

# Attitudes towards gamete donation among IVF doctors in the Nordic countries—are they in line with national legislation?

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## Abstract

**Purpose** To compare attitudes towards gamete donation between IVF doctors in the Nordic countries, and to determine whether attitudes are in correspondence with national legislation.

**Materials and methods** A study-specific questionnaire was used to study attitudes of 108 IVF doctors (92% response). Participants constituted 78% of all IVF doctors in Sweden, Denmark and Norway and 15% of IVF doctors in Finland. **Results** Despite similar legislation regarding offspring right to learn his/her donor's identity, IVF doctors from Norway reported significantly more negative attitudes towards disclosure than did Swedish physicians. A majority from all countries demonstrated positive attitudes towards embryo donation and allowing sperm donation for lesbian

couples. Physicians reported strong support for anonymous donation but less support for 'known' donation.

**Conclusion** There are discrepancies between IVF doctors' attitudes towards gamete donation and national legislation in four Nordic countries. Negative attitudes towards disclosure to offspring may counteract legislative intentions.

**Keywords** Attitude of health personnel · Heterologous artificial insemination · Legislation as topic · Oocyte donation · Physicians

## Introduction

Treatment with donated gametes is offered as part of assisted reproduction techniques (ART) in many countries, but national laws and regulations regarding these treatments vary considerably. Such discrepancies may regard access to different treatments, donor anonymity and characteristics of recipients. The Nordic countries differ markedly from one another in their legislation and practice of gamete donation [1, 2] despite close proximity and similar cultural basis. During the past years new legislation on assisted reproduction has been enacted in several of the Nordic countries. In vitro fertilization (IVF) with donated sperm or oocytes is available in all Nordic countries except Norway, where only donor insemination (DI) is permitted. Embryo donation is performed only in Finland. Lesbian couples have access to treatment with donated sperm in Denmark and Finland and, since this study was performed, also in Sweden and Norway. Donors are anonymous to the recipient couple unless they bring their own donor. In Sweden and Norway, all donation offspring have the legal right to receive identifiable information about the donor when they reach mature age. Following the recent Finnish legislation on

**Capsule** There are discrepancies between IVF doctors' attitudes towards gamete donation and national legislation in four Nordic countries.

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assisted reproduction, this is also true for offspring from gamete donation performed in Finland since September 2007.

Offspring following gamete donation can be regarded to have medical as well as psychosocial needs for information about their genetic origin. Genetic information is required to establish personal risk estimates for inherited medical conditions, to locate (or be located by) genetic relatives if donation of body tissues/parts is needed, and to avoid producing offspring with close relatives. Psychosocial interests concern children's right to know their identity, as stated by the UN Convention on the Rights of the Child. Sweden, Norway and Finland are three of relatively few countries in which all donation offspring (at mature age) have legal right to obtain identifying information about the donor. However, in order for the child to execute that right the child must first be informed about his/her conception with donated gametes. A child's origin by donation is generally not visible in birth certificate or official medical records. Consequently, the child's only possibility of finding out about his/her genetic origin is if the parents (or someone else) reveal it, or if it becomes obvious in connection with specific medical conditions or genetic tests.

Participation in gamete donation entails ethical as well as practical considerations; for instance, questions regarding disclosure of the donation to family members and donation offspring [3, 4]. Therefore, clinic personnel constitute important informants and discussants concerning different aspects of oocyte and sperm donation. Despite IVF-staff's important role, knowledge regarding their attitudes towards gamete donation is scarce. One Danish study showed marked discrepancies between national ethical recommendations regarding ART and the attitudes among health care staff concerning donor anonymity and access to gamete donation [5]. Health care professionals involved in assisted reproduction have responsibility for the implementation of legislative intentions. In Sweden, physicians have the main responsibility for assessing the suitability of donors and recipients, including ensuring that recipient couples will tell offspring about their genetic origin. Despite this, a recent Swedish study of parents following DI [6] showed that a majority had not been encouraged by the staff involved in the DI treatment to be open about the donation with their child/ren, but had received unclear and contradictory advice regarding disclosure. In a study from the US [7], physicians were the only group of health professionals who encouraged or supported non-disclosure for couples who conceived using gamete donor treatment. Such types of behaviour among doctors involved in assisted reproduction may be related to the limited compliance with national legislation on disclosure among Swedish recipients of donor sperm [8, 9].

The objective of the present survey was to study attitudes towards disclosure and other issues of gamete donation among physicians working at IVF clinics in the Nordic countries. In particular, we sought to determine whether attitudes differ between countries and if physicians' attitudes are in correspondence with national legislation and/or practice.

