



# Do Spiritual Well-Being and Demographic Characteristics Influence the Decision on Being an Organ Donor?

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### Authors

Khoshravesh S.<sup>1</sup> PhD,  
Karimi-Shahanjarini A.\*<sup>2</sup> PhD,  
Poorolajal J.<sup>3</sup> PhD,  
Bashirian S.<sup>4</sup> PhD,  
Barati M.<sup>5</sup> PhD,  
Hamidi M.<sup>6</sup> MD,  
Khalili S.<sup>7</sup> MSc

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<sup>1</sup>"Department of Public Health" and "Students Research Committee", Hamadan University of Medical Sciences, Hamadan, Iran

<sup>2</sup>"Department of Public Health" and "Social Determinants of Health Research Center", Hamadan University of Medical Sciences, Hamadan, Iran

<sup>3</sup>"Department of Epidemiology, School of Public Health" and "Modeling of Non-Communicable Diseases Research Center", Hamadan University of Medical Sciences, Hamadan, Iran

<sup>4</sup>"Social Determinants of Health Research Center, Hamadan University of Medical Sciences, Hamadan, Iran

<sup>5</sup>"Autism Spectrum Disorders Research Center, Hamadan University of Medical Sciences, Hamadan, Iran

<sup>6</sup>"Managing Director of organ Donation Association, Hamadan University of Medical Sciences, Hamadan, Iran

<sup>7</sup>"Department of Biostatistics and Epidemiology, School of Public Health, Hamadan University of Medical Sciences, Hamadan, Iran

### \*Correspondence

Address: School of Public Health, Hamadan University of Medical Sciences, Shaheed Fahmideh Ave. Hamadan, Islamic Republic of Iran.  
Phone: +98 (912) 6116052  
Fax: +98 (81) 38380509  
karimi.a@umsha.ac.ir

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## ABSTRACT

**Aims** This study aimed to investigate the role of spiritual well-being and demographic characteristics in signing the donor card.

**Instrument & Methods** This cross-sectional study was conducted in Hamadan in 2018. Six hundred employees from 57 offices (out of 60) were selected using a random sampling method. Data gathering was carried out using a self-administered questionnaire. The data were analyzed using logistic regression analysis using SPSS version 22.

**Findings** The participants' mean±SD age was 39.5±7.0. About 20% (n=120) of employees had a donor card, and 41.7% (n=250) were blood donors. About 56 percent than half of them were categorized as having high spiritual health. Among the interpersonal and mass media sources, employees obtained more information from friends (n=181, 30.2%) and TV (n=482, 80.3%), respectively. The results of logistic regression showed that being female (AOR=1.80; 95% CI=1.12-2.87), fewer children (1 child: AOR=1.99; 95% CI=1.15-3.43 & no child: AOR=2.94; 95% CI=1.48, 5.84), being blood donor (AOR=2.40; 95% CI=1.50-3.85), and higher spiritual health (AOR=1.01; 95% CI=1.00-1.03) were significantly predicted to sign donor card.

**Conclusions** This study provides evidence about the importance of spiritual well-being and demographic predictors of organ donor cards. These predictors can be helpful for the development and implementation of interventions related to increasing the sign donor card.

**Keywords** Organ Transplantation; Spirituality; Occupational Groups; Islam; Iran

## CITATION LINKS

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## Introduction

There is a great gap between the demand and supply of organs throughout the world [1]. Despite a slow pace growing in organ donation, this challenge introduces a serious concern in developing nations [2]. According to the Iran Ministry of Health and Medical Education reported there are about 25,000 people on the waiting list for transplantation, and about 10 cases are added daily [3]. The decision to sign the organ donor card involves multilevel factors from individual to socio-cultural factors [4-6].

In Iran, the organ donation program was created in 2000 after the jurisprudential support of Imam Khomeini to use deceased organ donation [7], and many religious scholars consider organ transplantation permissible [8]. It has been confirmed in the Holy Qur'an [9].

