

## Swedish Sperm Donors Are Driven by Altruism, but Shortage of Sperm Donors Leads to Reproductive Travelling

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### Abstract

*Background:* Swedish legislation requires that sperm donors are identifiable to offspring. In Denmark sperm donors remain anonymous. The aim of this study was to examine sperm donation in Sweden by identifying socio-demographic backgrounds, motivations and attitudes among donors and to describe options and plans of sperm recipients. Furthermore, the willingness of Swedish health care providers to assist in treatment abroad, where sperm from an anonymous donor were to be used, was assessed. The extent of travelling to Denmark for reproductive purposes was also examined.

*Methods:* Thirty Swedish sperm donors completed a questionnaire and were interviewed about their backgrounds, motivations and attitudes. Thirty couples where the infertility workup had shown azoospermia were interviewed about their options for achieving parenthood. The willingness to assist in fertility treatment abroad and the extent of reproductive cross border travelling were assessed by interviewing health care providers and by contacting Danish clinics.

*Results:* Almost all donors were Caucasian. The main motivation for sperm donors was to help others. Owing to shortage of sperm donors many Caucasian recipients intended to have treatment abroad. For most non-Caucasian recipients sperm from a donor of appropriate ethnicity were not available in Sweden. Whether the sperm donor was anonymous or identifiable was not of major importance to most sperm recipients. Health care providers expressed unanimous willingness to assist in treatment with sperm from an anonymous donor. Our inquiry indicated that more than 250 Swedish sperm recipients travel to Denmark annually.

*Conclusions:* Identifiable sperm donors are driven by altruistic motives, but shortage of sperm donors leads to reproductive travelling. Recruitment strategies to increase the number of sperm donors in Sweden are therefore warranted.

## Introduction

Sperm donation was previously carried out worldwide without any legal restrictions. The sperm donor remained anonymous to recipients as well as to offspring. In 1985 Sweden, as the first country in the world, passed a law that gave a child conceived by donor insemination the right to obtain identifying information about the donor upon reaching an age of sufficient maturity (1). The law states that the sperm donor remains anonymous to the recipient couple and vice versa, and it does not oblige the parents to inform the child that she/he was conceived with donor sperm (2). Medical files containing information about sperm donations are sepa-

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rated from official medical records and are kept for at least 70 years (3). The same legislative principles as for donor insemination have been applied to *in vitro* fertilization (IVF) since July 2005. These principles also include lesbian couples, who are allowed insemination or IVF with donor sperm in Sweden since 2005.

The Danish legislation regulating sperm donation differs from the Swedish legislation. In Denmark, sperm donors remain anonymous to recipients and offspring, and donor sperm are used to achieve pregnancy by insemination or IVF for single women as well as lesbian couples (4).

The consequences of the Swedish abolition of donor anonymity have been hotly debated. It has been argued that more sperm donors were recruited following the enactment of the law (5). Others have come to the conclusion that the law resulted in travelling to other countries for reproductive purposes partially owing to a decrease in the number of donors, resulting in shortages of donor sperm, and also because many recipients refused to accept identifiable donors (3,6).

In recent years a growing number of married as well as co-habitant heterosexual couples, lesbian couples, and single women have tried to achieve pregnancy by means of donor sperm. Thus, the need for donor sperm has increased substantially. In the present study we intended to determine why some men become sperm donors in a non-anonymous system by examining the socio-demographic backgrounds, motivations and attitudes of Swedish sperm donors. In addition, couples where the infertility workup had shown testicular azoospermia were interviewed regarding their options and plans for achieving parenthood. Finally, the willingness of Swedish health care providers to assist in fertility treatment abroad and the extent of travelling from Sweden to Denmark for reproductive purposes were assessed.

