

# DETERMINATION OF THOUGHTS OF UNIVERSITY STUDENTS TOWARDS SPERM BANKS IN TURKEY

ÜNİVERSİTE ÖĞRENCİLERİNİN SPERM BANKALARINA YÖNELİK GÖRÜŞLERİNİN BELİRLENMESİ

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## ABSTRACT

**Aim:** The study was conducted to determine possible preferences of university students for having a child in the case that they learn that would not have the child in the future due to infertility as well as their views about the sperm banks, which are illegal in Turkey.

**Material and Method:** The population of this descriptive study consists of 9400 students who have stayed in Erzurum Higher Education Credit and Hostels Institution in the fall semester of 2012-2013 academic year. Sample group of the study consisted of 499 students (being a university student, being single, between 18-25 age) who were staying in Higher Education Credit and Hostels Institution during the term of study and who accepted to participate in the study. The data were collected through the face-to-face interview by using a questionnaire prepared by the researchers and consisting of 23 questions. The obtained data were evaluated through percentage distributions, means, and chi-square test in the SPSS 17 statistical package.

**Results:** 54.5% of students participating in the study were male, their average age was 21.59 and 30.7% received education in departments of social sciences. According to their own statements; financial situation of 79.2% of families was medium and families of 30.7% lived in Eastern Anatolia Region. 94% of mothers were housewife; 33.5% of fathers were self-employed. It was determined that 94.4% of the students heard about the sperm bank and 59.6% have knowledge about the sperm bank by means of TV. When students were asked which methods are referred if they experience infertility problem in the future, 62.5% of them marked in-vitro fertilisation and constituted the most crowded group (n=312), and 1.8% (n=9) marked the option of sperm bank. 79% of students stated that the sperm bank should not be legal in Turkey; 76.2% stated that the sperm bank is not appropriate in ethical terms; 77.8% indicated that the sperm bank is not appropriate in religious aspect. 12.1% of men, who participated in the study, stated that they considered selling their sperm as a source of income.

**Conclusion:** Being the first study on sperm bank in Turkey, this study revealed that rate of student having a negative view about the sperm bank.

**Key words:** Infertility, nursing, sperm bank, student, university

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## ÖZET

**Amaç:** Çalıma üniversite öğrencilerinin gelecekte infertilite nedeni ile çocuk sahibi olamayacaklarını öğrenmeleri durumunda çocuk sahibi olabilmek için olası tercihleri ve ülkemizde yasal olmayan sperm bankaları konusunda görüşlerini belirlemek amacıyla yapılmıştır.

**Gereç ve Yöntem:** Tanımlayıcı tipteki bu çalışmanın evrenini 2012-2013 güz dönemi eğitim-öğretim yılında Erzurum Yüksek Öğrenim Kredi ve Yurtlar Kurumunda kalmakta olan 9400 öğrenci oluşturmaktadır. Çalışmanın örneklemini ise, 2012-2013 yılı güz döneminde Yüksek Öğrenim Kredi ve Yurtlar Kurumu'nda kalan ve çalışmaya katılmayı kabul eden 499 öğrenci (üniversite öğrencisi olma, bekar olma, 18-25 yaşları arası) oluşturmaktadır. Veriler araştırmacılar tarafından hazırlanan 23 sorudan oluşan anket formu ile yüz yüze görüşülerek toplanmıştır. Elde edilen veriler, SPSS 17 istatistik paket programında; yüzdelik dağılım ve ortalamalar, ki-kare testi ile değerlendirilmiştir.

