Empirical Articles

Beliefs and Attitudes Towards Organ Donation in Young Mexicans

Crenças e Atitudes de Jovens Mexicanos Face à Doação de Órgãos

Santa Magdalena Mercado Ibarra[a], Carlos Alberto Mirón Juárez*[a], Raquel García Flores[a],

Claudia García Hernández[a]

[a] Department of Psychology, Sonora Technological Institute, Obregón city, México.

Abstract

Aim: The objective of this work was to demonstrate the relationship between beliefs and attitudes towards organ donation in Sonoran university students, which required the adaptation and validation of the scales of beliefs and attitudes towards organ donation proposed by León (2015) for the Mexican Sonoran state population.
Method: From a non-probabilistic sample of 225 college students of both sexes, between 17 and 25 years of age, each scale was analyzed using the Rasch model, where relevant values of unidimensionality were found for almost all items. Subsequently, an exploratory factor analysis with varimax rotation showed theoretically interpretable factors, as well as a total explained variance greater than 50% in both scales.
Results: Using structural equations, a model of beliefs and attitudes towards organ donation was confirmed, identifying considerable correlations between negative beliefs on donation and positive attitude (r = -.73) and prosocial attitudes towards donation (r = -.44), showing relevant adjustment criteria (SRMR = .053; RMSEA = .056; CFI = .926).
Conclusion: The findings corroborate the importance of beliefs as a cognitive component of attitudes, as well future studies with sample extension are suggested to confirm the results obtained.

Keywords: organ donation, beliefs, attitudes, health, university students

Resumo

Objetivo: O objetivo deste trabalho foi demonstrar a relação entre crenças e atitudes face à doação de órgãos em estudantes da Universidade de Sonora, o que exigiu a adaptação e validação das escalas de crenças e atitudes face à doação de órgãos propostas por León (2015) para a população do estado Mexicano de Sonora.
Método: Recorrendo a uma amostra não probabilística de 225 universitários de ambos os sexos, com idades entre 17 e 25 anos, cada escala foi analisada usando o modelo de Rasch, onde valores relevantes de unidimensionalidade foram encontrados para quase todos os itens. Posteriormente, uma análise fatorial exploratória com rotação varimax revelou fatores teoricamente interpretáveis, bem como uma variância explicada total superior a 50% em ambas as escalas.
Resultados: Usando equações estruturais, um modelo de crenças e atitudes face à doação de órgãos foi confirmado, identificando correlações elevadas entre crenças negativas face à doação e atitude positiva (r = -.73) e atitudes pró-sociais face à doação (r = -.44), apresentando critérios de ajustamento relevantes (SRMR = .053; RMSEA = .056; CFI = .926).
Conclusão: Os resultados corroboram a importância das crenças como uma componente cognitiva das atitudes, sendo que estudos futuros com amostras maiores são sugeridos para confirmar os resultados obtidos.

Palavras-Chave: doação de órgãos, crenças, atitudes, saúde, estudantes universitários

As a result of technological advances in the field of health science, the transplantation of organs and tissues has become a viable procedure for the extension of life, and in many cases the only option to preserve it. As a result, organ donation has taken on greater relevance in the health agenda (Miranda, 2015; Moreno, 2012).

It has also been noted that demand for organs has been increasing due to the fact that procedures for organ transplantation are increasingly accessible to the population and these go beyond the disposition of donated organs (Lima, Silva, & Pereira, 2009).

At national level, according to the National Transplant Center (CENATRA, 2017), there are currently more than 21,000 people waiting for an organ transplant, and only 1,542 have received one in 2016. Mexico is below the international indexes of organ donation (National transplant organization (ONT, 2009). In 2015 it was reported that, of the 19,960 people waiting for a transplant, 12,052 were expected to receive a kidney transplant, 7,441 cornea, 401 liver, 44 heart, 10 pancreas, 9 kidney-pancreas, 2 liver-kidney, and 1 heart-lung.

In Mexico organ donation is promoted by doctors, nurses, paramedics, psychologists and social workers trained to encourage donation (Moreno, 2012) as the growing demand for donors in the country is increasing and it is estimated that the incidence of organ transplantation necessity will continue to increase (Velasco & Muñiz, 2010).

Hernández (2007) warns for the need of studies focused on knowing psychosocial factors associated with the intention or disposition for donation in organs in the Mexican population, since most of the studies analyzed by him have focused on the psychological consequences of the recipients and donors, instead of the predisposition for the donation.

