

Original Article

Attitudes of Turkish Health Care Professionals toward Organ Donation and Factors Affecting Organ Donation: A Systematic Review

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Abstract

Background: Determination of the attitudes and influencing factors of health care professionals toward organ donation is important to increase the organ donation rate

Aim: This study aimed to determine the attitudes of the Turkish health care professionals toward organ donation and factors affecting organ donation..

Method: A systematic review on the attitudes of the Turkish health care professionals toward organ donation and influencing factors was conducted. A search of all Turkish and English journals in CINAHL, Science Direct, Pubmed, Google Academic Search was conducted. Literature was scanned using keywords and 11 studies were included in the review according to the criteria. The quality of studies included was assessed using the CASP checklist. The checklist of Preferred Items for Systematic Reviews (PRISMA Checklist) was used to structure this review.

Results: Health care professionals had a positive attitude toward organ donation but the proportion of individuals who donated organs was very low. The rate of willingness to donate and donor card was significantly higher among doctors than nurses and other health care professionals. The main reasons for participants who had not volunteered to donate organs were religious reasons, concern about disfigurement of the body, lack of adequate information regarding organ transplantation.

Conclusion: This review showed that health care professionals should be informed about organ donation, religious dimension and legal regulations.

Keywords: attitude, health care professionals, organ donation, Turkey

Background

Organ transplantation is a treatment that offers a better quality of life and saves life (Balajee, Ramachandran, & Subitha, 2017). However, individuals with organ failure can't receive healthy organ in time to save their lives (Buthelezi & Ross, 2011). Although the countries have made various attempts to increase the organ donation rate, the organ donation rate is not at a desired level globally and the gap between supply and demand for organ donation widens daily (Balajee, Ramachandran, & Subitha, 2017; Erdogan et al., 2002; Kafkia et al., 2006, Esezobor, Disu, & Oseni, 2012;

Oluyombo et al. 2016; Vijayalakshmi, Sunitha, Gandhi, Thimmaiah, & Math, 2016,).

According to the Turkey 2018 data of Ministry of Health, there were 26,263 patients who were waiting organ transplant while the number of those who were organ-transplanted was 1,964 (<https://organ.saglik.gov.tr>).

According to 2017 data on international organ donation and transplantation, Turkey ranks on the bottom lines (7 donors) in terms of the annual number of deceased donors per million but is placed on the top (47,5 donors) in terms of the number of living donors (IRODAT, 2018).

Studies in Turkey suggested that religious perceptions, lack of knowledge and personal value judgments affect the views and decisions of public toward organ donation (Efil, Şişe, Uzel, & Eser, 2013; Gungormus & Dayapoglu, 2015; Yazar, & Acikgoz, 2016). The view of the public toward organ donation can be also influenced by the attitude of health care professionals (HCPs) toward this issue (Leon, Einav, & Varon, 2015).

Health care professionals play a key role in identifying potential donors, guiding attitudes and behaviours, obtaining consent and raising public awareness about the organ donation, therefore, they are undeniably crucial in the success of organ transplantation. (Oluyombo et al. 2016; Jawoniyi, Gormley, McGleenan, & Noble, 2018; Lomero, Jiménez, Herrera, Rasero, & Sandiumenge, 2017; Zambudio, Martínez-Alarcón, Parrilla, & Ramírez, 2009).

They inform public about organ donation process, religious and legal dimension of organ donation (Akgun, Bilgin, Tokalak, Kut, & Haberal, 2003; Araujo & Siqueira, 2016). Information offered by health care personnel has a important influence on the general public's decision about health problems (Topbas, Can, Can, & Ozgun, 2005, Zambudio, Martínez-Alarcón, Parrilla, & Ramírez, 2009).

They can also affect public opinion with their attitudes and behaviors; the generation of a negative attitude in the public by HCPs is very difficult to reverse (Topbas et al., 2005, Zambudio et al., 2009). Therefore, their attitude is crucial to the participation of public in organ donation. But studies showed that health professionals' contribution to organ donation is insufficient (Demir et al., 2011; Leon, et al., 2015; Topbas et al., 2011). In this context, determination of attitudes of HCPs toward organ donation and influencing factors are fundamental to increase donation rates.

This review aimed to determine the attitudes of the Turkish HCPs toward organ donation and factors affecting organ donation.

Methods

We conducted a systematic review of the published literature about attitudes of HCPs in Turkey toward organ donation and factors affecting organ donation in October in 2017.