The results of some studies indicate that spirituality and religiosity can affect signing the organ donor card [1, 10, 11]. The evidence shows that spiritual beliefs are distinct from religiosity [1, 12]. Spirituality refers to the search for purpose, meaning, and value in life [13]. This concept includes beliefs, principles, values, and inner strength in nature, generally individual experiences [14]. Religiosity refers to a belief in God or a supernatural power [15]. The spiritual well-being scale (SWB) has been developed to measure spirituality [16]. This scale includes two dimensions: religious well-being and existential well-being. Spiritual well-being contains the well-being of his or her spiritual life about God. Existential well-being is about an individual's life direction and satisfaction. This term indicates how well he or she is adjusted to self, community, and surroundings [16].

Spirituality may encourage someone to volunteer to help unknown others, including being an organ donor [1]. There are two limitations to understanding the role of spiritual and organ donation. First, a few studies have been conducted investigating this issue [1, 10, 11]; second, these studies have defined spirituality differently and focused on different dimensions of the construct [1]. Moreover, it should be noted that none of the previous studies were conducted in a Muslim setting, where, due to interaction between Islamic beliefs and spirituality, influencing the spirituality may be different from other settings. Moreover, it should be noted that none of the previous studies have been conducted in a Muslim setting, where, due to the interaction between Islamic beliefs and spirituality, influencing the spirituality may be different from other settings. The purpose of the study was to investigate the role of spiritual well-being and demographic characteristics in signing the donor card among employees.

## Instrument and Methods

This cross-sectional study was performed among employees of all eligible offices in Hamadan, west of Iran, in 2018. Using a confidence level of 95% and the

results of a previous study [6], the sample size was calculated to be 600. The study population was recruited from 57 offices out of 60 (10-11 employees per office). All employees working at the selected offices that agreed to participate and signed the consent form were included. We did not exclude any employees based on their demographic characteristics or working class. Following approval from the Hamadan University of Medical Sciences and coordination with the head of each office, the selection of participants was made through a random selection of work units at each office. For recruiting employees, "the first author personally approached the employees and explained the purpose of the study and the procedures to be followed. All participants provided informed written consent. The response rate was 96%. Employees signed an informed written consent form for participating in the study.

Data collection was done using a self-administration questionnaire. This paper has been written based on a multi-step to increase signing the organ donation card; here, we have described only some measured variables. The measured consisted of demographic information (e.g., age, sex, educational status, marital status), history of blood donation, having a donor card, interpersonal /mass media sources to get information about organ donation, and spiritual well-being. The procedures of developing the Signed Donor Card (SDC) Scale have been described elsewhere [16]. Briefly, the validity of this questionnaire was confirmed through face, content, and construct validities. The CVR range was 0.80-1. The CVI value was 0.93. Also, reliability was examined using the calculation of Cronbach's  $\alpha$  and the test-retest method. The questionnaire had acceptable internal consistency ( $\alpha=0.58-0.93$ ) and good test-retest reliability (ICC=0.76). We used a validated tool to measure employees' spiritual well-being (Spiritual Well-Being Scale) [17]. Spiritual Well-Being Scale (SWBS) includes 20 items, of which ten measure existential well-being (EWB) and ten items measure spiritual well-being (RWB). A total spiritual well-being score is obtained from the sum of EWB and RWB subscales (range from 20-120). A higher score shows a greater level of spiritual health. In the study of Baljani *et al.*, the validity of the Persian version of this questionnaire was confirmed through content validity and its reliability in Cronbach's alpha coefficient of 0.82 [18].

For data analysis, we used SPSS software version 22. To assess the relationship between variables, all predictors in the logistic regression were entered simultaneously. The significance level was considered at  $p<0.05$ .