**Bulgular:** Çalışmaya katılan öğrencilerin %54.5'i erkek öğrenci, yaş ortalaması 21.59, %30.7'si sosyal bilimler öğrencisi, öğrencilerin kendi ifadelerine göre %79.2'sinin ailelerinin maddi durumu orta düzeyde, %94'ünün annesi ev hanımı, %33.5'inin babasının serbest meslek sahibi olduğu bulunmuştur. Öğrencilerin %94.4'ünün sperm bankasını duyduğunu ve %59.6'sının sperm bankası konusundaki bilgilerini televizyon sayesinde edindiği belirlenmiştir. Öğrencilere gelecekte infertilite sorunu ya ama olasılığında başvurulabilecek yöntemler sorulduğunda %62.5 ile tüp bebek seçeneğini işaretleyenler en kalabalık grubu oluştururken (n=312), %1.8'i de sperm bankasına başvurum seçeneğini işaretlemiştir (n=9). Öğrencilerin %79'u Türkiye'de sperm bankasının yasal olmaması gerektiğini, %76.2'si sperm bankalarının etik açıdan uygun olmadığını, %77.8'i dini açıdan uygun olmadığını belirtmişlerdir. Erkek öğrencilerin %13.9'unun sperm bankasına sperm vermeyi düşündüğünü, %12.1'i de geçim kaynağı olarak sperm vermeyi düşündüğünü belirtmiştir.

**Sonuç:** Ülkemizde sperm bankasıyla ilgili yapılmış ilk çalışma olan bu çalışmada sperm bankasına olumsuz yaklaşan öğrencilerin oranı yüksek bulunmuştur.

**Anahtar kelimeler:** Hemirelik, infertilite, öğrenci, sperm bankası, üniversite

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## INTRODUCTION

Infertility is defined as the inability of a couple to become pregnant after one year of unprotected intercourse without birth control. As the infertility becomes a common health issue, advances in reproductive medicine make the diagnosis and treatment processes of the couples easier (1). In-vitro fertilisation of ovum, for the purpose of treatment of infertility, has caused significant social discussions, and certain implementations, which were considered as unacceptable in the past, are included in routine medical treatments today. The requirement for fertilisation out of body has resulted in rapid development of new reproduction techniques and reached to the extent that will affect the future of humanity. This situation may also cause certain values, which constitute moral structure of societies, to change in time (2).

Reproduction and continuing his lineage are one of the most important and basic instincts of all living beings. Infertility, which is psychologically threatening, emotionally stressful, economically expensive and physically painful due to operations made generally for diagnosis-treatment, is generally a complex and situational crisis for both of spouses (3-8).

Infertility is an important problem for married couples. Although today new auxiliary reproduction techniques commonly support the couples for infertility (9), those who still cannot find a solution search for other methods (such as intra-uterine insemination, in-vitro fertilisation, adoption, surrogacy, applying to the sperm bank) (10).

Donation (sperm and ovum donation) has been applied for years as the last hope of couples who cannot have a child. In Turkey, in accordance with Regulations on Assisted Reproduction Treatment Centres, regulating artificial insemination, the sperm donation is strictly prohibited

(11,12). Ministry of Health does not permit implementation of the sperm bank, which is highly common in Western countries, on the grounds that “It does not comply with religious values, traditions and ethical approach of the society”. As this method is illegal in Turkey, every year approximately 2 thousand infertile couples go abroad in order to have a child by means of sperm and ovum donation. There occur problems in terms of detection of lineage relation between the father and the child born by means of sperm donation. The main moral problem is how such practice will affect the child in the future or whether the child will accept the situation or not (6). Using the reproductive capacity of men for money cannot be considered separately from his personal identity and dignity (10). If there is a man who sells his reproduction ability for money before us, then the dignity of such man is in danger (6). The purpose of this study is to determine possible preferences of university students for having a child if they learn in the future that they cannot have the child due to infertility as well as their thoughts towards sperm banks, which are illegal in Turkey.

## MATERIAL AND METHOD

### Study design

The population of this descriptive study consisted of students who stayed in Erzurum Higher Education Credit and Hostels Institution in the fall semester of 2012-2013 academic year.

### Setting and sample

The population of this descriptive study consists of 9400 students who have stayed in Erzurum Higher Education Credit and Hostels Institution in the fall semester of 2012-2013 academic year. Method of simple random sampling was used to determine the sample group of study. Sample group of the study consisted of 499 students (being a university student, being

single, between 18-25 age) who were staying in Higher Education Credit and Hostels Institution during the term of study and who accepted to participate in the study. The reason for the study group of university students will be candidates for one's mother or father.