## Material and methods

In the beginning of 2005, a total of 198 physicians were working at public and private IVF clinics in the Nordic countries [10]. During the XVI Nordic IVF meeting in 2005, a questionnaire was handed out to all delegates who were physicians working in private or public IVF clinics. The questionnaire was available in an English and a Swedish version and one reminder was sent out by post to all eligible physicians. All participants received written information about the study, including the study aim and participant anonymity.

Out of 117 eligible IVF doctors at the meeting, 108 completed and returned the questionnaire (92% response). Thus, study participants constitute a majority of all practicing IVF doctors in Sweden (76%), Denmark (75%) and Norway (88%), but only 15% of IVF doctors in Finland. Due to a low number of participating physicians from Iceland ( $N=1$ , response 100%) his/her responses were excluded from the study. There was an uneven distribution of genders, with men constituting 62% of participants, and a majority of participants worked at clinics that performed gamete donation. Additional characteristics of participants are presented in Table 1.

Attitudes towards gamete donation were assessed by asking respondents to indicate their agreement with items on a 5-point Likert scale. In Tables 2 and 3, data are presented for the collapsed categories "Agree" (Strongly agree & Agree somewhat) and "Disagree" (Disagree strongly & Disagree somewhat), and a "Neutral" response (Neither agree nor disagree). In addition, respondents could choose the response alternative "Cannot form an opinion." Attitude items were drawn from the literature [11] and clinical experience and concerned attitudes towards information given to donor/recipients and disclosure to offspring (Table 2), attitudes towards embryo donation, lesbian recipients, as well as to anonymous and known gamete donation (Table 3). Three questions concerned participants' opinions regarding age limits for donors and recipients (Table 4). The questions in the present study were also used in a study including gynaecologists and obstetricians in Sweden [12].

Group comparisons of single items were performed with parametric statistics (ANOVA) as well as non-parametric

**Table 1** Characteristics of participants, 108 IVF-doctors who were delegates at a Nordic IVF-meeting

Variable	N (%)
<b>Country</b>	
Denmark	41 (38)
Sweden	34 (32)
Norway	22 (20)
Finland	11 (10)
<b>Gender<sup>a</sup></b>	
Female	40 (37)
Male	67 (62)
<b>Age</b>	
≤ 49	45 (42)
50 ≥	63 (58)
<b>Gamete donation performed at own clinic</b>	
No	20 (19)
Oocyte donation	14 (13)
Sperm donation	26 (24)
Oocyte and sperm donation	47 (44)

<sup>a</sup> missing data for one participant

analyses (Kruskal-Wallis). *P*-values <.05 were considered statistically significant. Since results from parametric and non-parametric analyses did not differ, only the results from parametric tests are presented.

## Results

### Attitudes towards information given to recipients/donors and towards disclosure to offspring

Participants demonstrated predominantly negative attitudes towards donors and recipients having information about each other, with the exception of a majority of Swedish physicians recognizing donors' right to know if the donation resulted in a child (Table 2). There were significant differences between countries with regard to disclosure to offspring. Despite similar legislation regarding disclosure and identifiable donors in Sweden and Norway at the time of the study, Swedish doctors reported significantly more positive attitudes towards disclosure and less concerns about negative consequences of disclosure and contact with the donor. About half of Norwegian physicians believed it to be in the best interest of the child never to be informed of his/her genetic origin or about the identity of their donor. Physicians from Denmark demonstrated the most negative attitudes towards identifiable donors, and relatively large percentages of participants from remaining countries could not form an opinion regarding the possible consequences of contact with the donor.

### Attitudes regarding access to, and participation in, gamete donation

A majority of physicians from all Nordic countries supported embryo donation and lesbian couples' access to sperm donation. Nearly all would recommend participation in anonymous donation to someone close to them (Table 3). Attitudes towards participation in "known" donation (i.e. where the donor and the recipient couple know each other) were less positive and particularly so among Danish doctors.

### Perceptions of age limits

Participants' perceptions of acceptable age limits in gamete donation were very similar, with the exception of Finnish doctors accepting significantly lower minimum age for male donors than did doctors from remaining countries (Table 4).