Due to this need, Querevalú-Murillo et al. (2012) emphasizes that particularly in Mexico the promotion of organ donation should be understood within the cultural and religious framework, in addition to accentuating the need for a psychosocial analysis of the aspects that influence the disposition towards donation.

In this sense there are studies that have identified several individual factors that affect the willingness to donate, among these, attitudes have been identified as the main psychosocial factor prior to the disposition for being an organ donor (Almohsen et al., 2016; Conesa et al., 2005; Davison & Jhangri, 2014; Martín, Martínez, & Manrique, 1991; Martínez, Martín, & López, 1995; Ríos et al., 2015; Vijayalakshmi, Sunitha, Gandhi, Thimmaiah, & Math, 2016).

It has also been identified that attitude toward organ donation can be directed mainly to two types of actions: On the one hand, the donation of organs as an instrumental process for the help of a specific person and, on the other hand, the donation as an altruistic attitude of social support (Guerra, 2005).

Related to the above, Moreno (2012), in a qualitative study with Mexican population, identified erroneous beliefs about organ donation. According to the author, people addressed constantly reported ideas related to unproven disadvantages about the donation of organs, such as institutional refusal to donate in life, high risks of disease transmission or the inefficiency of organ donation treatments. He also identified that there are beliefs derived from family and religious tradition that may influence the rejection of organ donation. Related to this, Rodrigue, Cornell, and Howard (2006) corroborate the importance of the beliefs of the closest relatives in the decision making of the donors, finding significant differences between those willing to donate and those who do not. These findings allow to notice the importance of family beliefs in organ donation rates.

PsychOpen GOLD

From a theoretical perspective, Zanna and Rempel (1988) propose a model where attitudes are explained by a cognitive component called beliefs, understood as knowledge that a person assumes as true on a topic, this cognitive component will influence a second emotional component that strongly determines how individuals can approach a particular topic.

Grube, Mayton, and Ball-Rokeach (1994) refer to attitudes as the valued disposition that people have towards an object or event. It depends fundamentally on cognitive, affective and behavioral components, being the cognitive component those beliefs through which people can attribute certain properties to an object or event. García Lirios et al. (2013), suggest that these beliefs can be inherited by the family environment, determining the way in which an individual can manifest certain attitudes before specific events. In this matter, Davison and Jhangri (2014) found that beliefs are different by cultural and original ethnics of the people, and these beliefs influence the way they perceive the importance of organ donation.

Following the above, determining how familiar beliefs and personal beliefs about organ donation are related with the attitudes to organ donation is relevant to contribute for the understanding of how people develop their positions towards donation, which can help in the implementation of strategies that encourage the inclination towards this altruistic behavior. Considering the previous, it is proposed to measure and analyze both factors in order to know the type of influence they exert on each other.

Method

A correlational cross-sectional study was chosen in order to know the relationship between beliefs and attitudes towards organ donation.

Participants

For this study we opted for a non-probabilistic sample due to convenience of access to the sample, which included 225 university-level students from Obregón city, Sonora, Mexico, between the ages of 17 and 25 years old (M = 19.93, SD = 1.98), 96.4% reported to be single, 2.7% reported to be married and 0.9% divorced; 43% of the sample were male and 57% female.

Procedure

Participants were randomly selected from a local university, in which we ask permission to access in order to survey the students. Ten classrooms were accessed requesting the support of randomly selected students to answer a questionnaire. Participants were selected by their number in the class students list, with the goal of collecting individuals between the age of 17 to 25. The instrument was applied in a self-administered manner to each group, providing an informed consent document, which explained the purpose of the study, the use that would be given to the data obtained and the anonymity of each of the participants, as well as the freedom to leave the study at any time if they wished. Once the data was collected, the information was inserted in a database using the software SPSS version 24.

Measures

The scales previously proposed by León (2015), with a reported reliability index of .752 for the belief scale and .76 for attitudes, were adapted through a grammatical revision and content analysis, to be later piloted in order to detect comprehension difficulties in the target population; as suggested by Hambleton (1996). The scale of beliefs was composed by 9 items related to beliefs about risks and unfavorable aspects about donation from self, family, religious and social susceptibilities (e.g., "The religion that I profess is against the donation of organs", "The donation of organs is an expensive, difficult and painful process for the donor and the receiver"). On the other hand, the scale of attitudes included 8 items related to the disposition and support towards organ donation, both their own and social (e.g., "I would like to be a donor if it is necessary because maybe one day I will need a transplant", "Organ donation is always good because it saves lives"). For both scales a four-point Likert-type scale was used, which measured the degree of agreement with each statement, (1) "*Disagree*", (2) "*Partially disagree*", (3) "*Partially agree*", and (4) "*Agree*".

