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# Do Muslims Living in Poland Approve of Organ Transplantation?

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**Background:** Although the International Society for Islamic Legal Studies and the Islamic Organization for Medical Sciences have officially approved of transplantations, Muslims' opinions on this issue are not uniform. The aim of this study was to assess the general knowledge, attitudes, and opinions concerning organ transplantation among Muslim Tatars living in North-East Poland.

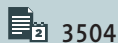
**Material/Methods:** The study included 78 Muslim Tatars and was carried out at the Center of Muslim Culture using the diagnostic poll method.

**Results:** Transplantation from living donors was accepted by 96.1% of respondents, and from dead donors by 88.8% of respondents. Consent to the removal of organs after the death of a close relative was approved of by 57.7%, and 1/5 of respondents objected to it. Removal of their organs after death was approved of by 70.5% of respondents, more often by persons with higher education and vocational education than among those with only elementary education. Only 2.2% of respondents had reported their objection to the Central Objection Register. Almost 40% of men and women informed their family members about their willingness to be an organ donor. Most (71.8%) respondents had a positive attitude to transplantation, 25.6% had a negative attitude, and 2.6% were neutral. Approximately 72% of respondents believed that the final decision concerning the removal of organs from dead donors should be made by the family, and according to 8.9%, it should be prescribed by the law.

**Conclusions:** Muslim Tatars living in Poland mostly accept the removal of organs both from live donors and from dead bodies. Gender and education level had a considerable impact on the decision concerning organ donation.

**Keywords:** Attitude • Islam • Organ Transplantation

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## Background

Tatar is an ethnic minority declared by approximately 2000 Polish citizens. The highest number of Tatars live in Podlaskie Voivodeship (539), but they also reside in Mazowieckie and Pomorskie Voivodeships. In 2015, according to the census data, there were 773 of them in Poland [1]. They have their mosques in Bohoniki and Kruszyniany in Białystok region as well as in Gdańsk. The Tatar community has been gradually fusing and naturally assimilating with Polish society. The only visible difference is their religion: Islam. Currently, Islam is trying to adjust to the rapid development of transplantation. This is in agreement with the underlying idea of that religion – the preservation of human life. Islamic spiritual leaders agree in adopting the criteria of brainstem death being tantamount to the end of a person's life. Guidelines concerning the procedure for confirming death do not differ greatly from the ones adopted by Western physicians and the European law [2].

There are 2 groups among Muslims: Sunni and Shia. Although officially the International Society for Islamic Legal Studies and the Islamic Organization for Medical Sciences have approved of transplantations, Muslims' opinions on this issue are not uniform. Doctrinal disputes are taking place all the time, and each fatwa issued by an imam takes the discussion concerning organ transplantation in a new direction [3].

More liberal Sunni Muslims accept the possibility of organ transplantation unless the circumstances of the procedure are offensive for a Muslim. Transplantation must be the ultimate way of saving the person's life (thus, the transplantation of, for example, fragments of skin to improve the person's appearance without a medical justification is unacceptable), the donor must be free, not sentenced to death, and must voluntarily agree to the donation. The radical branch of Islam, Shia Muslims, use more restrictions in their interpretation of law: they do not agree to the removal of organs from dead bodies unless that would save the life of another Muslim. Both groups definitely object to organ trade [4,5]. Muslims accept the possibility of conscious organ donation to improve the quality of life of another patient, but the necessary condition is the respect for the donor and the guarantee that their quality of life does not change after the removal [6,7]. Of key importance in the process of organ transplantation is the unconditional respect of the person's conscious consent to organ transplantation. It is unacceptable to coerce the potential donor to achieve a measurable therapeutic effect. Muslims value the bodily integrity of a human. Their respect for the sanctity of life is to be visible in practice. Organ transplantation between a Muslim and a follower of another religion is forbidden. An organ, which is an element of a Muslim's body, may not be transplanted to an unbeliever, although the opposite situation is more often regarded as acceptable. The transplanted

organ, making the body of a Muslim complete and more fit, becomes sanctified [8].