## Discussion

The finding that Swedish IVF doctors demonstrated the most positive attitudes towards disclosure is in concordance with the national legislation since 1985, which gives offspring legal right to learn the identity of the donor when they reach mature age. The guidelines by the Swedish National Board of Health and Welfare stress that the physician, as a part of the psychosocial investigation, must ensure that the couple will tell their child about her/his genetic origin. However, a study from year 2000 of Swedish parents after donor insemination indicated poor compliance with these guidelines [8]. A slight majority had told (11%) or intended to tell (41%) their children about the donation, which is a necessary prerequisite for offspring to exercise their legal right to obtain identifiable information about the donor. In a recent follow-up of that study, more than half of parents had told their offspring about the donation, but it was less common to inform children about their right to information about the donor's identity [6]. In the present study, a large majority of Swedish IVF doctors believed it to be in the best interest of offspring to be informed about the donation and two thirds supported offspring right to find out the identity of their donor. The results from two recent Swedish studies largely confirm the present findings, although gynaecologists/obstetricians [12] and nurses at Child Health Care centres [13] had more negative attitudes towards offspring access to identifiable information about the donor. One explanation for IVF doctors' more positive attitude towards offspring right to know the donor's identity may be their more frequent exposure to the official guidelines for gamete donation including information about disclosure.

**Table 2** Attitudes towards disclosure of information in gamete donation in four Nordic countries (group comparisons by ANOVA on means of original 5-point scale data)

		Denmark <i>n</i> =41 %	Sweden <i>n</i> =34 %	Norway <i>n</i> =22 %	Finland <i>n</i> =11 %	<i>p</i>
<b>Information to donor/recipient</b>						
The donor should be informed if donation results in a child	Agree	17	62	18	0	<.0001 <sup>a,b,c</sup>
	Neutral	17	3	0	18	
	Disagree	66	35	82	82	
	No opinion	0	0	0	0	
The donor should receive some information about the recipients (e.g. education, interests)	Agree	0	6	18	0	.016
	Neutral	0	3	0	0	
	Disagree	100	91	82	100	
	No opinion	0	0	0	0	
The recipients should receive some information about the donor (e.g. education, interests)	Agree	39	26	32	18	.071
	Neutral	2	0	0	18	
	Disagree	59	74	68	64	
	No opinion	0	0	0	0	
<b>Disclosure to offspring</b>						
Offspring should receive some information about the donor during childhood (through the parents)	Agree	24	27	0	18	.020 <sup>b,e,f</sup>
	Neutral	0	3	0	46	
	Disagree	76	65	82	36	
	No opinion	0	6	18	0	
Offspring should receive some information about the donor as a mature adult	Agree	10	38	9	73	<.0001 <sup>a,b,e,f</sup>
	Neutral	0	15	9	0	
	Disagree	88	35	82	27	
	No opinion	2	12	0	0	
It is in the best interest of the child that he/she never be informed of his/her genetic origin	Agree	27	3	45	0	<.0001 <sup>a,b,e,f</sup>
	Neutral	17	3	14	0	
	Disagree	56	88	32	100	
	No opinion	0	6	9	0	
Parents should be honest with their child with regard to his/her genetic origin	Agree	56	88	41	73	<.007 <sup>a,b</sup>
	Neutral	10	12	18	9	
	Disagree	32	0	32	18	
	No opinion	2	0	9	0	
The child's relationship with parents could be disturbed if he/she learns of the donation	Agree	24	12	27	18	.053
	Neutral	15	6	14	18	
	Disagree	61	73	50	64	
	No opinion	0	9	9	0	
It is in the best interest of the child to be able to learn (as an adult) the identity of the donor	Agree	2	68	23	36	<.0001 <sup>a,b,d,e</sup>
	Neutral	2	15	14	18	
	Disagree	93	12	50	46	
	No opinion	2	6	14	0	
Contact with the donor can be harmful for the offspring (as an adult) and/or for the family	Agree	44	9	32	27	<.0001 <sup>a</sup>
	Neutral	22	18	18	55	
	Disagree	32	53	36	0	
	No opinion	2	21	14	18	

<sup>a</sup> Sweden vs. Denmark<sup>b</sup> Sweden vs. Norway<sup>c</sup> Sweden vs. Finland<sup>d</sup> Denmark vs. Norway<sup>e</sup> Denmark vs. Finland<sup>f</sup> Norway vs. Finland

**Table 3** Attitudes regarding access to, and participation in, gamete donation (group comparisons by ANOVA on means of original 5-point scale data)