### **Instruments**

A "Questionnaire form" developed by the researchers upon literature review (5, 11) was used to collect the data. The form consisted of 23 questions. The first 14 questions (age, gender, number of sibling, high school they graduate from, their faculty /department, type of family, economic condition of family, region they live in, age of mother, educational status of mother, occupation of mother, age of father, educational status of father, occupation of father) were about descriptive characteristics of students and the remaining 9 questions (Have you heard about the sperm bank?, What is your source of information about sperm bank?, do you think donating sperms to sperm bank?, Which method do you apply when they encounter problem of infertility in the future?, Do you approve the sperm bank?, Should the sperm bank be legal in Turkey? Do you sell your sperms as a source of income to the sperm bank? Do you think that the sperm bank is appropriate in ethical aspect? Do you think that the sperm bank is appropriate in religious aspect?) were aimed to evaluate thoughts of students towards the sperm bank.

### **Data collection**

After students were informed about the study, data were collected in Erzurum Higher Education Credit and Hostels Institution by using face-to-face interview technique with students accepting to participate in the study. It took approximately 15 minutes to obtain the data.

### **Data analysis**

Statistical analyses were conducted using the statistical software program SPSS (SPSS Inc., Chicago, IL, USA) for Windows (version 17). Percentage distribution, mean, and chi-square test were used to assess the data.

### **Ethical consideration**

In order to conduct this study, necessary permission was taken from Ethics Committee of Atatürk University, Faculty of Health Sciences. Verbal consent was received from the students participating in the study. Students were informed about the purpose of the study and their verbal consents were taken. "Principle of informed consent", "Principle of volunteerism" and "Principle of Protection of privacy", which are related ethical principles because of usage of human phenomenon and necessity of protection of individual rights, were performed in the study.

### **RESULTS**

54.5% of students participating in the study were male, their average age was  $21.59 \pm 2.89$  and 30.7% received education in departments of social sciences. According to their own statements; financial situation of 79.2% of families was medium and families of 30.7% lived in Eastern Anatolia Region. 53.7% of mothers were primary school graduate and 94% were housewife; 35.1% of fathers were primary school graduates and 33.5% were self-employed (Table 1).

Worker	94	18.8
Other	125	25.1

**Table 1. Distribution of Descriptive Characteristics of Students (N= 499)**

Descriptive Characteristics	Sayı	%
<b>Age (Mean±SD)</b>	21.59	2.89
<b>Gender</b>		
Female	227	45.5
Male	272	54.5
<b>High school</b>		
Regular High School	276	55.3
Vocational High School	48	9.6
Super High School	130	26.1
Teacher High School	45	9.0
<b>Departments in university</b>		
Health Sciences	99	19.8
Sciences	95	19.0
Social Sciences	153	30.7
Educational Sciences	152	30.5
<b>Family type</b>		
Nuclear Family	375	75.2
Extended Family	124	24.8
<b>Income status of family (According to the students' own words)</b>		
High	91	18.2
Middle	395	79.2
Low	13	2.6
<b>Region where they live in</b>		
Eastern Anatolia	153	30.7
Black Sea	99	19.8
Central Anatolia	70	14.0
Marmara	57	11.4
Mediterranean	50	10.0
South-eastern Anatolia	37	7.5
Aegean	33	6.6
<b>Educational status of mothers</b>		
Illiterate	72	14.4
Primary School	268	53.7
Secondary School	66	13.2
High School	70	14.0
University	23	4.7
<b>Occupation of mothers</b>		
Housewife	469	94.0
Other	30	6.0
<b>Educational status of fathers</b>		
Illiterate	14	2.8
Primary School	175	35.1
Secondary School	103	20.6
High School	117	23.4
University	90	18.1
<b>Occupation of fathers</b>		
Self-employed	167	33.5
Officer	113	22.6

It was determined that 94.4% of the students heard about the sperm bank and 59.6% have knowledge about the sperm bank by means of TV. The students were asked what they would prefer if they learn in the future that they cannot have a child in any way according to existing medical means. 62.5% of them stated that they would apply to in-vitro fertilisation and 1.8% indicated that they would apply to the sperm bank. 79.0% of students specified that the sperm bank should not be legal in Turkey; 76.2% stated that the sperm bank is not appropriate in ethical terms; 77.8% indicated that it is not appropriate in religious aspect (Table 2). 12.1% of male students participating in the study indicated that they considered selling sperms as a source of income.