Data Analysis

The data was analyzed in terms of unidimensionality through an exploratory and confirmatory factor analysis to generate structural models that allowed to relate the identified constructs. Software winstep version 3.65 were used to analyze unidimensionality and each item productivity, SPSS version 23 and AMOS version 24 were used to generate a structural model of relations between beliefs and attitudes towards organ donation.

Results

As part of the analysis of unidimensionality, the data was submitted to the Rasch model in its adaptation for polytomous scales, in which it is assumed that items from the same scale are part of the same dimension.

The model assumed that the difficulty of each item to be answered by the participants related to a latent trait of the surveyed participants, taking into account the level of adjustment of each item as a criterion, as well as the ability to discriminate the latent trait of the surveyed participants (Hambleton, Swaminathan, & Rogers, 1991).

The affinity value was obtained in order to know the range of affinity captured by the items for the latent trait of the participants (Chávez & Saade, 2009), also the analysis estimate the values of internal adjustment (INFIT) and external (OUTFIT), being acceptable to the range of .50 to 1.5 (González-Montesinos, 2008).

The value of empirical discrimination was also estimated, expecting its approximation to 1 without going down to .80, and the biserial point correlation whose value is expected to be greater than .20 (González-Montesinos, 2008).

The global statistics for the scale of organ donation beliefs indicates an average of .00 for the difficulty/affinity with a standard deviation of .28 and an overall reliability of .87.

Table 1 shows the items in order of difficulty/affinity, along with the internal and external adjustment statistics, as well as the biserial point correlation and the discrimination capacity of each reagent. It is observed that all the items adjust to the relevant criteria with the exception of reagent BELIEF 1, which has adjustment values greater than the criterion of 1.50, a biserial point correlation less than .20 and a low discriminant capacity, so

Table 1

Statistical Data of the Rasch Analysis for the Scale of Organ Donation Beliefs

Item	Difficulty / Affinity	Infit	Outfit	Biserial point correlation	Discrimination
BELIEF7	.39	0.87	0.72	.47	1.09
BELIEF3	.37	1.15	1.27	.25	0.92
BELIEF2	.11	0.74	0.71	.57	1.20
BELIEF9	.10	1.06	1.03	.36	0.96
BELIEF8	.06	0.84	0.85	.53	1.18
BELIEF5	.04	0.87	0.86	.49	1.17
BELIEF4	-.25	0.91	0.94	.48	1.09
BELIEF1	-.32	1.52	1.81	.12	0.32
BELIEF6	-.50	1.06	1.08	.41	0.92

that said reagent does not fit the model and does not belong to the same dimension, therefore is discarded from the scale.

On the other hand, the values obtained for the scale of Attitudes towards organ donation (Table 2) show an acceptable distribution in the difficulty/affinity of the items, as well as internal and external adjustment, a positive polarity in the biserial point correlation and high discriminative capacity in all the items. The above suggests that the scale has undimensional properties and all the items are productive.

Table 2

Statistical Data of the Rasch Analysis for the Attitudes Scale Towards Organ Donation

Item	Difficulty / Affinity	Infit	Outfit	Biserial point correlation	Discrimination
ATTITUDE5	.76	0.91	0.84	.55	1.15
ATTITUDE7	.75	1.12	1.21	.44	0.81
ATTITUDE6	.53	0.87	0.80	.57	1.19
ATTITUDE1	.06	0.97	0.93	.49	1.05
ATTITUDE3	-.08	1.12	1.21	.39	0.81
ATTITUDE4	-.27	1.22	1.31	.32	0.79
ATTITUDE8	-.79	0.91	0.91	.46	1.07
ATTITUDE2	-.95	0.85	0.74	.50	1.16

Once the scales were adjusted from the Rasch analysis, each scale was subjected to the Kayser-Mayer-Olkin test, obtaining a value of .78 for the scale of beliefs and an approximate $\chi^2(28) = 372.17$, $p < .001$ in the Bartlett sphericity test. Through the varimax rotation, two factors were grouped that explained 51.40% of the total variance (Table 3).

The first factor corresponded to the items related to organ donation as risky to health, so it was categorized as negative beliefs to organ donation. The second factor was due to beliefs related to family and religious indisposition for organ donation after death, so it was categorized as family and theological beliefs against organ donation.