		Denmark <i>n</i> =41 %	Sweden <i>n</i> =34 %	Norway <i>n</i> =22 %	Finland <i>n</i> =11 %	<i>p</i>
<b>Access to donation</b>						
Embryo donation should be allowed	Agree	76	88	64	82	.067
	Neutral	0	3	0	0	
	Disagree	22	9	36	18	
	No opinion	2	0	0	0	
Lesbian couples should be allowed to receive donated sperm	Agree	81	53	55	82	.068
	Neutral	2	3	0	18	
	Disagree	17	23	36	0	
	No opinion	0	21	9	0	
<b>Anonymous donation</b>						
I would be supportive if a woman close to me wanted to donate oocytes	Agree	98	88	82	100	.008 <sup>b</sup>
	Neutral	0	0	9	0	
	Disagree	2	0	9	0	
	No opinion	0	12	0	0	
I would be supportive if a man close to me wanted to donate sperm	Agree	93	100	82	100	.003 <sup>b</sup>
	Neutral	0	0	9	0	
	Disagree	2	0	9	0	
	No opinion	5	0	0	0	
I would be supportive if persons close to me wanted to receive donated oocytes/sperm	Agree	100	97	100	100	.784
	Neutral	0	3	0	0	
	Disagree	0	0	0	0	
	No opinion	0	0	0	0	
<b>Known donation</b>						
I would be supportive if a woman close to me wanted to donate oocytes	Agree	34	71	59	82	.038 <sup>a</sup>
	Neutral	22	18	9	0	
	Disagree	39	12	32	18	
	No opinion	5	0	0	0	
I would be supportive if a man close to me wanted to donate sperm	Agree	34	71	59	82	.036 <sup>a</sup>
	Neutral	22	18	9	0	
	Disagree	39	12	32	18	
	No opinion	5	0	0	0	
I would be supportive if persons close to me wanted to receive donated oocytes/sperm	Agree	46	71	86	82	.344
	Neutral	29	21	0	0	
	Disagree	20	9	14	18	
	No opinion	5	0	0	0	

<sup>a</sup> Sweden vs. Denmark

<sup>b</sup> Sweden vs. Norway

Despite similar legislation on offspring right to obtain identifiable information about their donor in Sweden and Norway, Norwegian physicians demonstrated significantly more negative attitudes towards disclosure than did participants from Sweden. About half of the Norwegian doctors disagreed with the notion that parents should be honest with their child about its genetic origin and that offspring should be able to learn the identity of the donor. This finding indicates that Norwegian IVF doctors' attitudes on disclosure are not in line with Norway's national legislation on

gamete donation from 2003. The present findings of relatively positive disclosure attitudes among Swedish IVF doctors, as well as recent findings from other groups of health professionals [12, 13] and parents following donor insemination [6, 9] in Sweden, indicate that acceptance of new legislation may take time.

New legislation, guidelines and policies regarding clinical practice are not self-implementing [14]. Decisions regarding patient treatment may be influenced by individual providers' opinions and attitudes. For example, clinic

**Table 4** Attitudes towards acceptable age limits in gamete donation

	Denmark		Sweden		Norway		Finland		F	p
	n=40–42		n=34		n=21–22		n=11			
	m	sd	m	sd	m	sd	m	sd		
Sperm donor										
Minimum age	22	2.7	22	3.0	24	2.5	20	0.9	5.43	.002 <sup>a,b,c,d</sup>
Maximum age	49	10.0	49	11.4	51	8.4	43	5.4	1.51	.217
Oocyte donor										
Minimum age	23	2.6	23	6.2	23	2.5	20	2.3	1.61	.193
Maximum age	36	4.1	36	3.8	36	2.3	36	1.9	0.20	.895
Oocyte recipient										
Minimum age	23	3.4	23	5.8	23	2.3	20	1.8	2.44	.068
Maximum age	43	5.1	43	6.0	44	4.2	45	2.5	0.75	.524

<sup>a</sup> Sweden vs. Finland<sup>b</sup> Denmark vs. Norway<sup>c</sup> Denmark vs. Finland<sup>d</sup> Norway vs. Finland

directors at ART clinics demonstrated more restrictive attitudes on access to services compared to clinic policy [15]. In a study by Haagen and coworkers [16], physicians' implementation of a new subfertility guideline was found to be influenced by attitude-related barriers including lack of self-efficacy regarding communication with patients and lack of outcome expectancy. In the present study, many Norwegian and Danish doctors were concerned that disclosure to offspring would result in negative outcomes for the family. One in four believed that knowledge of the donation could disturb the child's relationship with its parents, a belief that is not supported by research. While there is no evidence that parents' telling their children about the donation at a young age has negative consequences [17–19], finding out about one's genetic origin by donation as an adult has been reported to be a traumatic experience [20]. In the present study, about one third of Norwegian and Danish doctors feared that contact with the donor could be harmful for the child or the family and a considerable number of participants could not form an opinion regarding this issue. This finding may be related to the shortage of information on this issue. Despite the fact that a substantial number of the DI children born in Sweden following the 1985 legislation have reached maturity by now, to our knowledge, none has contacted the IVF-clinics to retrieve information about their donor. Also on an international level, there is limited experience of consequences of offspring contact with their donor, mostly due to the practice of using non-identifiable donors.