Comparing answers given to the question, "which method do you apply to in case of infertility?", according to gender, the number of women marking the option of in-vitro fertilisation was more than number of men; and the number of men and women choosing option of sperm bank was the lowest ( $p<0.001$ , Table 2).

Comparing knowledge status of students about the sperm bank according to gender; a statistically significant difference was found ( $p<0.001$ , Table 2).

When students who approved the sperm bank and its legality and those who did not approve were compared in terms of ethics and religion according to gender, there was a statistically significant difference ( $p<0.05$ , Table 2).

## DISCUSSION

The results of the present study, which aims to determine possible preferences of university students for having a child in the case that they learn that would not certainly have the child in their future lives based on current medical means as well as

their views about the sperm banks, which are illegal in Turkey, were discussed in **Table 2. Comparison of Opinions of Students About Sperm Banks According to Gender**

Opinions of Students	Gender				Total		Test and p value
	Female		Male		n	%	
	n	%	N	%			
<b>Heard about the sperm bank</b>							
Yes	217	95.6	254	93.4	471	94.4	$X^2=1.14$
No	10	4.4	18	6.6	28	5.6	$p=.285$
<b>Source of information about sperm bank</b>							
TV	153	69.9	132	51.0	285	59.6	$X^2=21.95$ $p=.000^*$
Internet	24	11.0	66	25.5	90	18.8	
Health personnel	10	4.5	11	4.2	21	4.4	
Circle of friends	32	14.6	50	19.3	82	17.2	
<b>Methods to be applied in case of infertility problem</b>							
In-vitro fertilisation	172	75.8	140	51.5	312	62.5	$X^2=47.01$ $p=.000^*$
Adoption	30	13.2	30	11.0	60	12.0	
Applying to the sperm bank	3	1.3	6	2.2	9	1.8	
Doing nothing	22	9.7	96	35.3	118	23.6	
<b>Approving the sperm bank</b>							
Yes	32	14.1	62	22.8	94	11.8	$X^2=6.12$
No	195	85.9	210	77.2	405	81.2	$p=.013^{**}$
<b>Should the sperm bank be legal</b>							
Yes	39	17.2	66	24.3	105	21.0	$X^2=3.73$
No	188	82.8	206	75.7	394	79.0	$p=.053^{**}$
<b>In ethical aspect, the sperm bank is</b>							
Appropriate	23	10.1	37	13.6	60	12.0	$X^2=8.41$ $p=.015^{**}$
Not appropriate	186	81.9	194	71.3	380	76.2	
No idea	18	8.0	41	15.1	59	11.8	
<b>In religious aspect, the sperm bank is</b>							
Appropriate	7	3.0	17	6.2	24	4.8	$X^2=7.61$ $p=.022^{**}$
Not appropriate	189	83.3	199	73.2	388	77.8	
No idea	31	13.7	56	20.6	87	17.4	

\* $p < 0.001$  \*\* $p < 0.05$   $X^2$ =Chi-square

accordance with the comments of the researchers and the literature. The participating students stated that they would apply to in-vitro fertilization (62.5%) and sperm bank (1.8%) as a solution in the event of learning that they are infertile. In the study of Kılıç et al. (13), with the title of "Determining the Attitude of The Students of GATA School of Nursing Towards Surrogate Motherhood", it was found that 60.2% of the students stated that they would accept the act of surrogate motherhood in the event that they learn that they would not have a child in the future due to infertility; whereas, the rate of those having a positive approach about child adoption was 41.3%. In a study conducted by Swanberg

et al. (14), in Sweden, it was reported that while the rate of the participants who approached positively to child adoption as the first option for having a child in the event of learning that they are infertile was 19%, the rate of those having a negative approach was 47%. As it can be understood from here, it is possible to encounter studies, where many options come into prominence for the solution of infertility problem, in the literature.

