

Characterization of potential oocyte donors in Sweden

A.Skoog Svanberg^{1,4}, C.Lampic², T.Bergh³ and Ö.Lundkvist¹

¹Department of Women's and Children's Health, ²Department of Public Health and Caring Sciences, Uppsala University, Uppsala and ³Carl von Linné Kliniken, Uppsala, Sweden

⁴To whom correspondence should be addressed. E-mail: skoog.svanberg@swipnet.se

BACKGROUND: Oocyte donation has been permitted by Swedish legislation since January 2003. While donors are anonymous to the receiving couple, offspring have the legal right to receive identifying information about the donor when they reach adult age. Our aim was to investigate factors of potential importance for women's willingness to donate oocytes. **METHOD:** A questionnaire regarding attitudes towards oocyte donation was sent to a randomized sample of 1000 women aged 25–35 years (73% response). **RESULTS:** Seventeen percent would consider donating oocytes, whereas 39% opposed this, and 44% were doubtful. Potential donors were less likely to have children of their own and thought the genetic link was of less importance. Potential donors would feel happy about helping a childless couple, and 38% would be glad to be contacted by the offspring. Factors that would increase women's willingness to donate were being able to talk to experienced donors, proximity to the clinic and availability of counseling. **CONCLUSION:** The results indicate considerable interest in donating oocytes among a subset of women in Sweden. Potential donors associated donation with altruistic motives. The issue of offspring's right to know about their origin appears to be complicated. This suggests that information about the consequences of donation is of great importance.

Key words: attitude/disclosure/oocyte donation/potential donor/public

Introduction

Internationally, the practice of oocyte donation in humans is increasing. Although the vast majority of countries endorse anonymous gamete donation (Frith, 2001), there seems to be a trend towards openness and allowing children access to information about the donor (McGee *et al.*, 2001; McWhinnie, 2001; Greenfield, 2002). Oocyte donors and their motives for donation have been characterized in previous studies (Schover *et al.*, 1991; Sauer *et al.*, 1994; Greenfield *et al.*, 1995; Söderström-Anttila, 1995; Abdalla *et al.*, 1998; Kan *et al.*, 1998; Klock *et al.*, 1998). Several authors have published guidelines for selection of oocyte donors that have been adopted by most European countries (Schenker, 1997; Boivin *et al.*, 2001).

Oocyte donors are often described as being of a young age, often mothers who are altruistically motivated, except for in a few countries, where oocyte donation can have a financial motivation (German *et al.*, 2001; Greenfield, 2002). Recruitment of oocyte donors appears to be a challenge for most infertility clinics (Englert *et al.*, 1996). A previous study (Gorrill *et al.*, 2001) showed that only 12% of the women who responded to a donor recruiting advertisement were finally included in the donor pool. A shortage of donors has generated a need for clinics to obtain more knowledge about how to attract donors. In one study concerning attitudes of donors towards the oocyte donation process (Kalfoglou and Geller,

2000a), it was suggested that oocyte donation programmes should show greater flexibility with regard to both anonymity and information about the outcome in order to attract potential donors. Logistic difficulties for donors associated with transport problems, social commitments and concerns about complications have been described (Kan *et al.*, 1998), and proposals have been made for possible improvements of the donation routines with the aim of attracting potential oocyte donors (Kalfoglou and Geller, 2000b). Former donors have suggested that infertility clinics should organize discussion groups for anonymous donors to provide post-donation support (Partrick *et al.*, 2001).

A recent study indicated that the Swedish public has a generally positive attitude towards different aspects of oocyte donation (Skoog Svanberg *et al.*, 2003). As of January 2003, oocyte donation has been permitted in Sweden. While donors are anonymous to the receiving couple, offspring have the legal right to receive identifying information about the donor when they reach adult age. Sweden is one of the few countries in which children conceived by gamete donation have the legal right to receive information about the donor's identity (SFS, 1984). This means that the women who are willing to donate oocytes must accept the fact that they can become identified by the offspring in the future. Against this background, our interest in the present study focused mainly on factors of potential importance for women's willingness to donate

Table I. Demographic data of women, subgrouped regarding their attitudes towards donating oocytes anonymously in the future ($n = 724$)