Physicians and other staff members at IVF clinics have an important role in discussing the complex psychological, social and ethical consequences of donation with couples considering donation treatment as well as with donors. Therefore, it is of great importance that IVF health care professionals have a clear understanding of the intentions and application of national law regarding gamete donation. To the extent that staff attitudes have influence on their patients' intentions and actions, IVF staff's attitudes towards disclosure may be of importance for recipient

couples' disclosure behaviour. This notion was supported by recent findings in a Swedish study of parents following DI [6]. While a majority of the couples who had been encouraged by the staff to tell their child/ren about the donation also had done so, openness was reported to be less common among those couples who had not received such encouragement. It has recently been suggested that the protection of the legal rights of Swedish donor offspring could be improved by a mandatory requirement for recipient couples to receive pre-treatment counselling on disclosure by professional counsellors [21].

Physicians from all Nordic countries were inclined to support participation in anonymous oocyte or sperm donation by individuals close to them, while attitudes towards known donation (i.e. when donor and recipients know each other) were less positive. These results are in line with findings concerning attitudes towards donor insemination by medical students and infertile patients in Norway [22], as well as by health care staff in Sweden [12, 13] and in Denmark [5]. This may indicate an awareness of potential psychological complications involved in known donation [23, 24]. The present finding that participants were equally likely to support a man and a woman who wants to become a donor is surprising considering the physical ordeal and medical risks involved in oocyte donation. There was relative consensus regarding the ideal minimum and maximum ages of donors and female oocyte recipients, which were in line with the recommendations concerning acceptable age limits expressed in the Danish and Swedish legislation [2].

IVF doctors from all countries demonstrated equally positive attitudes towards embryo donation, which was permitted only in Finland. Participants also expressed relatively positive attitudes towards sperm donation for lesbian couples, and this was particularly evident among participants from Denmark and Finland, the two countries in which this treatment option was available at the time of the survey. While the Danish legislation restricts ART by physicians to heterosexual couples, a loophole in the legislation enables midwives at private clinics to offer DI

to lesbian couples and single women. The fact that support towards embryo donation as well as DI for lesbian couples was considerably higher compared to earlier results from Denmark [5] may indicate a change towards more liberal attitudes among Danish health care professionals. The positive attitude towards lesbian couples' access to donor sperm among Swedish IVF doctors corresponds well with findings reported for Swedish gynaecologists and obstetricians [12] and the Swedish legislation in effect from July 2005, permitting sperm donation for lesbian couples.

The present study presents data from 107 IVF doctors in four Nordic countries. While the chosen approach (i.e. contacting IVF doctors participating at a Nordic IVF meeting) made it feasible to contact a substantial number of physicians from several countries, this group may not be representative of IVF doctors in these countries. The plenary sessions held at the 2005 Nordic IVF meeting focused on individual patient perspectives, specific medical procedures (e.g. preimplantation genetic diagnosis), ethical issues, and results and changing policies (e.g. regarding elective single embryo transfer) in the Nordic countries [25]. Thus, it is not likely that the meeting attracted participants with particular attitudes towards the issues covered in the present study. Response rates were high for participants from all countries (92%). Based on the study by Bergh and coworkers [10], participants in the present study constitute 78% of the IVF doctors working in public and private clinics in Denmark, Sweden and Norway at the time of the study, but only 15% of IVF doctors in Finland. Thus, participants from Denmark, Sweden and Norway may be regarded representative of the eligible population in these countries, while the results regarding Finnish doctors should be regarded with caution.

## Conclusions

In conclusion, the present findings indicate that there are discrepancies between attitudes towards different aspects of donation among Nordic IVF doctors and the national legislation in these countries. To the extent that IVF doctors' attitudes towards different aspects of gamete donation are expressed to patients, they may influence patient behaviour. Thus, positive attitudes towards treatment options that are not permitted in their own country may contribute to women/couples travelling to countries with a more permissive law for ART [26]. In addition, negative attitudes towards disclosure to offspring may, if expressed to patients, counteract national legislative intentions to provide offspring with information about their donor.

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