## Findings

The participants' mean $\pm$ SD age was 39.5 $\pm$ 7.0. Most of the employees were men (65.5%). The mean level of

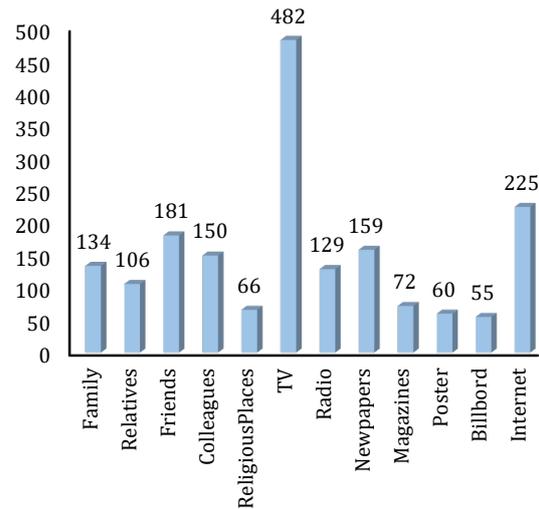
spiritual well-being was  $99.80 \pm 15.00$ , indicating that the majority of participants described themselves as having high spiritual health. Also, the mean values of the existential and religious scores of the Spiritual Well-Being Scale were  $47.72 \pm 15.00$  and  $52.20 \pm 7.23$ , respectively. Only 20% of employees ( $n=120$ ) reported signing a donor card. Table 1 indicates the participants' characteristics in the study.

**Table 1)** Frequency of characteristics of participated employees ( $n=600$ )

Characteristics	Number	Percent
<b>Age (Year)</b>		
20-30	67	11.2
31-40	288	48.0
41-50	214	35.7
51-60	30	5.0
61-70	1	0.2
<b>Sex</b>		
Male	387	65.5
Female	213	35.5
<b>Education level</b>		
Under diploma	5	0.8
Diploma	26	4.3
Above diploma	52	8.7
License	273	45.5
Above license	209	34.8
PhD	35	5.8
<b>Material status</b>		
Single	93	15.5
Married	501	83.5
Widow / Died	6	1
<b>Number of children</b>		
0	166	27.7
1	182	30.3
$\geq 2$	252	42.0
<b>Spiritual health</b>		
Low	4	0.7
Moderate	261	43.0
High	335	55.8
<b>History of blood donation</b>		
Yes	250	41.7
No	350	58.3
<b>Having donor card</b>		
Yes	120	20.0
No	480	80.0

The status of interpersonal/mass media sources to achieve information on organ donation has been shown in Diagram 1. TV ( $n=482$ , 80.3%), and friends ( $n=181$ , 30.2%) were the most frequent interpersonal and mass media sources of obtaining the information, respectively.

Among the studied variables, sex, the number of children, being a blood donor, and spiritual health were predictors of signing donor card behavior. So that, being female, having fewer children, being a blood donor, and having higher spiritual health were significant predictors of signing a donor card (Table 2).



**Diagram 1)** Interpersonal and mass media sources of participants

**Table 2)** Predictors of signing an organ donor card ( $n=600$ )

Predictors	B	S.E	AOR	95% CI	p.
<b>Age</b>	-	0.018	0.99	0.96, 1.02	0.735
	0.006				
<b>Sex</b>					
Female	0.589	0.239	1.80	1.12, 2.87	0.014
Male (Ref)					
<b>Educational status</b>					
Diploma & less than	0.505	0.490	1.65	0.63, 4.33	0.303
Above diploma & License	0.165	0.224	1.17	0.76, 1.82	0.461
Above License & Ph.D. (Ref)					
<b>Marital status</b>					
Single	0.020	0.329	1.02	0.73, 2.41	0.952
Married (Ref)					
<b>Number of children</b>					
0	1.079	0.350	2.94	1.48, 5.84	0.002
1	0.690	0.278	1.99	1.15, 3.43	0.013
$\geq 2$ (Ref)					
<b>History of blood donation</b>					
Yes	0.878	0.240	2.40	1.50, 3.85	<0.001
No (Ref)					
<b>Spiritual health</b>	0.016	0.008	1.01	1.00, 1.03	0.033

## Discussion

The study was performed to determine the role of spiritual well-being and demographic characteristics in predicting signing donor cards. Our study revealed that spiritual well-being predicted signing the donor card significantly. Accordingly, participants who had higher spiritual health were more likely to sign the donor card. This finding aligns with the conceptual view of the association between spirituality and organ donation and the previous studies [19, 20]. Spirituality and religiosity can influence the organ donor card [1, 10, 11]. Due to Islamic teachings emphasizing the importance of saving a human life, Muslims are encouraged to save a human life [7]. In

some Muslim nations, such as Iran, these beliefs are reinforced through parents, mass media, and schools. The evidence shows that religious beliefs can provide individuals with a greater sense of well-being spirituality [7]. Our finding demonstrated that the likelihood of signing the donor card was higher in participants who had a higher well-being key role in persuading spirituality. Therefore, Islamic teachings have a key role in persuading Muslims to save human life, and this view can influence the positive public attitudes about organ donation [7].