Table 3

Factorial Distribution of the Organ Donation Beliefs Scale

Item	Factors		Communality
	1	2	
CREE2		.46	.54
CREE3		.90	.83
CREE4	.63		.46
CREE5	.67		.46
CREE6	.65		.43
CREE7		.47	.40
CREE8	.66		.53
CREE9	.67		.46
Explained variance	33.32%	18.10%	

For the scale of attitudes towards organ donation a value of .76 was obtained in the Kayser-Mayer-Olkin test and $\chi^2(28) = 431.84$, $p < .001$ in the Bartlett sphericity test. Demonstrating the sample meets the minimum requirements for exploratory factor analysis. Two groupings with considerable factorial weights were obtained, which explained 52.60% of the total variance (Table 4).

Table 4

Factorial Distribution of the Attitudes Towards Organ Donation Scale

Item	Factors		Communality
	1	2	
ACT1	.52		.41
ACT2	.70		.54
ACT3		.41	.29
ACT4	.44		.23
ACT5		.88	.80
ACT6		.89	.81
ACT7	.74		.56
ACT8	.74		.56
Explained variance	27.89%	24.71%	

The first factor was due to items related to positive attitudes towards organ donation to help a relative, so it was categorized as a positive attitude towards donation. The second factor included items related to positive attitudes to socially help through the donation of organs, understanding their summation as pro-social attitudes through organ donation.

Once the factors were identified and interpreted, the relationship between these was established through structural equation modeling. The comparative adjustment index (CFI) was taken as acceptable goodness-of-fit criterion, which is considered optimal at > .90 (Bentler, 1990). In addition, the root mean square error of approximation (RMSEA) and the standardized root mean square residual (SRMR) were obtained, with the optimal value < .05 for both (Steiger & Lind, 1980; Steiger, 1990), and values < .08 are considered acceptable (Abad, Olea, Ponsoda, & García, 2011).
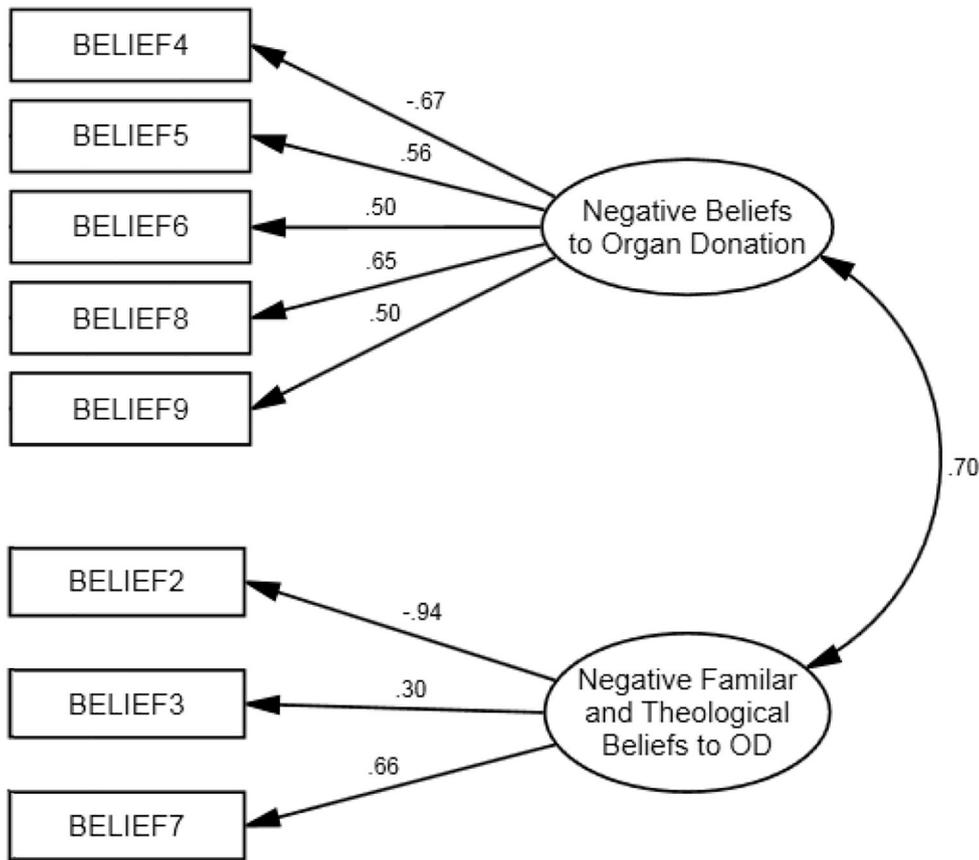
Figure 1. Negative beliefs about organ donation model.