The aim of this research was to learn the opinions of Tatar Muslims living in Podlaskie (North-East) regarding organ transplantation depending on their gender and education level.

## Material and Methods

The study involved 78 Tatars (Polish nationality with Polish as a native language) aged 18 to 70, residing in Podlaskie region (north-eastern part of Poland). It was carried out using a diagnostic poll, with the survey questionnaire method (Table 1). The study was conducted at the Center of Muslim Culture in Białystok. Each person participating in the study was informed of its purpose and assured of the anonymity. The study was approved by the Bioethics Committee of the Medical University of Białystok. The requirement of written informed consent was waived; however, participation in the anonymous poll is a form of informed consent according to the Bioethics Committee. Statistical calculations were performed with the use of the Statistica 13.0 program from StatSoft. The data were subject to quantitative, percentage, and statistical evaluation. The chi-square test and Shapiro-Wilk test were used in statistical calculations. The significance level of  $P < 0.05$  was used for statistically significant results.

## Results

### *Characteristics of the Respondent Group*

In the study group, 51% were women and 49% were men. The mean age was  $35.8 \pm 13.6$  for women and  $40.9 \pm 12.7$  for men. The vast majority (83.3%) lived in rural areas; 66.6% of the respondents were married and 33.3% were single; 50% had higher education, 42.3% had secondary education, and 7.7% had only elementary or vocational education. All the respondents had heard of organ transplantation.

### **Approval of Transplantation as a Treatment Method**

Treatment with the use of organs removed from living donors was approved by 96.1% of respondents, 1.3% were against it, and 2.6% did not have a clear opinion.

Treatment with the use of organs removed from deceased donors was approved by 88.8% of respondents, 11.5% were against it, and about 8% did not have a clear opinion. With regard to gender, 79% of women and 82.5% of men approved of deceased donor organ transplantation, 10.6% of women and 12.5% of men objected to this method, and 10.5% of women