Demographic data	Yes 'Potential donors' ($n = 120$)	Maybe/do not know 'Doubtful group' ($n = 318$)	No 'Non-donors' ($n = 286$)	<i>P</i>
Age, years mean (SD)	29.0 (3.4)	28.3 (3.1)	29.4 (3.2)	<0.001 ^a
Education, college/university (%)	41	44	44	NS
Civil status, single (%)	15	16	12	NS
Experience of infertility (%)	14	10	12	NS
Children (%)	53	51	65	<0.05 ^b , <0.001 ^a
Born outside Sweden (%)	9	7	13	<0.05 ^a
Know persons with infertility (%)	74	80	77	NS
Received some information about oocyte donation before the survey (%)	63	61	64	NS
Experience of giving blood (%)	25	15	15	<0.05 ^{b,c}
Previously active in an aid organization (%)	13	12	8	NS

^aSignificant difference between the doubtful group and the non-donor group.

^bSignificant difference between the potential donors and the non-donor group.

^cSignificant difference between the potential donors and the doubtful group.

Table II. The attitudes of the women, subgrouped into 'potential donors', 'doubtful' and 'non-donors', towards oocyte donation in general^a

Statement	Reply	Potential donors ($n = 120$) % (Md ^b)	Doubtful ($n = 318$) % (Md ^b)	Non-donors ($n = 286$) % (Md ^b)	<i>P</i>
If a friend/acquaintance wanted to donate eggs I would support her decision.	Agree	98 (5)	93 (5)	71 (5)	<0.001 ^{c,d} , <0.01 ^e
	Neutral	0	3	9	
	Disagree	0	1	13	
	Cannot form an opinion	0	1	5	
If a friend wanted to receive donated eggs I would support her decision.	Agree	98 (5)	94 (5)	75 (5)	<0.001 ^{c,d} , <0.01 ^e
	Neutral	1	2	8	
	Disagree	0	1	11	
	Cannot form an opinion	0	1	4	
If you are infertile, adoption should be your first choice.	Agree	7 (1)	15 (2)	28 (3)	<0.001 ^{c,d} , NS ^e
	Neutral	23	30	20	
	Disagree	59	52	38	
	Cannot form an opinion	9	12	12	
If you cannot have children of your own, you should not have any.	Agree	2 (1)	1 (1)	3 (1)	<0.001 ^{c,d} , <0.05 ^e
	Neutral	1	3	5	
	Disagree	96	95	85	
	Cannot form an opinion	1	2	6	
Oocyte donation is a good way to help childless couples.	Agree	88 (5)	82 (5)	54 (4)	<0.001 ^{c,d} , NS ^e
	Neutral	4	6	11	
	Disagree	1	4	24	
	Cannot form an opinion	5	7	11	
Subscale		(5)	(5)	(5)	<0.001 ^{c,d,e}

^aThere was an internal drop-out of 1–2% for each item.

^bMedian values were calculated on original data (five-step scale) for each item.

^cPotential donors compared with the non-donor group.

^dNon-donor group compared with the doubtful group.

^ePotential donors compared with the doubtful group.

NS, non-significant.

oocytes. The following specific research questions were addressed. (i) Are there significant differences between groups of women categorized according to their willingness to donate oocytes with regard to (a) demographic data; (b) their attitudes towards oocyte donation in general, as well as to parenthood, the importance of the genetic link and disclosure of genetic information to offspring; and (c) their response to a recruitment advertisement? (ii) How do potential donors perceive the act of donating oocytes with regard to personal consequences, social support, values and perceived control? (iii) What factors would induce women to donate oocytes?

Materials and methods

Procedure

This study is part of a large survey concerning attitudes towards different aspects of oocyte donation among women and men in Sweden, results of which have been reported earlier (Skoog Svanberg *et al.*, 2003). Here only data for the female sample will be reported.

A questionnaire-based survey was carried out in the county of Uppsala, Sweden, in February 2002. About 2 months before the decision to introduce oocyte donation was made in the Swedish Parliament, a questionnaire was mailed to a selected sample of women and men, together with an accompanying letter explaining the purpose of the study and an invitation to participate. In addition, the proposed law, including the stipulation that at a mature age the offspring should have the right to obtain identifying donor information, was briefly described, as also was the procedure of oocyte donation. Three reminders were sent to non-respondents. The study was approved by the Local Ethics Committee of the Medical Faculty of Uppsala University.