χ^2/df = 3.2; SRMR = .0488; RMSEA = .099; CFI = .925.

The first model (Figure 1) showed relevant adjustment indicators, with the exception of the RMSEA whose value approached .1. The model corroborates the structure of the latent variables of negative beliefs to organ donation, constructed from five indicators with moderate weights and distributed in a homogeneous manner. This suggests there is no observed variable that largely determines the construct. On the other hand, the construct of negative familiar and theological beliefs shows, in one of its three observed variables, a significant weight, suggesting it to be a determining indicator for the construct. In addition, the correlation between both constructs was moderately high and positive (*r* = .70).

With regard to the attitude model (Figure 2), optimal adjustment values were obtained, confirming the composition of the latent variable of positive attitudes towards donation, in which the five indicators reported moderate weights except for one. Likewise, the construct of pro-social attitude in organ donation presented moderate high weights with respect to the observed variables that compose it. The relationship between both constructs was moderate (*r* = .55), with a positive polarity.

Finally, a model was constructed in which the relationship between the four constructs was established, in order to know the degree and nature of correlation between them (Figure 3). Acceptable values of adjustment were observed for the model. Likewise, the standardized values show that the highest correlations obtained were be-
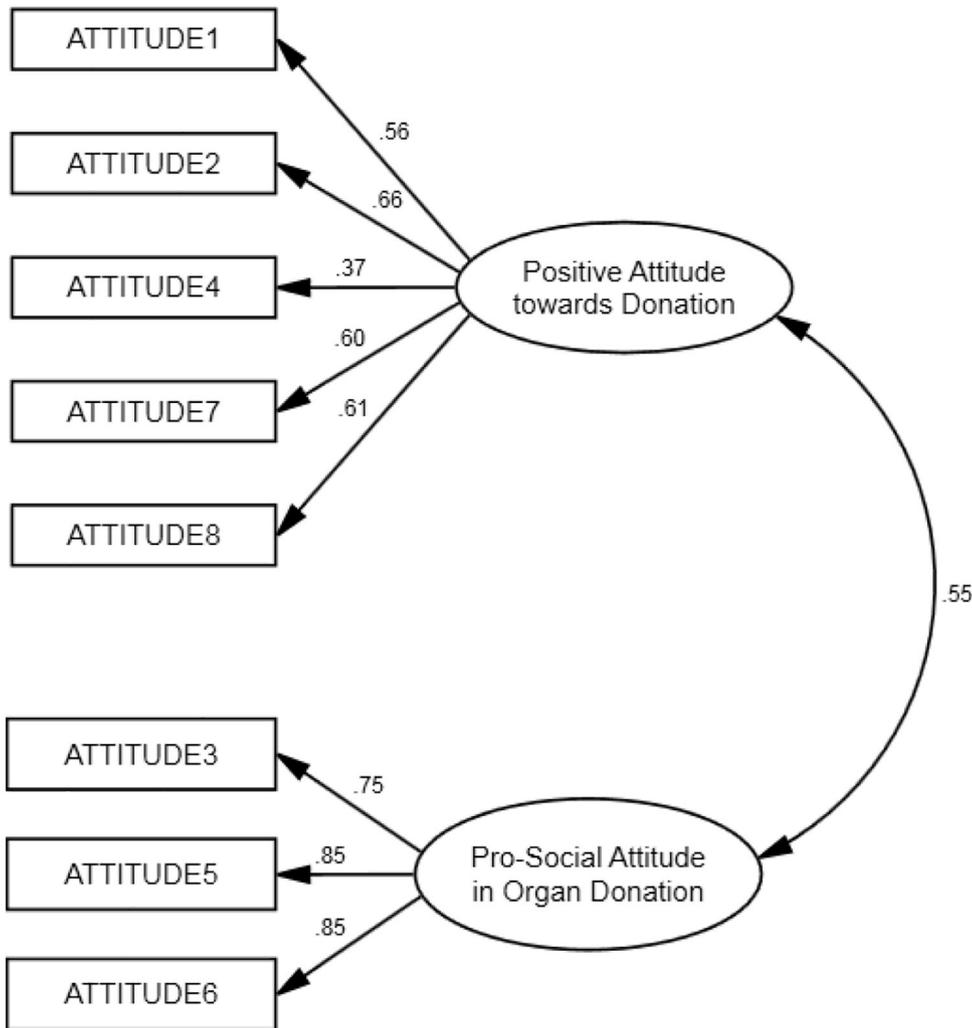
Figure 2. Positive beliefs towards organ donation model.