Qualitative studies that explored the issue on Turkish HCPs were analyzed. The following key

words were used for the search: "organ donation", "attitude", "Turkey" "health care professionals" as Turkish and English in CINAHL (n=1166), Science Direct (n=758), Pubmed (n=22), Google Academic Search (n=460) databases and 11 studies were included in the study according to the criteria.

The primary inclusion criteria were as follows: (1) original research article carried out in Turkey, (2) published in the English or Turkish language,(3) included attitudes of HCPs toward organ donation. Articles that did not attempt to measure attitudes of HCPs toward organ donation and the population was not HCPswere excluded from the review.

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The checklist of Preferred Items for Systematic Reviews (PRISMA Checklist) was used to structure this review (See Supplementary File 1). The initial electronic database search produced 2406 citations. Titles and abstracts were screened manually by one author according to inclusion criteria, of these 512 were duplicates, 1493 were related to organ transplant process, ethical dimensions, brain death, patients' and their caregivers' experiences etc. and 362 did not carry out in Turkey. 39 papers were read full and 28 were excluded because the population was not HCP (n=24) and group differences were not assessed (n=4). A total of 11 papers were thus selected for analysis. A flow diagram summarizing the process of incorporating studies into the study is presented in Figure 1.

The two authors independently screened the titles for inclusion and exclusion criteria. They reviewed each article and met to discuss results until consensus on article eligibility was reached. For the present review, all included papers were assessed for quality using the Critical Appraisal Skills Programme (CASP). CASP qualitative research checklist included 10 questions. Qualitative papers may achieve a total score of 10 points. Authors read each paper and discussed the scores assigned to each paper. The results of CASP scores can be found in Table 1.

