



Knowledge of the Concept of Encephalic Death: Is This an Obstacle in the Acceptance of Donation and Transplantation of Organs Among Students of Nursing at the Medical University of Warsaw in Poland?

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ABSTRACT

Background. The knowledge and acceptance of the concept of brain death among future health professionals is essential. The objective of this study was to analyze the knowledge of the concept of brain death among nursing students at the Medical University of Warsaw and determine the factors that affect it.

Methods. Academic year 2011–2012, nursing students of the University of Poland. Sampling points in 5 compulsory-attendance nursing courses with a completion rate >80%. Validated questionnaire (PCID-DTO Rios), anonymous and self-administered.

Results. The completion rate was 96% (793/828); 71% ($n = 561$) knew the concept of brain death, 22% ($n = 178$) did not know it, and 7% ($n = 54$) did not know that it implies the death of the patient. Variables related to the correct knowledge: 1) to be studying in 4th year compared with 1st year (85% vs 60%; $P \leq .001$); 2) discuss the subject with family (76% vs 61%; $P \leq .001$); 3) discuss with friends (73% vs 63%; $P = .009$); and 4) having a favorable attitude toward organ donation (74% vs 65%; $P = .011$). In the multivariate analysis, the variables that remained independent were studying in 4th year (odds ratio [OR], 3.809; 95% confidence interval [CI], 2.006–5.823; $P \leq .001$) and discussed with family concerning donation and transplantation (OR, 1.718; 95% CI, 1.241–2.381; $P \leq .001$).

Conclusions. One-third of the nursing students were unfamiliar with the concept of brain death.

A KEY element in the development of organ donation and transplantation is the knowledge and acceptance of the concept of brain death (BD), as the death of a person [1–5]. This concept is not very well understood in the Polish population, limiting organ donation [2]. Professional nurses have an important role in providing information to the public on the concept of BD [3]. Knowledge acquired on the concept of BD during university education would produce a great impact on nurses themselves, their families, patients, and society in general [4]. The aim of the present study was

to analyze the knowledge and acceptance of the concept of BD among nursing students at the Medical University of Warsaw in central Poland and to determine the factors that affect their attitudes.

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Table 1. Variables Affecting the Knowledge of the Brain Death Concept Among Nursing Students at the Medical University of Warsaw

Variable	Regression Coefficient (β)	Standard Error	Odds Ratio (Confidence Interval)	P Value
Nursing course year				
First ($n = 199$)			1	
Second ($n = 140$)	0.156	0.229	1.169 (0.749–1.833)	.496
Third ($n = 164$)	0.956	0.244	2.601 (1.611–4.200)	$\leq .001$
Fourth ($n = 148$)	1.229	0.272	3.809 (2.006–5.823)	$\leq .001$
Fifth ($n = 142$)	0.399	0.235	1.490 (0.939–2.365)	.900
Discussed with family concerning donation and transplantation				
No ($n = 267$)			1	
Yes ($n = 526$)	0.541	0.166	1.718 (1.241–2.381)	.001

METHODS

Study Population

The study was carried out among nursing students at the Medical University of Warsaw in the center of Poland during the academic year of 2011–2012 ($n = 793$), covering all of the years of the nursing diploma and bachelor degree.

Sample Selection

A representative sample was taken of each of the 3 years of the diploma and the 2 years of the degree. To prevent bias in the sample selection, the questionnaire was applied in each academic year in one of the compulsory sessions. For the questionnaires to be included it was necessary for the completion rate to be $>80\%$ among the potential respondents in the compulsory sessions.

Measurement Instrument

The attitudes were evaluated with the use of a validated psychosocial questionnaire concerning organ donation and transplantation (PCID-DTO Ríos) [6–10]. The questionnaire was self-administered and completed anonymously.

Study Variables

Knowledge of the concept of BD was studied as the dependent variable. The independent study variables included: socio-personality, social interaction, prosocial behavior, and religion.

Statistical Analysis

Descriptive statistical analysis, Student t test, and χ^2 test were complemented with an analysis of the remainders and logical regression analysis.

RESULTS

The completion rate was 96% (793/828); 71% ($n = 561$) knew the concept of BD, 22% ($n = 178$) did not know it, and 7% ($n = 54$) did not know that it implies the death of the patient. Variables related to the correct knowledge were: 1) to be studying in the 4th year compared with 1st year (85% vs 60%; $P \leq .001$); 2) discuss the subject with family (76% vs 61%; $P \leq .001$); 3) discuss with friends (73% vs 63%; $P = .009$); and 4) having a favorable attitude toward organ donation (74% vs 65%; $P = .011$). Variables that were not related to knowledge of the BD concept were age ($P = .098$), gender ($P = .996$), partner opinion on organ donation and transplantation ($P = .232$), and professed

religion ($P = .376$). In the multivariate analysis, the variables that remained independent were studying in the 4th year (odds ratio [OR], 3.809; 95% confidence interval [CI], 2.006–5.823; $P \leq .001$) and discussed with family concerning donation and transplantation (OR, 1.718; 95% CI, 1.241–2.381; $P \leq .001$) (Table 1).

DISCUSSION

The history of organ transplantation has always been linked to the definition of BD. Today in Poland, it remains as matter for discussion, with great interest and importance in society. This fact becomes even more relevant if we look at the question of the acceptance of the concept of BD among health care professionals (nurses and physicians). Several studies have observed that these professionals do not accept the concept as death of a person [1–5].

Data from the present study show that 71% of the nursing students of central Poland accepted BD in the sense of death of a person. However, during their university education we found increasing of their understanding and acceptance: 60% of 1st-year students accepted the concept, compared with 85% of 4th-year students. Taking into account that all students do not obtain the degree, it is important that undergraduate students have the same level of understanding of the concept of BD as the degree students. Acceptance of the concept by the future nursing professionals will give us a better overall understanding of the process of organ donation and transplantation in the general population [6–10].

In conclusion, we can say that 71% of the nursing students at the Medical University of Warsaw understand the concept of BD. We must insist that future nurses acquire a good knowledge during their training to increase their acceptance of BD.

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