χ^2/df = 1.77; SRMR = .044; RMSEA = .059; CFI = .968.

tween the constructs of negative beliefs towards donation and the positive attitude towards donation (*r* = -.73), and the Pro-social attitude towards donation (*r* = -.44), both with negative polarity.

Conclusions

From the Rasch analysis it was possible to obtain psychometric properties of each scale, weighing the productivity of each item and discarding those that did not meet the criteria of unidimensionality, adjustment and discrimination, corroborating the reliability of both scales for its use.
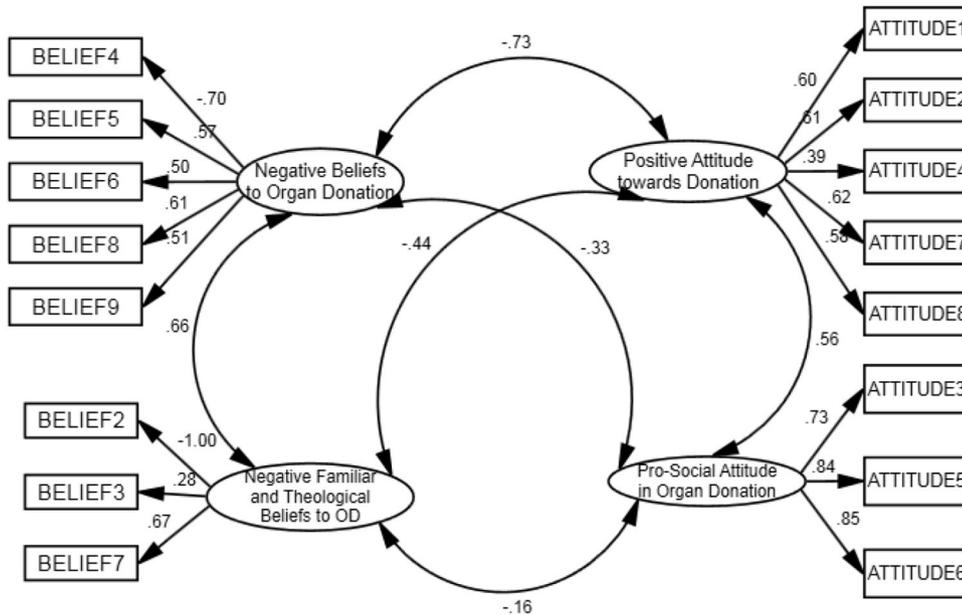
Figure 3. Model of relationship between negative belief factors and positive attitudes towards organ donation.

χ^2/df = 1.70; SRMR = .053; RMSEA = .056; CFI = .926.

The factorial distribution of the scale of attitudes coincided with what was proposed by Guerra (2005), when the distribution was shaped according to the utility of organ donation and its altruistic prosocial function. In the same way, the factorial distribution of the scale of beliefs coincided with the suggestion of Moreno (2012) when finding beliefs of organ donation as risk exposure to one's own health and of low success for recipients and, on the other hand, the beliefs depend of the family and theological posture of the individuals.

It should be emphasized the models showed high and significant correlations, but do not exceed the value of .8, as indicated by Mason & Perreault (1991). Only correlation above .8 are indicators that suggest high collinearity. Therefore, it is possible to assume that all the constructs of the model are independent of each other and are not indicators of the same dimension.

High weights and negative polarity in the correlation indexes between negative beliefs and attitudes were observed. This coincides and provides more evidence to the findings of Grube, Mayton, and Ball-Rokeach (1994) by pointing out the intimate nature between beliefs and attitudes understood as dispositional towards behaviors.

Also, the results provide empirical data for García Lirios et al. (2013), who suggest the family context as a strong source of beliefs that are the cognitive part of the structure of attitudes explained by Zanna and Rempel (1988).

The findings have empirical implications that can support the development of strategies with the objective of promoting organ donation, taking in consideration the limitations that familiar and theological beliefs can represent in Mexican population, and even stimulate new beliefs to contrast to those.

It is suggested the need to approach beliefs from various courses of action in the promotion of organ donation. Furthermore, it is deemed necessary for future studies to search for other factors associated with the disposition to be an organ donor, and to examine the causal relationships between those factors. Additionally, the expansion of samples, which allow for the analysis of possible attributive variables that may influence those predictive psychosocial factors, is considered necessary.

Funding

Competing Interests

Acknowledgments

References

Abad, F. J., Olea, J., Ponsoda, V., & García, C. (2011). *Medición en Ciencias Sociales y de la Salud.* Madrid, España: Síntesis.