## Material and methods

Between January 2002 and December 2004, 32 consecutively recruited sperm donors at the Centre for Reproductive Medicine, Sahlgrenska University Hospital, Göteborg, Sweden, were asked to participate in the study by completing a questionnaire. The questions were of both qualitative and quantitative nature, with both structured and open-end options. The questionnaire was divided into different sections. The initial section sought detailed socio-demographic information plus present education and occupation. The other sections were about recruitment of donors, motivation for becoming a sperm donor, financial aspects of being a sperm donor, and future implications. After completing the questionnaire and returning it through the post, a telephone interview was undertaken to allow the respondents to deepen their answers and comments.

Between July 2005 and August 2007, 30 couples where the infertility workup had shown testicular azoospermia were interviewed about their options and plans achieving parenthood. All interviews were conducted at the Centre for Reproductive Medicine as part of a standard programme toward the end of the infertility investigation. One to three months earlier the couples had been offered placement

on a waiting list for fertility treatment with donor sperm. They had also been informed that the waiting time for donor insemination or IVF with donor sperm was approximately 18 months.

The willingness of Swedish health care providers to assist in fertility treatment abroad, where sperm from an anonymous donor were to be used, was assessed by contacting 10 Swedish outpatient clinics in obstetrics and gynaecology. In each case a doctor or a nurse was asked about the clinic's policy regarding assistance in fertility treatment of couples and single women who travel abroad for sperm donation. To examine the extent of travelling for reproductive purposes from Sweden to Denmark 13 clinics in Denmark where sperm donation is carried out were contacted. The clinics were asked about the estimated number of Swedish recipients of donor sperm during the previous 12 months. All contacts with other clinics were carried out by e-mail as well as with telephone interviews.

## Results

### Socio-demographic backgrounds, motivations and attitudes of sperm donors

Thirty out of 32 consecutively recruited sperm donors agreed to participate in the study and returned the questionnaires. Twenty-eight of the respondents were Caucasian (Table 1). The two non-Caucasian sperm donors were both born in Iran and had both been adopted by ethnic Swedes when they were less than 2 years old. They had both grown up in Sweden.

Two-thirds of the respondents had been to college or university. Only five of the donors were students, all university students about to finish their degrees. Approximately two-thirds of the sperm donors were married or lived in stable co-habitation arrangements.

Twenty-one of the men had become aware of the need for sperm donation through advertisements at blood donor centres (Table 2). Twenty-three of the sperm donors proved to be blood donors as well. Except for one man, all respondents who were married or lived in a co-habitation arrangement had informed their partners about their intention of becoming a sperm donor before they contacted the fertility centre. Only two of the men had told a friend or a colleague about their decision. None of the donors had tried to recruit or intended to recruit other men to become sperm donors. Most of the donors stated that, in contrast to blood donation, sperm donation was still not socially acceptable and therefore not a subject one discussed with friends or colleagues.

Concerning motivation for becoming a sperm donor, the vast majority of the men declared that they only wanted to help infertile couples (Table 2). None of the respondents stated that their motive for sperm donation was mainly of financial character.

Most donors responded positively about donating sperm to single women and les-

Table 1. Socio-demographic characteristics of the sperm donors

N = 30		
<b>Age</b>		
Mean (years)	35.8	
(SD, range)	(± 4.9, 24-46)	
	<i>n</i>	<i>%</i>
<b>Ethnic background</b>		
Caucasian*	28	93.3
Iranian	2	6.7
<b>Education</b>		
High school	7	23.3
College	9	30.0
Undergraduate degree	12	40.0
Graduate degree	2	6.7
<b>Occupational status</b>		
Student	5	16.7
Unskilled	3	10.0
Blue collar	6	20.0
White collar	9	30.0
Professional	7	23.3
<b>Marital status</b>		
Married	6	20.0
Co-habitant	13	43.3
Divorced	2	6.7
Single	9	30.0
<b>Number of children</b>		
0	19	63.3
1	2	6.7
2	5	16.7
3	1	3.3
> 3	3	10.0