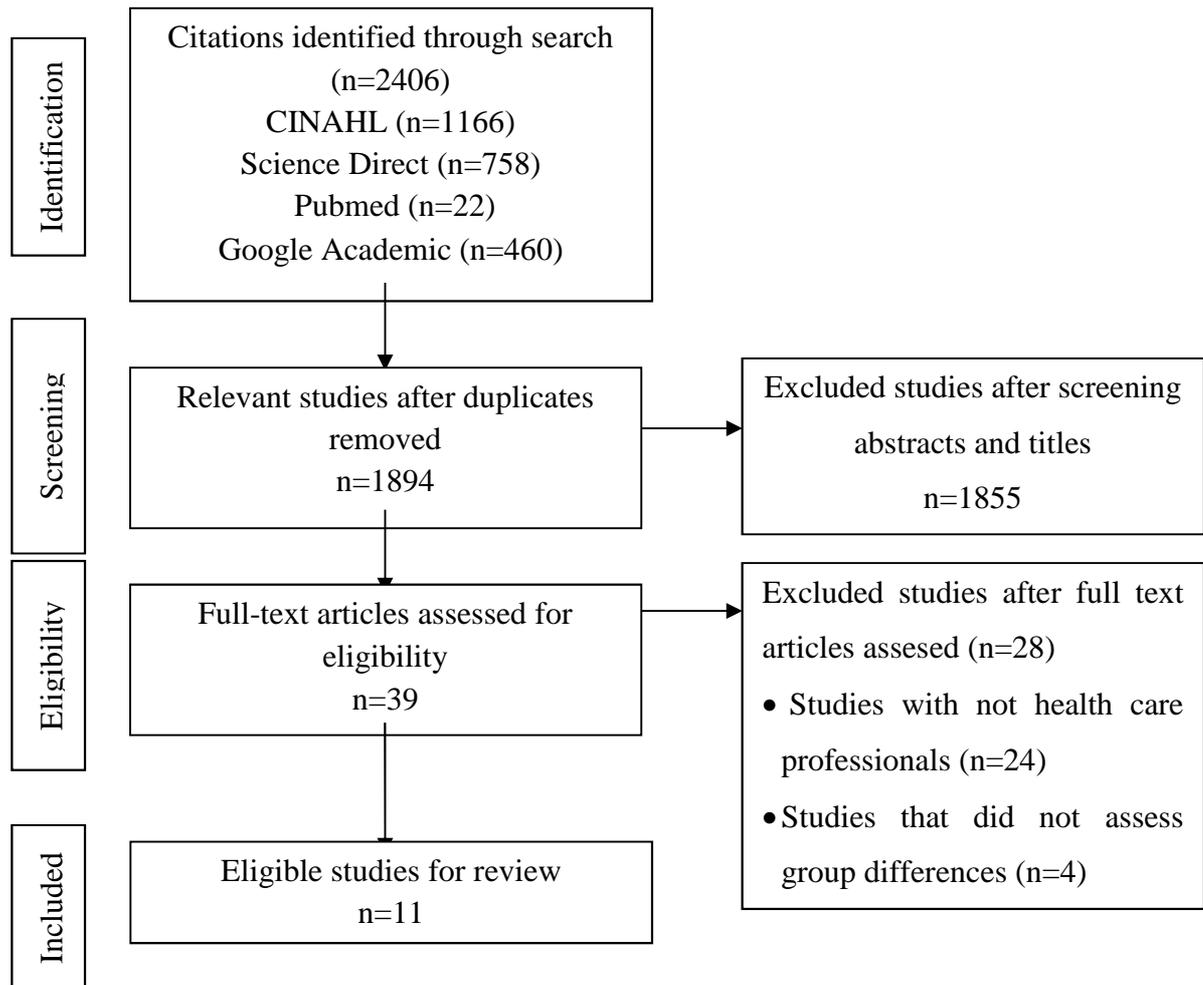


FIGURE 1. PRISMA flow diagram of study selection

Results

General characteristics of selected studies

Eleven articles were included in final review. Table 1 presents the summary of included studies. All of the studies were descriptive and cross sectional survey. The studies included physicians, nurses, other health persons such as midwives, laboratory technicians, X-ray and anesthesia technicians, other hospital workers including cleaning staffs and patient sitters, medical students and nurse teachers.

While five studies (Akgun et al. 2003; Bilgin & Akgun, 2002; Erdogan et al. 2002; Ozdag & Bal, 2001; Topbas et al., 2005) were published before 2010, six studies were published after 2010 (Aytas, Kartalci, & Unal, 2011; Balci & Sahingoz, 2014; Cillimoglu, Yilmaz, & Ogurlu, 2016; Demir et al., 2011; Efil et al., 2013; Topbas et al. 2011). The

studies were mainly in English (Akgun et al. 2003; Bilgin & Akgun, 2002; Demir et al., 2011; Erdogan et al. 2002; Ozdag & Bal, 2001; Topbas et al. 2005; Topbas et al. 2011;), there were also Turkish studies (Aytas et al., 2011; Balci & Sahingoz, 2014; Cillimoglu, Yilmaz, & Ogurlu, 2016; Efil et al., 2013).

Rate of willing to donate organs

The rate of willingness to organ donation was not at the desired level in the studies examined, ranging from 32.9% (Topbas et al, 2005) to 93.3% (Erdogan et al. 2002). In a study there is no information about rate of willingness (Topbas et al. 2011). Rate of willing to donate organs was significantly higher among the physicians than nurses and other HCPs in studies comparing the groups ($p < 0.05$) (Akgun et al. 2003; Bilgin & Akgun,

2002; Cillimoglu et al., 2016; Topbas et al., 2005;).

Rate of having an organ donation card

Majority of HCPs had positive attitudes about organ donation, but rate of having a signed organ donation card was very low, ranging from 1.9% (Balcı & Sahingoz 2014) to 40% (Demir et al., 2011). In two studies, there was no information about the rate of organ donation card (Aytas et al., 2011; Ozdag & Bal 2001). The rate of having an organ donation card was significantly higher among the physicians than nonphysician health personnels (Akgun et al. 2003; Bilgin & Akgun, 2002; Cillimoglu et al., 2016; Demir et al., 2011; Topbas, Can, Can, & Ozgun, 2005; Topbas et al. 2011) ($p < 0.05$).

The main reasons opposing organ donation

The main reasons opposing the organ donation were religious and traditional reasons (Akgun et al., 2003; Aytas et al., 2011; Cillimoglu et al., 2016; Erdogan et al. 2002; Topbas et al., 2005; Topbas et al. 2011), concern about disfigurement of the body (Akgun et al. 2003; Cillimoglu et al., 2016; Efil et al., 2013; Ozdag & Bal, 2001), lack of adequate information regarding organ transplantation and brain death (Cillimoglu et al., 2016; Topbas et al., 2005; Topbas et al. 2011), fear of inappropriate use of organs/tissues (Akgun et al. 2003; Aytas et al., 2011; Bilgin & Akgun, 2002; Demir et al., 2011; Efil et al., 2013; Erdogan et al. 2002; Topbas et al., 2005) not trusting the medical team (Aytas et al., 2011; Cillimoglu et al., 2016; Demir et al., 2011; Efil et al., 2013; Erdogan et al. 2002), personal preference (Aytas et al., 2011), premature withdrawal of life support (Bilgin & Akgun, 2002), lack of interest in the subject (Topbas et al. 2011), not certain about the success of transplantation (Ozdogan & Bal, 2001). In a study there was no information about reasons for not having an organ donation (Balcı & Sahingoz, 2014).