**Table 1.** Surveys on the attitude on organ donation and transplantation.

1. Age: .....
2. Gender: <input type="checkbox"/> Male <input type="checkbox"/> Female
3. Place of residence: <input type="checkbox"/> City <input type="checkbox"/> Rural
4. Marital status: <input type="checkbox"/> Single <input type="checkbox"/> Married <input type="checkbox"/> Widowed <input type="checkbox"/> Divorcee/Divorced
5. Education: <input type="checkbox"/> Elementary <input type="checkbox"/> Vocational <input type="checkbox"/> Secondary <input type="checkbox"/> Higher
6 Have you heard of organ transplantation? <input type="checkbox"/> Yes <input type="checkbox"/> No
7. Do you accept treatment with organs taken from healthy people? <input type="checkbox"/> Definitely yes <input type="checkbox"/> Rather yes <input type="checkbox"/> Rather not <input type="checkbox"/> Definitely not <input type="checkbox"/> Hard to say
8. Do you approve of the removal and transplantation of organs from cadavers? <input type="checkbox"/> Definitely yes <input type="checkbox"/> Rather yes <input type="checkbox"/> Rather not <input type="checkbox"/> Definitely not <input type="checkbox"/> Hard to say
9. Would you agree to donate organs for transplant after the death of a loved one? <input type="checkbox"/> Definitely yes <input type="checkbox"/> Rather yes <input type="checkbox"/> Rather not <input type="checkbox"/> Definitely not <input type="checkbox"/> Difficult to say
10. Would you agree to have an organ removed for transplantation after your death? <input type="checkbox"/> Definitely yes <input type="checkbox"/> Rather yes <input type="checkbox"/> Rather not <input type="checkbox"/> Definitely not <input type="checkbox"/> Hard to say
11. Has your family been informed of your decision? <input type="checkbox"/> Yes <input type="checkbox"/> No
12. Have you heard of a statement of intent promoting transplantation? <input type="checkbox"/> Yes <input type="checkbox"/> No
13. Do you have and carry a statement of intent with you? <input type="checkbox"/> Yes <input type="checkbox"/> No
14. Would you be opposed if, if necessary, a doctor asked if your loved ones could donate organs? <input type="checkbox"/> Definitely yes <input type="checkbox"/> Rather yes <input type="checkbox"/> Rather not <input type="checkbox"/> Definitely not <input type="checkbox"/> Difficult to say
15. Have you filed your objection with the Central Register of Objections? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I haven't thought about it
16. According to the Act on Organ and Tissue Procurement and Transplantation dated 1.07.2005, a person who has not made their objection can be an organ donor, do you think doctors should still ask the family about the possibility of organ donation? <input type="checkbox"/> Yes <input type="checkbox"/> I have not thought about it <input type="checkbox"/> No <input type="checkbox"/> Definitely not
17. Would you yourself be willing to be a paired tissue or organ donor during your lifetime? <input type="checkbox"/> Yes <input type="checkbox"/> I have not thought about it <input type="checkbox"/> No <input type="checkbox"/> Definitely not
18. In your opinion, should organ procurement from a deceased person ultimately be decided by law or by family consent? <input type="checkbox"/> The law should decide <input type="checkbox"/> Family consent should decide <input type="checkbox"/> Difficult to say
19. What are your concerns and fears about tissue and organ transplantation? ..... .....
20. Do you know the procedure for recognizing and declaring brain stem death? <input type="checkbox"/> Yes <input type="checkbox"/> Don't know <input type="checkbox"/> I did not wonder <input type="checkbox"/> No <input type="checkbox"/> Definitely not
21. Do you think there is a need for actions to promote the idea of transplantation? <input type="checkbox"/> Necessary in certain environments <input type="checkbox"/> Necessary <input type="checkbox"/> Pointless
22. Your attitude towards the problem of organ transplantation? <input type="checkbox"/> Positive <input type="checkbox"/> Indifferent <input type="checkbox"/> Negative
23. I think that campaigns for transplantation should be carried out by (you can mark more than one answer): <input type="checkbox"/> Schools <input type="checkbox"/> Government <input type="checkbox"/> Health foundations <input type="checkbox"/> Religious organizations <input type="checkbox"/> Celebrities such as politicians, artists
24. In your opinion, can organs be transplanted from a living or deceased donor? <input type="checkbox"/> You can only transplant organs from a living donor <input type="checkbox"/> You can only transplant organs from a deceased donor <input type="checkbox"/> Organs can be transplanted from a living donor and a deceased donor
25. Select the sources from which your knowledge of transplantation comes (you may select more than one answer)? <input type="checkbox"/> Television <input type="checkbox"/> Radio <input type="checkbox"/> Internet <input type="checkbox"/> Friends <input type="checkbox"/> Family <input type="checkbox"/> Doctor <input type="checkbox"/> Nurse <input type="checkbox"/> Billboard

and 5% of men did not have a clear opinion. Treatment with the use of organs removed from deceased donors was more often approved by respondents with higher education than by those with elementary education (84.6% vs 66.7%,  $P < 0.001$ )

### **Approval of Removal of Organs for Transplantation After the Death of a Close Relative**

Removal of organs after the death of a close relative was approved of by 57.7% of respondents, 1/5 expressed an objection, and 22% were unsure. With regard to gender, 65.7% of women and 50% of men would accept it, 13.2% of women and 27.5% of men expressed an objection, and the proportion of those who could not decide was similar in both groups and was about 22%. Persons with higher education significantly more often ( $P < 0.009$ ) approved of removal of organs for transplantation after the death of a close relative compared to those with elementary education.