Participants

The study population comprised 1000 women of ages 25–35 years in the county of Uppsala. Women of this particular age group were chosen because they roughly represent the populations of potential oocyte donors and recipients. The women were randomly selected from the national tax registration record. A total of 729 women (73%) completed the questionnaire. Since the third reminder included a shorter version of the questionnaire, 37 women (3.7%) answered only some of the questions. Twenty-four (2.4%) questionnaires were returned unanswered because the addressees were either mentally handicapped, had difficulties in understanding Swedish, were living abroad or had moved without giving a new address.

The proportion of respondents with college or university education (41%) was similar to the proportion among the inhabitants of the county of Uppsala (38%) and of the whole of Sweden (32%). The proportion of non-responders was the same in rural areas (27%) as in the largest town, Uppsala (27%). Non-responders and responders did not differ with regard to age. Characteristics of participants are presented in Table I.

The instrument

A study-specific questionnaire concerning attitudes towards oocyte donation was constructed on the basis of previous research and of explorative interviews with eight women and two men. 'The theory of planned behaviour' (TPB) (Ajzen, 1991) was chosen as the theoretical framework for the investigation of women's willingness to donate oocytes. According to this theory, an individual's intentions to perform a certain behaviour (e.g. donating oocytes) are influenced by her attitudes towards the behaviour, subjective norms and behavioural

control. A number of statements were formulated for assessment of the TPB components, as well as of attitudes towards various aspects of oocyte donation. The respondents were asked to indicate on a 5-point scale to what extent each attitude statement applied to them. For each statement, it was possible to respond with 'cannot form an opinion'. A pilot study was performed on a group of student nurses ($n = 25$) and, on the basis of the results and of comments by these students, the questionnaire was revised. Responses from participants in the pilot study indicated that most sections concerning TPB components were not suitable for women with no or little interest in becoming an oocyte donor. These sections were attitudes towards the behaviour (consequences of oocyte donation and evaluation of the act of donating oocytes), subjective norms (support from the partner, family and friends) and behavioural control (perceived control over the behaviour). According to the instructions in the final questionnaire, these sections were to be completed only by women who stated that they would consider donating oocytes in the future.

The final version of the questionnaire included items covering the following areas. Some items were reversed so that higher scores consistently indicated a positive attitude.

The following questions were answered by all participants.

(i) Willingness to donate oocytes in the future (one item). The question was formulated 'would you consider anonymously donating oocytes at some point in the future?' with response categories 'yes', 'maybe, I do not know' or 'no'.

(ii) Attitudes towards oocyte donation in general (five items). The items are presented in Table II. The response categories were formulated to indicate levels of agreement ('strongly agree', 'agree somewhat', 'neutral', 'disagree somewhat' and 'strongly disagree'). Cronbach's α was 0.67 (Cronbach, 1990).

(iii) Attitudes towards specific circumstances in the procedure of oocyte donation (six items). The items are presented in Table III. The response categories were formulated to indicate levels of agreement.

(iv) Attitudes towards parenthood (six items). This subscale included the statements: 'having children is the most important thing in life', 'a child is an expression of the love shared by two people', 'a relationship is incomplete without children', 'having children means losing your freedom', 'self-fulfillment is difficult to attain if you have children' and 'having children is the whole purpose in life'. The response categories were formulated to indicate levels of agreement. Cronbach's α was 0.86.

(v) Attitudes towards the genetic link (four items). The items are presented in Table IV. The response categories were formulated to indicate levels of agreement. Cronbach's α was 0.80.

(vi) Attitudes towards disclosure to offspring (six items). This subscale included the statements: 'children conceived through oocyte donation should have the right to know about their genetic origin', 'as an adult, the child should be able to find out the identity of the oocyte donor', 'the parents should decide whether or not they want to tell their child of his or her origin', 'parents should be honest with their children with regard to their genetic origin', 'it is in the best interest of the child that she/he never be informed of her/his genetic origin' and 'the child's relationship with her/his parents could be damaged if she/he learns of his genetic origin'. The response categories were formulated to indicate levels of agreement. Cronbach's α value was 0.78.