Discussion

This study reviewed Turkish HCPs' attitudes toward organ donation and factors affecting organ donation and demonstrated that majority of HCPs in Turkey had favorable attitudes, but only a small proportion had

signed organ donation card. The low rates of organ donation card show that health professionals' contribution to organ donation is not enough. These rates in our literature review were lower than the rates in other countries. For example, in Saudi Arabia, in a study by Flayou et al. (2016), 82.8% of HCPs expressed their agreement to donation after their death. In a study by Alsaied et al. (2012) 64.3% of physicians and 32.5% of nurses in Qatar had organ donation card.

Consistent with findings in other countries (Esezobor et al., 2012; Leon et al., 2015; Lomero et al. 2015), our literature review indicates that Turkish physicians have the most favorable attitudes toward organ donation of all hospital personnels (Akgun et al. 2003; Bilgin & Akgun, 2002; Cillimoglu et al., 2016; Topbas et al., 2005). However, nurses are fundamental in the organ donation and transplantation process (Zambudio et al., 2009). As a result of their proximity to patients and their relatives, nurses are seen as a key element raising public awareness about donation and their attitudes play a vital role in improving attitudes of public (Lomero et al. 2017). Positive behavior of nurses such as donation of own organs can set an example for public (Aytas et al., 2011; Gungormus & Dayapoglu, 2015; Zambudio et al., 2009).

Nurses are an important link with the community, and as HS, can help to raise public awareness and establish trust among the general public toward responsible, ethical, professional organ and tissue donation and transplantation, to engage medical community, and to encourage public debate and provide information so that people can decide on donation and make their wishes known to their families.

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Understanding refusal reasons could help to increase the rate of organ donation (Flayou et al. 2016). Religious and traditional reasons (Akgun et al. 2003; Aytas et al., 2011; Cillimoglu et al., 2016; Erdogan et al. 2002; Topbas et al., 2005; Topbas et al. 2011), the concern about disfigurement of the body (Akgun et al. 2003; Cillimoglu et al., 2016; Efil et al., 2013; Ozdag & Bal, 2001), Lack of adequate information regarding organ transplantation and brain death (Cillimoglu et al., 2016; Topbas et al., 2005; Topbas et al. 2011), the fear of inappropriate use of organs/tissues (Akgun et al. 2003; Aytas et al., 2011; Bilgin & Akgun, 2002; Demir et al., 2011; Efil et al., 2013; Erdogan et al. 2002; Topbas et al., 2005) not trusting the medical team (Aytas et al. 2011; Cillimoglu et al., 2016; Demir et al., 2011; Efil et al., 2013; Erdogan et al. 2002) were the factors reported by HCPs opposing the organ donation. These obstacles show that HCPs have insufficient knowledge about religious dimension of organ donation and organ transplantation process and need education about these issues. Turkey is a developing Muslim country of more than 80 million people. In Turkey, religion has an important role in decision making in social life. The Turkish Department of Religious Affairs stated that organ donation is compatible with Islam (Religious Affairs Directorate of Turkey). When HCPs know that their religion permits organ donation, their attitudes toward organ donation become more favorable (Demir et al., 2011). Medical staffs are the first to establish contacts with potential donors and if they are not well-informed, they could misinform the public (Oluyombo et al. 2016). To increase and

promote organ donation and attitude of health care professionals, they should be educated about ethical, moral, and religious dimensions of organ donation and transplantation and their misbeliefs should be eliminated. Such education could be incorporated into mandatory training and completed by all health care professionals.

Limitations

There are several limitations to this qualitative review. First, this review only included journal articles published in English. Studies published in other languages and other kinds of sources, such as doctoral dissertations, that also explore CM with patients were excluded. Also, we searched with four electronic bibliographic databases to retrieve relevant studies and followed the PRISMA guidelines on searching; however, there could be missing studies. There are several limitations to this qualitative review. First, this review only included journal articles published in English. Studies published in other languages and other kinds of sources, such as doctoral dissertations, that also explore CM

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There are some limitations to this qualitative review. First, this review did not determine health care professionals' knowledge level about organ transplantation as a possible obstacle because majority of studies didn't evaluate knowledge level. Second, this review only included journal articles and other kinds of sources such as doctoral thesis were excluded. Also, we search with four electronic

databases to retrieve relevant studies; however there could be missing studies.