It seems that, along with religious beliefs, it is important to pay special attention to addressing the spiritual aspects of organ donation. Spiritual well-being includes four domains: personal (meaning and values in life), communal (interpersonal space between self and others like culture and religion), environmental (something beyond biological/physical self), and metaphysical (relationship with God) [1]. The study of Bortz *et al.* indicated differences in mean scores of transcendental spirituality between those who had organ donor cards and those who hadn't [1]. Results showed statistically significant associations between sex, the number of children, and history of blood donation with signing the donor card. In other words, being female, having fewer children, and being a blood donor were predictors of signing the donor card.

In our study, being female was one of the predictors of signing the donor card. Similar to our results, some other previous studies showed that women were more likely to be organ donors than men [5, 21]; for example, a survey indicated that women were more likely than men to have discussed organ donation with their families [21] that can further encourage women to sign the donor card. By contrast, in some studies, sex was not a significant predictor of being an organ donor [22, 23]. Differences in the studied population and cultural contexts may contribute to these mixed results, and further studies in this regard would be informative [22].

In this study, employees with fewer children were more likely to be organ donors than those with two or more children. The number of children is one of the significant predictors of signing donor cards. Khajooei showed that the number of children of brain death patients had a significant relationship with organ donation consent [24]. It is necessary to do further researches to determine the role of the children's number in this regard.

In our study, employees who were blood donors were more likely to sign the donor card. This finding has been reported previously [25]. Engaging in donation behavior (i.e., blood donation) may be associated with other donation behaviors such as organ donation. Likely similar motivations are different underlying types of medical donation behavior, such as altruism and self-identity. So, blood donors may

be served as a target population for organ donation recruitment.

In our study, TV was the most important mass media source regarding organ donation. TV as an important mass media resource plays an important role in increasing people's knowledge about organ donation [26]. The results of a qualitative study among Iranian college students illustrated that TV leads to increase public awareness, improved public attitude, and modified false religious beliefs related to organ donation [27].

The internet was the next most important source of information regarding organ donation. The results of an intervention to increase organ donor registry in America indicated that this intervention could increase knowledge and a positive attitude about organ donation and lead to enrollment in a donor registry [28]. Although the internet is a cost-effective way to share health information, identifying valid and nonbiased information is significant.

Participants reported that their friends were the most important interpersonal resources to obtain information regarding organ donation. Friends as significant others can act as a key information source and influence individuals' behaviors [29]. People with the same cultural features will tend to track shared norms [30].

There were some limitations to the present study. First, because of the cross-sectional design, we cannot consider causal relationships between the studied variables in our study. Second, the variables were measured through self-reported questionnaires, and they may lead to social desirability biases. Finally, most of the participants in our sample were men; this can limit the generalizability of the results.

## Conclusion

This study provides evidence about the importance of spiritual well-being and demographic predictors of organ donor cards. These predictors can be helpful for the development and implementation of interventions related to increasing the sign donor card.

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**Ethical Permissions:** This study was approved by the Ethics committee of Haman University of Medical Sciences (No. IR. UMSHA. REC.196.909).

**Conflicts of Interests:** This study was part of a multi-component project to increase signing donor card rates in Hamadan, Iran.

**Authors' Contribution:** Khoshravesh S. (First Author) Main Researcher/Methodologist (25%), Karimi-Shahanjarini, A. (Second Author), Main Researcher/Methodologist (25%); Poorolajal J. (Third Author), Statistical Analyst (10%); Bashirian S. (Fourth Author),

Methodologist (10%); Barati M. (Fifth Author), Methodologist (10%); Hamidi M. (Sixth Author), Methodologist (10%); Khalili S. (Seventh Author), Statistical Analyst (10%).

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