



Knowledge of the Brain Death Concept in Dominican Immigration Residents in Spain and Florida

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ABSTRACT

The Latin American population has a double way of immigration, one toward the United States by proximity and another toward Spain by sociocultural affinity. This population increase is affecting organ donation and transplantation in receiving countries.

Objective. To analyze the brain death (BD) concept knowledge in the Dominican Republic immigrant population in Florida (United States) and Spain.

Method. Population under study: Population born in the Dominican Republic, resident in Florida (United States) and in Spain. Inclusion criteria: Population older than 15 years stratified by age and sex. Assessment instrument: Donation attitude questionnaire PCID-DTO-Ríos. Fieldwork: Random selection based on stratification. Immigration support association collaboration in Florida and Spain was needed to locate potential respondents. Completion was anonymous and self-administered, with verbal consent.

Results. A total of 123 respondents, 57 residents in Spain and 66 in Florida, have been included in the study. The 27% ($n = 33$) of the respondents knowledgeable of the BD concept consider it the death of an individual. Of the remainder, 52% ($n = 64$) do not know about it, and the remaining 21% ($n = 26$) believe it does not mean the death of a patient. No differences were observed regarding migration countries ($P > .05$). There was no association of the BD concept with other psychosocial factors analyzed or with the attitude toward organ donation.

Conclusions. Knowledge of the BD concept among the Dominican immigrant population is similar in Spain and Florida, and, unlike most studies, there is no objective association with the attitude toward organ donation.

BRAIN death (BD) is a definitive arrest of brain functions and, therefore, of the activity of the body as a whole. In the 1950s it was called “irreversible coma,” but since 1968 it has been understood, even in the medical field, as the new definition of death [1]. Despite this, many people are still unclear about the concept and its consequences, often associating it with reversible coma. Low awareness of the definitive meaning of BD is associated with organ donation refusal [2,3]. In this sense, increasing

knowledge of BD has been effective in improving awareness of its meaning and increasing the favorable attitude toward organ donation [4]. This variable, therefore, is

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Table 1. Analysis of Factors Related to Knowledge of the Brain Death Concept Among the Dominican Population

| Variable | Bivariate Analysis | | P Value |
|--|-----------------------------|-----------------------------|---------|
| | Right Concept (n = 33; 27%) | Wrong Concept (n = 90; 73%) | |
| Socio-personal variables | | | |
| Age, mean, 34 (SD, 12) y | - | - | .12 |
| Sex | - | - | .10 |
| Civil status | - | - | .97 |
| Descendent | - | - | .16 |
| Level of education | - | - | .10 |
| Social interaction and prosocial behavior variables | | | |
| Family comment on donation and transplant | - | - | .43 |
| Opinion of the couple toward donation and transplant | - | - | .79 |
| Religious variable | | | |
| Religion of respondent | - | - | .59 |
| Organ donation and transplant variable | | | |
| Attitude toward deceased organ donation | - | - | .06 |

shown as one of the most conditioning psychosocial aspects in the general population for the acceptance of organ donation and transplantation [1]. Awareness of this level of knowledge in different population groups helps in planning organ donation promotion campaigns [4–8]. The Latin American population represents an important migratory group for certain countries, such as Spain and the United States. The objective of the present work is to analyze the knowledge of the BD concept among the population of Dominican Republic immigrants in Florida (United States) and Spain.

