effective training programs with a positive impact upon donation parameters. Specialized training of professionals active in the field of organ D&T proved its efficacy in organ donation.

For the first time, a needs analysis was carried out. On its basis an efficient educational initiative was developed and implemented at large scale, reaching out health care professionals involved in the various stages of the organ donation process.

The training program covered different important professional profiles as following: Healthcare professionals in targeted donor units, such as Intensive Care, Postoperative Recovery and Emergency Room departments; Healthcare professionals in charge of managing the whole organ donation process, those owing to join a Transplant Coordination Office and Key Donation Professionals wishing to update their knowledge and reinforce their competences as well as Donor program managers responsible for national, regional, local, and/or hospital organizations with high activity in organ recovery and transplantation.

Several limitations to the study have been identified while analyzing the project results.

TAs differed in population size, health care system (expressed as number of hospitals involved, number of ICU beds, etc.), legislation, organ donation organizational structure and resources, etc.

Moreover, they were not necessarily representative for their countries. It means that results cannot be extrapolated to other areas than the ones assessed. However, considering the different sizes and profiles of TAs, this educational initiative seems feasible for regions and countries of different sizes, with diverse structure and investment in healthcare.

No correlation was found between the increase in donation rates and the number of coordinators in the TAs, despite the suggestion that an increased number of coordinators could improve the rate of organ donors in a given area (Matesanz, 2004). We consider that the increased awareness, commitment, knowledge, and skills of the professionals involved in the study could explain better results, despite a reduced number of coordinators.

Further improvements were suggested concerning the identification and use of clinical indicators to establish baseline performance and assess the effectiveness of proposed quality improvements (Council of Europe, 2006; Procaccio, Rizzato, Ricci & Venettoni, 2008), the extension of educational programs in organ donation, and the homogenization of results in Europe and worldwide.

The predictions of **Hypothesis 2. "Specialized training programs such as TPM have positive perceived benefits in the areas of career, collaboration, skills and ability in organ donation"** are also correct.

**ODTaSE** proved that TPM specialized training programs in D&T had positive effects for a significant percentage of D&T related health care workers on professional competence development and career evolution. These programs result in improvement in technical skills and knowledge, as well as the ability to communicate effectively about D&T. Additionally, they bring together people who have similar interests who are likely to become influential in their fields, and thus increases networking ability and collaborative opportunities as well. Furthermore, having well designed

programs taught using innovative approaches by passionate faculty (Shafer et al., 2006) increases motivation to work in transplantation and the desire to innovate in D&T. Many participants act on these motivations and report that the trainings are influential in their ability to change policy and practice related to D&T, collaborative opportunities, ability to change policies and practices, desire to innovate, and communication skills related to D&T.

However, not all types of trainings had the same outcomes for all participants, although most training still received high evaluations. These differences are important to note in terms of evaluating overall success and for consideration of who is likely to benefit most from a certain type of training. It appears that overall D&T was still a bit of a male-dominated field (Delgado, Saletti-Cuesta, López-Fernández, de Dios Luna & Mateo-Rodriguez, 2011) and female participants were less likely to feel the same influence of trainings on respect from peers. Additionally, it is a bit surprising that BL and OL trainings are reported to have more of an influence on promotions than the F2F courses only. There are a couple of possible explanations for this. First, the overall numbers of participants in these categories was significantly lower than for the TPM Masters/International and the TPM Advanced F2F courses. Moreover, in the Masters and Advance course, the majority of respondents were RNs and MDs. Thus, it may be less common for an MD or RN to report a specific type of promotion.

Overall, this report provided a new type of evaluation of training programs that went beyond rating the quality of the course or instructors, and focused specifically on how different groups perceived the benefits of the trainings in their ongoing work life. Generally, MDs reported the greatest influence of the trainings on improving their attitudes toward D&T. MDs also reported more influence of the trainings on their ability to change policies and practices related to D&T. However, in many categories RNs, and social workers also reported high levels of influence of the trainings on their ability to change policy and practice as well. Lab technicians and biologists seemed to perceive less benefit from the trainings than did medical professionals, social workers and others.

However, we should also consider some limitations of the study.

A degree of caution should be taken in interpreting the data for biologists, lab technicians, and social workers, especially when broken out by type of training as the number of participants in a given course for each category might be very low.

Moreover, while OL courses seemed more influential to MDs and RNs, there was a low sample size for these cells, making interpretation more difficult.

Last, the study focused on the perceived benefits from the trainings on career, collaboration, and skills and ability in D&T and not on the actual impact of the trainings on the different items. However, previous findings showed that the educational initiatives undertaken by TPM along with the consortium partners and the support of the European Commission within the ETPOD project were successful and facilitated significant increase in organ donation figures.