(vii) Response to a recruiting advertisement (four items). Respondents were asked to assess hypothetically their level of response after reading a recruiting advertisement concerning oocyte donation (Table V). The response categories were formulated to indicate levels of likelihood ('most likely', 'rather likely', 'neutral', 'rather unlikely' and 'most unlikely').

(viii) Factors that would induce women to donate (12 items). The items are presented in Table VII. Response categories were

Table III. Responses of the women, subgrouped into 'potential donors', 'doubtful' and 'non-donors', concerning specific circumstances in the procedure of oocyte donation^a

Statement	Reply	Potential donors (<i>n</i> = 120) % (Md ^b)	Doubtful (<i>n</i> = 318) % (Md ^b)	Non-donors (<i>n</i> = 286) % (Md ^b)	<i>P</i>
Women who undergo IVF should be asked to donate the remaining oocytes.	Agree	74 (5)	65 (4)	46 (4)	<0.001 ^{c,d} , <0.01 ^e
	Neutral	8	9	15	
	Disagree	8	11	20	
	Cannot form an opinion	8	15	18	
Women who want to be sterilized should first be asked if they want to donate oocytes.	Agree	74 (5)	60 (4)	42 (3)	<0.001 ^{c,d} , <0.01 ^e
	Neutral	11	11	16	
	Disagree	8	16	30	
	Cannot form an opinion	4	13	10	
Advertising via media such as newspapers is a good method for recruiting women for oocyte donation.	Agree	43 (3)	38 (3)	28 (2)	<0.01 ^{c,d} , NS ^e
	Neutral	21	17	15	
	Disagree	31	35	44	
	Cannot form an opinion	4	10	11	
The woman who donates oocytes and the couple receiving oocytes should be anonymous to each other.	Agree	49 (2)	45 (2)	44 (2)	NS ^{c,d,e}
	Neutral	18	23	24	
	Disagree	23	17	14	
	Cannot form an opinion	8	15	17	
The oocyte donor should have some relationship (family/friend) with the receiving couple	Agree	2 (1)	5 (1)	8 (1)	NS ^{c,d,e}
	Neutral	23	23	20	
	Disagree	64	59	55	
	Cannot form an opinion	9	13	15	
Only women under 43 years of age should be able to receive donated oocytes	Agree	43 (4)	50 (4)	59 (4)	<0.001 ^{c,d} , NS ^e
	Neutral	14	11	8	
	Disagree	23	22	15	
	Cannot form an opinion	16	17	16	

^aThere was an internal drop-out of 1–2% for each item.

^bMedian values were calculated on original data (five-step scale) for each item.

^cPotential donors compared with the non-donor group.

^dDoubtful group compared with the non-donor group.

^ePotential donors compared with the doubtful group.

NS, non-significant.

formulated to indicate levels of certainty ('definitely', 'probably', 'neutral', 'probably not' and 'absolutely not').

The following questions were answered only by potential donors.

(i) Attitudes to the consequences of oocyte donation (seven items). The items are presented in Table VI. Response categories were formulated to indicate levels of likelihood.

(ii) Perceived social support and control (two items). The statements were: 'the important people in my life would support my decision to donate oocytes' and 'it is entirely up to me whether or not I want to donate oocytes'. Response categories were formulated to indicate levels of agreement. The importance of having persons to consult (spouse, children, parents, friends, personnel at the infertility clinic, gynaecologist) was assessed by levels of extension ('very much', 'rather a lot', 'neutral', 'rather little', 'not at all').

(iii) Evaluation of the act of donation (four items). The act of oocyte donation was evaluated on four 5-point scales with endpoints 'very

good' and 'very bad', 'very sensible' and 'very foolish', 'highly problem free' and 'very problematic' and 'very important' and 'very unimportant'. Each scale had a response 'neutral' in the middle.

When the results were compiled in tables, data were organized into three categories instead of five. The two positive response categories and the two negative categories were collapsed into one group each. The attitude 'neutral' remained single (Tables II–VI). Concerning the circumstances that would make women more likely to donate oocytes, only the positive responses 'definitely' and 'probably' are presented (Table VII).