METHOD

The population older than 15 years born in the Dominican Republic and resident in Spain and the state of Florida (United States) was selected. A random representative sample was obtained and stratified according to sex and age, based on the last population census and data obtained from aid associations to the Latin American immigrant population in Spain and Florida on the Dominican population residing in Spain and in Florida without official documentation. Attitude was assessed using a validated questionnaire of attitude toward organ donation and transplant (PCID-DTO-RIOS: Questionnaire of Proyecto Colaborativo Internacional Donante sobre Donacion y Trasplante de Órganos (in Spanish) developed by Dr Ríos) [9]. The 20 items of the questionnaire explain 63.203% of the total variance and present a Cronbach α reliability coefficient of 0.834. A random selection of people were surveyed according to the stratification. The completion was anonymized and self-administered. Verbal consent was given to collaborate in the study. Regarding the knowledge of the BD concept, the following was considered: (1) right concept: the respondent accepts BD as death of the patient; (2) misconception: the respondent does not accept BD as patient death; (3) ignorance of the concept: indicates not knowing the BD concept. The remaining variables were grouped into socio-personal and interaction variables in relation to the donation and the transplant, religion, and attitude toward organ donation and transplant. A descriptive statistic was performed, and t test, χ^2 test, Fisher exact test, and a logistic regression analysis were applied.

RESULTS

Knowledge of the BD Concept

A total of 123 respondents were included in the study. Of the respondents, 27% (n = 33) know the concept and accept it as death. A total of 73% (n = 90) do not know it, have a misperception, or do not accept it as the person's death: 52% (n = 64) do not know the meaning of BD and 21% (n = 26) think they know the concept, but nevertheless think it is a reversible and curable process. Factors associated with the knowledge of the BD concept.

Socio-personal variables. Age, sex, marital status, offspring, and educational level are analyzed. In this case, none of the socio-personal variables analyzed are associated with knowledge of the concept of BD ($P > .05$), as can be seen in Table 1.

Social interaction and prosocial behavior variables. Variables studied are discussion of the family and the couple regarding organ donation and transplantation. In these variables, related to the exchange of ideas and opinions regarding the issue of donation and transplantation with family members, friends ($P = .43$), and couples ($P = .79$), no positive associations are identified with correct knowledge of the BD concept.

Religious variable. Regarding religious beliefs, 78% (n = 96) are Catholics, 13% (n = 16) are atheists or agnostics, and 9% (n = 11) profess some other type of religious beliefs. Results indicate that there is no greater or lesser knowledge of the BD concept depending on this factor ($P = .59$).

Relationship Between Attitude Toward Organ Donation and Transplant and Knowledge of the BD Concept

Of all respondents, 54% (n = 66) are in favor of deceased organ donation, 23% (n = 29) are against, and 23% (n = 28) are undecided. Those in favor of donation and transplant have a greater knowledge of the BD concept than those who are not in favor ($P = .06$).

DISCUSSION

The immigrant Dominican population has a general ignorance of the BD concept. Thus, in our study up to 73% of the Dominican population residing in Spain and Florida does not know the concept and do not understand that is the death of the person. These results correspond to those shown in previous studies in the Spanish-speaking general population [8]. In addition, in this case, it is important to note that there is no significant relationship between the knowledge of BD and the psychosocial aspects analyzed.

The fear of apparent death is one of the main reasons among the refusal to donate after death. The BD concept is linked to this fear. The lack of clearness of the meaning and the process of irreversibility of BD becomes a source of fear among the population who do not know about this concept. This study did not objectify the relationship between attitude toward donation and knowledge of the BD concept, which is a difference from most studies [4–8]. Taking into account the lack of concordance of our data with that of those studies carried out in the Spanish-speaking hospital workers, both in Spain and Latin America [10–14], at the population level, there are studies that show that ignorance of the BD concept affects 70% to 80% of the population [8]. In Western countries, ignorance of the BD is lower, affecting over 50% [8]. Assessing the results obtained in this study, in which more than 70% do not know the BD concept, it is considered that the immigrant Dominican population, both in Spain and Florida, presents a percentage of ignorance similar to that of Spaniards several decades ago [15]. However, it is not possible to establish comparisons with other data in the Dominican Republic, since such information is not available.

In conclusion, we can say that the Dominican population immigrating to Spain and the United States has a significant ignorance of the BD concept, highlighting that it is similar in immigrants residing in both countries, and, unlike most studies, there is no objective association with the attitude toward organ donation.

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