The data collected will allow future evaluations focusing on issues like networks and collaboration, success in changing policy and practice, career advancement and committees, etc.

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## 8. Articles published

- ✓ Istrate, M.G., Harrison, T.R., Valero, R., Morgan, S.E., Páez, G., Zhou, Q., Rébék-Nagy, G., Manyalich, M. (2015). Benefits of Transplant Procurement Management (TPM) specialized training on professional competence development and career evolutions of health care workers in organ donation and transplantation. *Experimental and Clinical Transplantation*, Apr;13 Suppl 1:148-55.
- ✓ Manyalich, M., Guasch, X., Paez, G., Valero, R., Istrate, M. (2013). ETPOD (European Training Program on Organ Donation): a successful training program to improve organ donation. *Transplant International*, Apr; 26(4):373-84.
- ✓ Paez, G., Manyalich, M., Guasch, X., Valero, R., Istrate, M. (2012). ETPOD Dissemination: The Continuity of a Successful Training Program. *Edulearn12 Proceedings*, pp. 3416-3423
- ✓ Istrate, M.G., Brinzaniuc, K., Copotoiu, S., Azamfirei L. (2010). The European Training Program on Organ Donation and its Results in Romania. *Acta Medica Mariensis, official publication of the University of Medicine and Pharmacy of Targu-Mures, volume 56, no. 3, pp.164-166.*
- ✓ Istrate, M. (2009). Family interview in organ donation and Hymes Speaking Model. In: *Revista de Medicina si Farmacie Targu Mures*, vol. 55. no. 2, pp. 145
- ✓ Istrate, M. (2009). Family interview in organ donation. The role of social context identified by Grice and Searle. In *Revista de Medicina si Farmacie Targu Mures*, vol. 55. no. 2, pp. 278.
- ✓ Istrate, M. (2009). Communication Patterns in Organ Donation. In *XIX. Magyar Alkalmazott Nyelvészeti Kongresszus, Az Előadások Összefoglalója*. Eszterházy Károly Főiskola.
- ✓ Istrate, M. (2008). Family Interview in Organ Donation Comparative Study. In *Porta Lingua 2009: Szaktudás idegen nyelven cikkek, tanulmányok a hazai szaknyelvtanításról és kutatásról*, pp. 39-43.

## **9. Conferences/congresses where study results were presented**

### **ODTaSE**

- ✓ 13th Congress of the International Society for Organ Donation and Procurement (ISODP). Seoul, South Korea, 2015.10.17-2015.10.20
- ✓ 17th Congress of the European Society for Organ Transplantation (ESOT). Brussels, Belgium, 2015.09.13-2015.09.16
- ✓ 14<sup>th</sup> Congress of the Asian Society of Transplantation (CAST). Singapore, 2015.08.23-2015.08.26
- ✓ 13<sup>è</sup> Congrés de la Societat Catalana de Trasplantament. Barcelona, Spain, 2015.03.18- 2015.03.20
- ✓ European Organ Donation Congress, 25<sup>th</sup> EDTCO. Budapest, Hungary, 2014.10.3-2014.10.5
- ✓ 14<sup>th</sup> Congress of the Middle Eastern Society of Transplantation (MESOT). Istanbul, Turkey, 2014.09.10-2014.09.13
- ✓ 12th Congress of the International Society for Organ Donation and Procurement (ISODP). Sydney, Australia, 2013.11.21-2013.11.24
- ✓ 22nd Annual Congress of the European Association of Tissue Banks. Brussels, Belgium, 2013.11.20-2013.11.22

### **ETPOD**

- ✓ 12<sup>th</sup> Congress of the International Society for Organ Donation and Procurement (ISODP). Sydney, Australia, 2013.11.21-2013.11.24
- ✓ 13<sup>th</sup> Congress of the Middle East Society of Organ Transplantation (MESOT). Abu Dhabi, United Arab Emirates, 2012.12.14-2012.12.15
- ✓ XXIV International Congress of The Transplantation Society (TTS). Berlin, Germany, 2012.07.15-2012.07.19
- ✓ 4<sup>th</sup> International Conference on Education and New Learning Technologies. Barcelona, Spain, 2012.07.02-2014.07.04
- ✓ Organ Donation Congress, 11<sup>th</sup> Congress of the International Society for Organ Donation and Procurement, 2<sup>nd</sup> Congress of the Iberoamerican Society of Transplant Coordinators (ISODP). Buenos Aires, Argentina, 2011.11.27-2011.11.30
- ✓ The European Training Program on Organ Donation and its Results in Romania. The PhD students' 3<sup>rd</sup> Conference in Medicine and Pharmacy. Târgu-Mureș, Romania, 2010.07.07-2010.07.09.