### **Consent to Having Organs Removed After Death for Transplantation Purposes**

Consent to having organs removed after their own death was expressed by 70.5% of respondents. Approximately 18% objected to it, and 11.5% did not have a clear opinion. With regard to gender, 81.5% of women and 60% of men agreed to have their organs removed for transplantation after death, while 10.5% of women and 25% of men objected to it. The proportion of people without a clear opinion was 7.9% in the group of women and 15% in the group of men. Consent for donating organs after death was expressed more often by persons with higher education (79.5%) and vocational education (100%), and less often by those with elementary education (33%). Objection was only expressed by people with secondary (30.3%) and higher education (17.9%). The largest group of those who found it hard to say was among respondents with elementary education (66.7%).

We found that 37.5% of women and 36.8% of men had informed their family members about their willingness to donate their organs for transplantation after death. More respondents with elementary education had done so than those with higher education (66.7% vs 37.2%, NS).

### **Declaration of Will**

We found that 73.1% of respondents had heard about the declaration of will that promotes the idea of transplantation. With regard to gender, 65.8% of women and 80% of men had heard about it, and 5.3% of women and 15% of men had signed such a declaration. More respondents with higher education had done so than those with elementary education (73.1% vs 33.3%).

### **Reporting an Objection in the Central Objection Register (CRS)**

Our results showed that 2.27% of respondents (all were men with secondary education) had reported their objection in the register.

### **According to the Respondents, Who Should Ultimately Decide About the Removal of Organs From a Dead Person?**

About 72% of respondents believed that the family should decide about the removal of organs from a deceased person, and 9% said the law should decide. The response "hard to say" was chosen by 19.2%. With regard to gender, 60.5% of women and 82.5% of men chose the family, and 15.8% of women and 2.5% of men chose the law. The response "hard to say" was chosen by 23.7% of women and 15% of men. Regardless of the education level, most respondents believed the family should decide about the removal of organs from the deceased person, not the law.

### **Respondents' Attitudes Toward Organ Transplantation**

Our survey showed that 71.8% of respondents had a positive attitude to transplantation, 25.6% had a negative attitude, and 2.6% were neutral. A positive attitude was more often displayed by women (81.6% vs 62.5%, NS), and a negative attitude was more often displayed by men (32.5% vs 18.4%, NS). Only men reported having a neutral attitude. It was found that the higher the education level, the more positive the attitude to organ transplantation among the respondents (76.9% vs 33.3%, NS, higher vs elementary).

### **The Need for Campaigns Promoting the Idea of Transplantation**

Approximately 57.7% of respondents believed campaigns promoting organs transplantation were necessary, and 1/3 believed they were only necessary in some communities. With regard to gender, 63.2% of women and 52.5% of men said there was a need to carry out such campaigns, whereas 7.7% of women and men thought it was not necessary. A higher proportion of people with elementary education opted for carrying out educational campaigns in some communities.

As regards the respondents' opinions on campaigns concerning transplantation, they mostly pointed to the role of the media (67.6%) and schools (53.5%), and 1/3 pointed to health-promoting foundations.

## Discussion

Organ transplantation can prolong the recipient's life, and the donor is also an indispensable and basic element of each transplantation, who donates an integral part of their body for another person [9,10]. The vast majority of organs used in transplantations come from dead donors, so transplantations on the one hand help save someone's life, but on the other hand are connected with the tragedy of death. The death of a human always evokes religious and spiritual questions. Religion is definitely an important element of non-material culture and it provides people with answers regarding the meaning of human existence and helps them find their place in the world. Whether it is Christianity, Islam, Judaism, Buddhism, or other denomination, religion is the source of guidelines and principles of actions and thinking in many areas of life, including medicine. That is why the role of religion is important for the formation of social attitudes toward transplantation. None of the world's biggest religions forbids donating organs or having them transplanted, but ethical problems connected with it are perceived and interpreted in various ways depending on the religion [11,12].

There are very few research works that present the opinions of followers of different religions concerning organ donation. Most studies, both in Poland and abroad, have focussed on public opinion on organ donation and transplantation. The present study was carried out among Tatar Muslims living in north-eastern Poland. The aim of the study was to determine their attitudes, opinions, and level of knowledge concerning organ transplantation.