\* 24 born in Sweden, 2 born in Russia, 1 born in Iceland and 1 born in Finland

Table 2. Recruitment method and motivation among 30 sperm donors

	N = 30	
	n	%
Advertisement at the blood donor center	21	70.0
Newspaper article	4	13.3
Suggested by others	3	10.0
Radio	1	3.3
Did not know	1	3.3
Purely altruistic motives	19	63.3
Purely financial motives	0	0.0
Altruistic and financial motives	3	10.0
Altruistic and non-financial motives	5	16.7
Altruistic, financial and other motives	3	10.0

Table 3. Attitudes among 30 sperm donors regarding sperm donation to single women and lesbians

	Yes		No	
	n	%	n	%
Would you donate sperm if the sperm were going to be offered to single women?	28	93.3	2	6.7
Would you donate sperm if the sperm were going to be offered to lesbian single women?	26	86.7	4	13.3
Would you donate sperm if the sperm were going to be offered to lesbians?	26	86.7	4	13.3

bian couples (Table 3). Two sperm donors expressed that sperm should not be used to impregnate single women. They were both of the opinion that it was essential for young children to be raised by parents of both sexes. Four respondents were against sperm donation to lesbian women since the birth of a child, in their views, should be the result of love between a man and a woman.

Twenty-five of the sperm donors thought that donors should be reimbursed for travel expenses. Five men were of the opinion that sperm donors should not be compensated for expenses at all. They all underlined that the word donation implies that money is not involved in the matter and that sperm donation should be an act of pure altruism. Twenty-five men answered that they would still be sperm donors even if no monetary compensation were given.

Twenty-eight of the respondents stated that they would like to know if their do-

nation had led to birth of at least one child (Table 4). Most of them expressed that this knowledge was important since birth of a child was a confirmation that their donation had been meaningful. Secondly, many of the respondents said that they in the future intended to inform their own children about the sperm donation and that this information was especially important if it had resulted in a child.

Most of the men said they had a positive attitude toward future contact with potential offspring (Table 4). However, several of them underlined that it was important to distinguish between the offspring's legal right to know the identity of the donor and contacts between offspring and donor.

### Decisions about treatment made by couples in which azoospermia had been diagnosed

Twenty-one of the 30 men where the infertility workup had shown azoospermia were Caucasian (Table 5). Fourteen of the couples in this group accepted the offer to be on the waiting list for fertility treatment with donor sperm. However, 9 of these couples stated that they planned to have fertility treatment with donor sperm abroad during the waiting period for insemination or IVF to be performed in Sweden.

Six couples of non-Caucasian origin had decided to go abroad for fertility treatment with sperm from an anonymous donor. Three non-Caucasian couples expressed that they were unsure of what to do since fertility treatment outside Sweden seemed to be too expensive. None of the non-Caucasian couples would accept treatment with donor sperm from a Caucasian donor. Twenty-eight of the 30 couples were of the opinion that only sperm from an identifiable donor of the same ethnicity was acceptable.

*Table 4.* Attitudes of 30 sperm donors regarding results of sperm donation and possible future consequences of sperm donation

	Yes		No	
	<i>n</i>	%	<i>n</i>	%
Would you like to be informed if the sperm donation results in pregnancy and birth?	28	93.3	2	6.7
Does a sperm donor have certain moral responsibilities for the child later in life?	6	20.0	24	80.0
Would you accept meeting the offspring when she/he has become an adult?	26	86.7	4	13.3

Table 5. Decisions regarding further fertility treatment made by 30 couples where the infertility workup had shown testicular azoospermia

	<i>n</i>	%
<b>Ethnic background</b>		
Caucasian	21	70
Non-Caucasian	9	30
<b>Caucasian</b>		
Waiting list for sperm donation	5	23.8
Waiting list for sperm donation + sperm donation abroad	9	42.9
Sperm donation abroad	2	9.5
Adoption	2	9.5
No further fertility treatment	2	9.5
Undecided about what to do	1	4.8
<b>Non-Caucasian</b>		
Sperm donation abroad	6	66.7
Undecided about what to do	3	33.3

### Assistance in sperm donation abroad and travelling for reproductive purposes to Denmark

All the interviewed health care providers regarded assistance with fertility treatment resulting in sperm donation from an anonymous donor abroad as a natural part of their job. Their willingness to assist was described as similar to helping arrange treatment at another domestic clinic. All the nurses and doctors who were interviewed said they gave such assistance without any discussion or disagreement among colleagues.