As a result of the examination of the answers given by the students for the question "which ways they would apply to for the solution of infertility problem" based on gender variable; it was found that while those marking the option of in-vitro fertilization were higher among females

than males, those making the option of preferring the sperm bank were found to be the lowest response in both females and males ( $p<0.001$ ). Within Turkish society and family values, having a child is considered to be among the most significant reasons for marriage and being a family. Having a child can be considered as moving up in the social ladder as it brings women and men with new titles such as mother and father. Therefore, in this sense infertility may lead to a negative situation psychologically, as well. The family members with no children are constantly exposed to social pressure and detach themselves from society (15). This desperation climbing up with the social pressure and the state of being unable to accept the biological deficiency disturb the peace in the marriage and result in psychological problems among individuals. In time, this situation causes consequences leading to family problems and even divorce (16). In a study, it was found that the divorce cases were inversely proportional to the number of children in many countries, and couples having children divorced at lower rate compared to couples having no children (14). The main reason for having a “kuma” (co-wife), which is frequently encountered in many regions of Anatolia, primarily in the Eastern and Southeastern regions, is childlessness. Thus, previous studies have revealed that women have a high interest in the in vitro fertilization centers by women especially due to fear of the co-wife and the anxiety of being stigmatized as infertile (17). These results support the result of the present study that females preferred in-vitro fertilization as a solution to the infertility problem.

A significant difference was found between those who approved and did not approve the sperm bank and its legality in Turkey in terms of gender and this significance was associated with male students ( $p<0.05$ ). Having a child is

considered as traditional and an economic values such as continuing the family name for man and a guarantee for old age (16). In case that these values are not in question, donating his sperm to the sperm bank could make the man think about the fact that his ability to reproduce still remains and he has to feel respected and valued with the idea of proving himself. Donating sperm to the sperm bank can be considered as a positive behavior for the man due to reasons such as continuing his lineage or increasing the number of those from him. It can be asserted that these opinions are underlying for the positive approach of the male students towards the donation of sperm.

When the answers given by the students related to the sperm bank from ethical and religious aspects were examined; 76.2% stated that sperm bank was inappropriate in ethical aspect, and 77.8% stated it inappropriate in religious aspect. The fact that the man uses his reproductive capacity in return for money can affect adversely his personal identity and dignity (10). Giving birth and having children is an issue that includes a complicated, well-established, and public-specific system of values and has cultural, religious, ethical and legal dimensions. When taking into account the fact that the changes in the social values are quite slow, it can be thought that the acceptance level in this study for a method recently applied by the medicine such as sperm donation is not considered as very low. The Ministry of Health does not give permission for the application of sperm banks that is rather wide-spread in the Western countries because “they are not in accordance with the society’s religious values, traditions and sense of ethics”. The reason for people in Turkey to see ethical issues in the application of sperm banks might be the opinion of how this situation would affect a child born through sperm donation or whether the child would accept this

condition or not. Problems arise in terms of detection of the lineage with the father by the child born by using sperm donation (6). The fact that the students gave the lowest score to the option of “I apply to the sperm bank” among the options related to the solution of infertility could be associated with the fact that they considered sperm banks inappropriate culturally, ethically and religiously.

35.3% of the male students responded that they would do nothing in the event of having the infertility problem in the future. Males are more comfortable against the difficulties of infertility compared to the females (14). If a man is self-confident and has a strong will to have a child, he either breaks up his family or takes up his chance again with a co-wife even without going to a medical examination (16). For this reason, that might not have sought any means for treatment for infertility and might have preferred doing nothing.

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## CONCLUSION

Being the first study on sperm bank in Turkey, this study revealed that rate of student having a negative view about the sperm bank.

Considering the socio-cultural uncertainties about the matter and lack of confidence in people due to its illegality, it can be foreseeable that social values related to the sperm bank will change in the near future. It will be appropriate and beneficial to examine the matter in more detail in studies to be conducted in other target groups.

## Conflict of Interest

The authors have no conflict of interest to disclose.

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