In 2016, the Public Opinion Research Center (CBOS) carried out a poll concerning public opinion on organ transplantation. The results showed that 93% of respondents approved of organ transplantation as a treatment method, 80% expressed their consent to having their organs removed after death, and one-ninth (11%) objected to it [13]. In our own research, 88.8% of respondents approved of organ transplantation as a method of treatment, and 11.5% were against it, while 70.5% expressed their consent to having their organs removed after death, and 18% expressed their objection. Both the CBOS poll and our study show that education level has a significant influence on attitudes about transplantation of organs. People with higher education more often approve of this form of treatment than do people with only elementary education. Men and persons with only elementary education more often declared they did not want to become organ donors after death.

Among Christians, donating one's organs for transplantation is considered to be the greatest act of mercy for another human. Most religious groups have a positive stance regarding organ transplantation. Representatives of particular denominations

encourage their followers to donate organs after death, regarding transplantation as a great act of altruism [14]. In this study, carried out among Muslim Tatars, 57.7% declared their approval of the removal of organs after the death of a close relative, and 1/5 objected to it. In a similar study carried out among Baptists, 72.29% agreed to the removal of organs from a deceased family member, 1/5 did not have a clear view on this, and 7% objected [15]. The recent poll carried out by the Public Opinion Research Center (2016) showed that 82% of Poles would agree to the removal of organs after the death of a close relative.

An important aspect that could help increase the availability of organs for transplantation is learning what is the goal of the declaration of will, and, first of all, to talk to the closest family members about one's decisions concerning organ donation [11]. Importantly, the lack of activities that would help change people's attitude to transplantation toward a more active one largely results from the common distrust of such activities. The fears refer to mentioning this topic to one's family members, their reactions, and the questions that may arise. Sadly, this is reflected in numbers: at the end of October 2019, organs for transplantation were only obtained from 411 dead donors, organs were transplanted to 1208 recipients, and 1954 more were waiting for transplantations. In 2018, there were 498 real donors in Poland, and 1390 organs were transplanted from dead donors [16]. In our original study, 37% of respondents declared their family members knew their will concerning organ donation after death. In a study by Romanowska et al [17], 41% of respondents declared that their family members knew their will concerning organ donation in the situation of the statement of brain death, about 1/4 (27%) had not informed their family members about their decision, and 32% had not talked to anyone about this issue. In the USA, 43% of Americans say they have had conversations with family members about transplantation [18]. According to CBOS research [13], only 24% of Poles have talked to their relatives about potentially donating their organs after death. Respondents with higher education, younger age, and living in big cities had more often talked about this. In our own study, women and people with elementary education more often declared they had talked to their family members. Talking to family members about transplantation has an influence on making positive decisions concerning the donation of one's own organs for transplantation and knowing the opinions of family members with regard to the approval of or objection to donation [19].

The declaration of will is an information document which is not registered and does not have legal effect. The person signing it is not obliged to report it anywhere, but the personal signature helps the family, friends, and doctors make a decision according to the will of the donor expressed while alive. In our own study, 5.3% of women and 15% of men had signed



a declaration of will. A study by Bładkowska and Witczak [20] showed that 66.1% of respondents intend to sign a declaration of will, but only 8.9% have signed it, and 1/4 are against it. The document was more often signed by men (10.6%) than by women (7.8%) [21]. The CBOS research and a study by Ścisło et al showed that more than half of respondents do not know the definition or practical importance of signing a declaration of will [12,13].

Pursuant to Polish law, each adult citizen becomes a potential donor at the moment brain death is declared, unless the person has previously expressed their objection in the Central Objection Register (CRS) [22]. In our study, 2.27% of respondents had reported their objections to organ donation after death in the Central Objection Register. In 2018, the CRS received 2425 applications, including 2412 regarding the objection and 13 of withdrawal of objection; 1819 applications were made personally and 606 were made by statutory representatives. In Podlaskie Voivodeship, only 835 objections have been reported [23].