Contacts with Danish clinics where insemination or IVF with donor sperm is performed confirmed that Swedish couples as well as single women often receive fertility treatment in Denmark. Although data are incomplete, our inquiry indicated that more than 250 Swedish couples and single women annually have fertility treatment with donor sperm in Denmark.

### Discussion

The study shows that recruitment of identifiable sperm donors is feasible and that the number of identifiable donors at present is inadequate. Since there is no shortage of Danish sperm donors, many Swedish recipients have fertility treatment in Denmark.

Most of the men who completed the questionnaire had become aware of the need for sperm donation at blood banks. This clearly reflects the recruitment strategy of the fertility centre. In order to increase the number of sperm donors it seems evident that the recruitment programme has to appeal to a large section of the Swedish population. Posters and pamphlets at blood banks are probably more cost-effective than advertising in the mass media. In addition, blood donors are also often driven by altruistic or humanitarian motives (7).

Most of our identifiable sperm donors were mainly motivated by the desire to assist infertile couples. This finding is in agreement with a previous Swedish study conducted in 1995–1996 (8). The fact that the vast majority of the men responded that they would still be sperm donors even if no reimbursement were given is encouraging. Our study differs to some extent from two Danish studies which showed that monetary compensation was of importance to many anonymous sperm donors, in addition to altruistic motives (9,10). During the study period a reimbursement of 300 SEK (~30 €) for each donation was given to cover transport costs.

Most Swedish sperm donors were willing to provide sperm to lesbian couples and single women. In fact, after the present study had been initiated the Swedish legislation was changed so that donor sperm was made available for insemination or IVF of lesbian couples. Shortly after this change in legislation we asked 22 ongoing sperm donors at the fertility centre if they would allow their previously cryopreserved sperm to be used for fertility treatment of lesbian couples. Twenty of the 22 men responded positively to the enquiry, confirming a positive attitude toward donating sperm to lesbians, as demonstrated in the present study.

The two main problems for recipients of donor sperm disclosed in the present study were the long waiting period for fertility treatment with donor sperm and the almost total absence of non-Caucasian sperm donors. In Göteborg the waiting period for fertility treatment with donor sperm increased in 2005 from 6 months to 18 months when lesbian couples became permitted to have insemination or IVF with donor sperm. In this study many of the couples who accepted placement on the waiting list for treatment with donor sperm stated that they intended to have treatment abroad. Being put on the waiting list was regarded by many couples as a fallback position in case they had not already achieved pregnancy when fertility treatment in Sweden became available for them. For most couples of non-Caucasian origin, fertility treatment outside Sweden was the only option, since no donors of suitable ethnicity were available. The possibility of recruiting a friend or a relative of the male partner to become sperm donor was regarded by all the couples as too complicated or unacceptable.

The use of sperm from an identifiable donor was not regarded as a problem by most couples. Almost all couples answered that they had not yet decided if they would tell their offspring about the mode of conception. Previous studies have shown that a majority of parents do not inform their children about the use of donor sperm, even when sperm from an identifiable donor has been used (11–13).

In conclusion, the present study showed that Swedish sperm donors are driven by altruistic motives and that shortage of sperm donors forces many recipients to



go abroad for fertility treatment. Reproductive travelling from Sweden to Denmark can be described as a safety valve that reduces the problems associated with the shortage of sperm donors. Recruitment strategies to increase the number of identifiable Swedish sperm donors of different ethnicity are urgently needed.

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