Almohsen, S. S., Alobaishy, S. M., Alghammas, N. I., Albulayhi, S. K., Alrashid, S. M., Aljamal, R. Y., & Dandash, K. (2016). Attitudes and beliefs on organ donation among students in a university in Central Saudi Arabia [Abstract]. *Saudi Medical Journal, 37*(5), 591. doi:10.15537/smj.2016.5.14701

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107*, 238-246. doi:10.1037/0033-2909.107.2.238

Centro Nacional de Trasplantes (CENATRA). (2017). *Estadísticas (Stadistics).* Retrieved from http://www.cenatra.salud.gob.mx/

Chávez, C., & Saade, A. (2009). *Procedimientos básicos para el análisis de reactivos* [Basic procedures for the analysis of ítems]. Ciudad de México, México: Centro Nacional para la Evaluación de la Educación Superior.

Conesa, C., Ríos, A., Ramírez, P., Canteras, M., Rodríguez, M. M., & Parrilla, P. (2005). Estudio multivariante de los factores psicosociales que influyen en la actitud poblacional hacia la donación de órganos [Multivariate study of psychosocial factors that influence the population attitude towards organ donation]. *Nefrologia, 25*(6), 684-697. http://www.revistanefrologia.com/es-publicacion-nefrologia-articulo-estudio-multivariante-de-los-factores-psicosociales-que-influyen-en-la-X0211699505019359

Davison, S. N., & Jhangri, G. S. (2014). Knowledge and attitudes of canadian first nations people toward organ donation and transplantation: A quantitative and qualitative analysis. *American Journal of Kidney Diseases, 64*(5), 781-789. doi:10.1053/j.ajkd.2014.06.029

García Lirios, C., Carreón, J., Hernández, J., Limón, G., Morales, M., & Bustos, J. (2013). Modelo de los determinantes de la actitud hacia la rehidratación [Model of the determinants of attitudes toward rehydration]. *Revista Colombiana de Enfermería, 8*(8), 53-60. doi:10.18270/rce.v8i8.546

González-Montesinos, L. (2008). El análisis de reactivos con el Modelo Rasch [Item analysis with the Rasch Model]. *Manual técnico A. Serie: Medición y metodología, México, Universidad de Sonora/INEE*. Retrieved from https://www.academia.edu/10818360/An%C3%A1lisis_de_Reactivos_Modelo_Rasch_M._G_Gonzalez_Montesinossub

Grube, J. W., Mayton, D. M., & Ball-Rokeach, S. J. (1994). Inducing change in values, attitudes, and behaviors: Belief system theory and the method of value self-confrontation. *The Journal of Social Issues, 50*, 153-173. doi:10.1111/j.1540-4560.1994.tb01202.x

Guerra, C. (2005). *Donación de órganos: Comprensión y significado* [Organ donation: Understanding and meaning] (Undergraduate thesis). Facultad de Ciencias Sociales, Universidad de Chile, Santiago de Chile, Chile.

Hambleton, R., Swaminathan, H., & Rogers, H. (1991). *Fundamentals of item response theory*. Newbury Park, CA, USA: Sage.

Hambleton, R. K. (1996). Adaptación de tests para uso en diferentes idiomas y culturas: Fuentes de error, posibles soluciones y directrices prácticas. In J. Muñiz (Ed.), *Psicometría* (pp. 207-238). Madrid, España: Editorial Universitas, S. A.

Hernández, E. (2007). *Atención Psicológica en el Trasplante de Órganos* [Psychological care in organ transplantation]. La Habana, Cuba: Editorial Ciencias Médicas.

León, R. (2015). *Factores psicológicos asociados a la donación de órganos* [Psychological factors associated with organ donation] (Undergraduate thesis). Departamento de Psicología, Instituto Tecnológico de Sonora, Ciudad Obregón, México.