Conclusion

This is the first qualitative systematic review of the perceptions and experiences that individuals with chronic illnesses and their caregivers have about. This is the first qualitative systematic review of attitudes of Turkish HCPs toward organ donation and influencing factors. In conclusion, HCPs seem to generally look warmly on organ donation while it was not reflected in their behavior. Despite the HCPs display positive attitude toward donation, positive attitude is not always sufficient. It is absolutely a necessary priority to inform HCPs with nationwide media and educational campaigns about organ donation and transplantation process, because their attitude has strong impact on public and negative attitude is linked to lack of knowledge. We believe that one of the important ways to increase willingness about donation and donation rates in Turkish HCPs is to educate university students in health sciences about ethical, moral, and religious issues related to organ donation and transplantation.

Relevance to clinical practice

Health care professionals are fundamental in generating public awareness. They are key agents to increase organ donation rate. Therefore, there is a need of focused education in curricula on ethical, moral, and religious dimensions of organ donation and transplantation for undergraduate medical and nursing students in Turkey. In-service trainings can be also given to increase the awareness of health workers about organ donation. This may help create a favorable opinion toward donation in future HCPs and reinforce personal beliefs. Health care organizations should evaluate opinions of all HCPs about organ donation and possible obstacles regularly and inform them about organ donation and organise organ donation campaigns.

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TABLE 1. Summary of the characteristics of included studies.

<i>Author, year</i>	<i>Study group</i>	<i>Rate of willing to donate organs</i>	<i>Rate of having an organ donation card</i>	<i>Reasons for not having an organ donation</i>	<i>CASP</i>
Akgun et al. 2003	485 doctors 699 nurses	Only 55.1% of the physicians and 37.5% of the nurses were willing to donate their own organs	Only 27.1% of the physicians and 11.5% of the nurses had already donated	Religious beliefs and/or traditions Concern about disfigurement of the body Suspicion about inappropriate use of organs/tissues	7
Aytas et al. 2011	201 nurses	Only 46.0% of participants were willing to donate own organs	There is no information about organ donation card	Personal preference Religious and traditional reasons Not trusting the medical team	7
Balci & Sahingoz 2014	641 nurses	Only 88.8% were willing to donate own organs	Only 1.9% had organ donation card	There no information about Reasons for not having an organ donation	8
Bilgin & Akgun 2002	1184 physicians and nurses	Only 55.0% of physicians and 37% of nurses were willing to donate own organs	Only 27% of doctors and 11% of nurses had organ donation card.	Concern about inappropriate use of organs Premature withdrawal of life support	9
Cillimoglu et al. 2016	415 hospital workers (256 nurses, 56 doctors, cleaning staff, patient sitter) 320 students	Only 58.9% of the physicians and 43.4% of the nurses were willing to donate their own organs,	Only 16.1 % of doctors and 9% nurses had organ donation card	Not trusting the medical team No enough information about organ donation Religious and traditional reasons Concern about disfigurement of the body	9
Demir et al. 2011	249 nurses 60 doctors	Only 90% of health care professionals were to donate their own organs	Only 18% of nurses and 40% of doctors had organ donation card.	Lack of confidence Fear of procurement Inappropriate use of harvested organs	10
Efil et al. 2013	150 health care professionals, 156 outpatients	Only 43.3% of health care professionals were to donate their own	Only 3.3% of health care professionals had organ donation card.	Concern about disfigurement of the body Inappropriate use of harvested organs Not trusting the medical team	9

		organs				
Erdogan et al. 2002	116 interns 95 general practitioners 97 specialist	Only 93.3% of physicians were to donate their own organs	Only 23.1% had organ donation card	Inappropriate use of harvested organs Religious beliefs Not trusting the medical team		8
Ozdag & Bal 2001	308 nurses 18 health technicians 32 midwife 8 nurse teachers	Only 68.8% of professionals were to donate their own organs	There was no information about organ donation card	Fear of mutilation of body Not certain about the success of transplantation		7
Topbas et al. 2005	148 assistants 171 nurses 134 interns	Only 50.2% of assistants and 32.9% of nurses were willing to donate their own organs	Only 3.4% of assistant and 2.3% of nurses had organ donation card.	Lack of information about the donation process Concerns about the sale of organs Islamic religious beliefs		8
Topbas et al. 2011	141 doctors 588 nonphysician health care professionals	Only 59.8 of all participants were willing to donate their own organs	Only 12.1% of doctors and 6.5% of nonphysician health personels had organ donation card	Lack of interest in the subject Lack of knowledge about donation and procedure Islamic religious beliefs and/or traditions		9