Podlaskie is a region where the ratio of organ donations is low, although most of the residents declare a positive attitude to transplantation. Kobus et al found that the attitudes of respondents from various religions to organ transplantation were comparable, and that about 95% of members of the Catholic Church, Orthodox Church, and Baptists displayed a positive attitude. Among the members of the Orthodox Church, the proportion of people with a negative attitude was the highest (5.1%). The study also showed that the vast majority (96%) of the respondents under 60 years old and 81% of those over 60 years old had a positive attitude toward organ donation. A negative attitude occurred more often among older persons [24]. In this work, 71.8% of respondents had a positive attitude and 25.6% had a negative attitude. The negative attitude prevailed among men and people with elementary or vocational education.

The principle of presumed consent exists in Poland. Pursuant to the Polish law, organs can be removed from a dead person if the person had not expressed their objection while alive. However, 2/3 of Poles believe the doctor is obliged to ask the family for consent [25]. In our study, we asked the respondents who they thought should ultimately decide: the law or the family? We found that 72% believe that the family should decide about organ removal and 9% believed the law should decide.

A very important part of the system of development of transplantation medicine is educating society. People fear the unknown. Muslims Tatars in Poland are a very small community and it is important to reach everyone with educational information. A significant role in the social perception of transplantation as a method of treatment is definitely played by mass media, which is confirmed by our research. Regardless of the education level

and gender, the respondents pointed to the media and schools. Other studies also show that the most frequent source of information is the television (77%) and the Internet (55%) [26]. Intensive development of technology has led to the media being a significant source of health information for most people.

Recently, Ferhatoglu and Yilmaz Ferhatoglu [27] assessed the attitude of Islamic nations on organ donation and transplantation and investigated how the Islamic perspective on these topics influences scientific productivity about the subject of brain death, which is inevitably related to organ transplantation. They found no consensus about brain death and organ transplantation in Islamic nations. In addition, various obstacles to organ donation and transplantation have been identified in the majority of these countries. They stressed the need for education in these areas. Kuddus [28] found that current Islamic attitudes on transplantation medicine are nonuniform, transitory, and somewhat detached from the bulk of the population. In general, in Morocco, factors associated with a negative attitude about transplantation included lack of confidence in the health system, personal and religious reasons, and lack of valid reasons for donation; therefore, education, a better knowledge of the legislation, and of the position of the Islamic religion are of utmost importance [29]. In contrast, Bangladeshis have strong family ties and experience anxiety around violating the human body, which is generally forbidden in Islam. They do not permit the separation of body parts of dead relatives for organ donation for transplantation, or donating the dead body for medical study and research purposes [30]. Posthumous organ donation for transplantation is commonly viewed as wrong from a religious point of view. Therefore, organ transplantation from deceased donors is non-existent in Bangladesh. As shown by Padela et al [31,32], religiously tailored and ethically balanced education on living kidney organ donation yielded significant kidney donation-related knowledge gains among Muslim Americans. Ali et al [33] discussed the Islamic perspective on organ donation and transplantation. They stressed that Muslims in the Western world have more negative attitudes toward organ donation and transplantation compared with followers of other religions. They found that lack of information regarding organ donation, mistrust of the healthcare system, family opinions, sacredness of the body, lack of clear understanding of religious rulings, and opinions of religious leaders may prevent Muslims from organ donation. They stressed that collaboration with religious leaders to address these concerns may help foster positive attitudes toward organ donation and transplantation.

## Conclusions

Most Muslim Tatars living in Podlaskie accept the removal of organs from live donors and from dead bodies. However,

when the problem affects a close friend or relative, fewer of them agree to organ removal while living or after death. The level of approval of transplantation as a method of treatment is higher among young and better-educated people. More effort should be made to educate society. There is a need for

campaigns promoting the idea of organ transplantation and encouraging representatives of all age groups to talk to their relatives about their decisions concerning organ transplantation, and to declare their will to become a donor while living and after death.

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