Lima, A., Silva, M., & Pereira, L. (2009). Sufrimiento y contradicción: El significado de la muerte y del morir para los enfermeros que trabajan en el proceso de donación de órganos para trasplante [Suffering and contradiction: The meaning of death and dying for nurses who work in the process of organ donation for transplant]. *Enfermería Global, 15*, 1-17. http://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S1695-61412009000100002

Martín, A., Martínez, J. M., & Manrique, S. (1991). Donación de órganos para trasplantes. Aspectos psicosociales [Donation of organs for transplants. Psychosocial aspects]. *Nefrologia, 11*(1), 62-68. http://www.revistanefrologia.com/es-publicacion-nefrologia-pdf-donacion-organos-trasplantes-aspectos-psicosociales-X0211699591044811

Martínez, J. M., Martín, A., & López, J. (1995). La opinión pública española ante la donación y el trasplante de órganos [The Spanish public opinion towards the donation and the transplant of organs]. *Medicina Clínica, 105*(11), 401-406. https://www.researchgate.net/publication/15724551_Spanish_public_opinion_concerning_organ_donation_and_transplantation

Mason, C., & Perreault, W. (1991). Collinearity, power, and interpretation of multiple regression analysis. *JMR, Journal of Marketing Research, 28*(3), 268-280. doi:10.1177/002224379102800302

Miranda, C. (2015). *Propuesta para la promoción de la cultura de la donación de órganos en México* [Proposal to promote the culture of organ donation in Mexico] (Master's thesis). Universidad Autónoma de México, UNAM. Retrieved from http://132.248.9.195/ptd2015/marzo/305078410/Index.html

Moreno, E. (2012). *Factores Sociales y Psicológicos que influyen en la Donación de Órganos* [Social and Psychological Factors that influence Organ Donation] (Undergraduate thesis). Secretaría de Salud, Hospital Juárez de México. Retrieved from http://132.248.9.195/ptd2013/Presenciales/0702975/Index.html

National Transplant Organization (ONT). (2009). International figures on donation and transplantation – 2008. *Newsletter Transplant, 14*(1). Retrieved from http://www.ont.es/publicaciones/Documents/Newsletter2009.pdf

Querevalú-Murillo, W., Orozco-Guzmán, R., Díaz-Tostado, S., Herrera-Morales, K., López-Teliz, T., & Martínez-Esparza, A. … Miranda-Coutolenc, S. (2012). Iniciativa para aumentar la donación de órganos y tejidos en México [Initiative to increase the donation of organs and tissues in Mexico]. *Revista de la Facultad de Medicina UNAM, 55*(1), 12-17. Retrieved from http://www.medigraphic.com/cgi-bin/new/resumen.cgi?IDARTICULO=32368

Ríos, A., López-Navas, A. I., Navalón, J. C., Martínez-Alarcón, L., Ayala-García, M. A., Sebastián-Ruiz, M. J., . . . Parrilla, P. (2015). The Latin American population in Spain and organ donation. Attitude toward deceased organ donation and organ donation rates. *Transplant International, 28*(4), 437-447. doi:10.1111/tri.12511

Rodrigue, J. R., Cornell, D. L., & Howard, R. J. (2006). Organ donation decision: Comparison of donor and nondonor families. *American Journal of Transplantation, 6*(1), 190-198. doi:10.1111/j.1600-6143.2005.01130.x

Steiger, J. H., & Lind, J. M. (1980). Statistically based tests for the number of common factors. Paper presented at the annual meeting of the Psychometric Society, Iowa City, IA, USA. Retrieved from http://www.statpower.net/Steiger%20Biblio/Steiger-Lind%201980.pdf

Steiger, J. H. (1990). Structural model evaluation and modification: An interval estimation approach. *Multivariate Behavioral Research, 25*(2), 173-180. doi:10.1207/s15327906mbr2502_4

Velasco, S., & Muñiz, C. (2010). Los jóvenes universitarios de Monterrey ante la donación de órganos: Estudio exploratorio de sus actitudes y opiniones [The young university students of Monterrey towards the donation of organs: An exploratory study of their attitudes and opinions]. In A. E. Gutiérrez, G. L. Pedroza, & A. Ontiveros (Eds.), *Memorias de la Tercera Jornada de Investigación en Ciencias Sociales. La producción de los jóvenes investigadores del Tecnológico de Monterrey* (pp. 1-7). Monterrey, México: Tecnológico de Monterrey.

Vijayalakshmi, P., Sunitha, T., Gandhi, S., Thimmaiah, R., & Math, S. (2016). Knowledge, attitude and behaviour of the general population towards organ donation: An Indian perspective. *National Medical Journal of India, 29*(5), 257-261. https://www.researchgate.net/publication/312118527_Knowledge_attitude_and_behaviour_of_the_general_population_towards_organ_donation_An_Indian_perspective

Zanna, M., & Rempel, J. (1988). Attitudes: A new look at an old concept. In D. Bar-Tal & A. Kruglaski (Eds.), *The social psychology of knowledge* (pp. 315-334). Cambridge, United Kingdom: Cambridge University Press.

PsychOpen GOLD