Data analysis

Comparisons of background data between subgroups of women were performed with χ^2 tests. For comparisons of individual items between subgroups, the Mann–Whitney *U*-test was used on original five-step data. Median (Md) values were calculated for each attitude subscale

Table IV. The attitudes of the women, subgrouped into 'potential donors', 'doubtful' and 'non-donors', towards the importance of the genetic link^a

Statement	Reply	Potential donors (<i>n</i> = 118) % (Md ^b)	Doubtful (<i>n</i> = 298) % (Md ^b)	Non-donors (<i>n</i> = 271) % (Md ^b)	<i>P</i>
The genetic link between father and child is important	Agree	12 (2)	26 (2.5)	40 (3)	<0.001 ^{c,d,e}
	Neutral	17	18	13	
	Disagree	63	43	34	
	Cannot form an opinion	5	5	7	
The genetic link between mother and child is important	Agree	11 (2)	27 (2)	39 (3)	<0.001 ^{c,d,e}
	Neutral	18	16	13	
	Disagree	63	45	35	
	Cannot form an opinion	5	4	6	
It is important to me that my child physically resembles me	Agree	18 (1)	19 (2)	28 (2)	<0.001 ^c , <0.01 ^{d,e}
	Neutral	12	19	17	
	Disagree	64	53	45	
	Cannot form an opinion	3	2	3	
It is important to me that my child resembles me in terms of behaviour	Agree	18 (2)	19 (2)	28 (3)	<0.01 ^c , NS ^{d,e}
	Neutral	12	19	17	
	Disagree	64	53	45	
	Cannot form an opinion	3	2	3	
Subscale ^f		(1.5)	(2)	(3)	<0.001 ^{c,d,e}

^aThere was an internal drop-out of 1–2% for each item.

^bMedian values were calculated on original data (five-step scale) for each item.

^cPotential donors compared with the non-donor group.

^dPotential donors compared with the doubtful group.

^eThe non-donor group compared with the doubtful group.

^fThe subscale consisted of 629 women.

NS, non-significant.

and respondent (Svensson, 2001). Comparisons of subscale medians between subgroups were performed with Mann–Whitney *U*-test. Respondents who could not form an opinion on more than one-third of the items in a subscale were excluded from the analysis. A *P*-value of <0.05 was considered statistically significant.

Results

Potential donors, the doubtful group and non-donors

The sample was split into three groups according to women's willingness to become oocyte donors: the 'potential donors' (*n* = 120; 17%) reported that they would be willing in the future to donate anonymously; the 'non-donors' (*n* = 286; 39%) were unwilling to donate; and the women in the 'doubtful' group (*n* = 318; 44%) were unsure or could not form an opinion on the subject. Five participants did not report their willingness to donate and therefore could not be categorized into these groups.

Differences in background data

The non-donors were more likely to have children of their own than were the other groups (Table I). Compared with the doubtful group, non-donors were older and more likely to have been born outside Sweden. Potential donors were more likely to have given blood compared with the other groups.

Differences in attitudes

The potential donors were more in favour of oocyte donation in general than were non-donors and the doubtful group (subscale *P* < 0.001) (Table II). In comparison with non-donors, the potential donors and the women in the doubtful group were more favourably disposed towards the idea of recruiting donors via the media among women undergoing IVF or sterilization, and more negative towards having an age limit of 43 years for oocyte receivers (Table III). In addition, the genetic link between parents and offspring was less important to potential donors than it was to the doubtful group and the non-donors (subscale *P* < 0.001) (Table IV). There were no group differences regarding the attitudes towards different aspects of parenthood or the attitudes towards disclosure of the genetic origin to offspring. The great majority in the three groups (77–79%) were positive towards parents giving oocyte offspring information about the circumstances of the conception. In addition, almost half of the responding women (43–48%) were positive towards giving the offspring information about the donor's identity at a mature age, while one-third were opposed to this (27–32%).

Differences in behavioural intentions

Regarding responses to a hypothetical advertisement for recruiting oocyte donors, significant differences were found

Table V. The likelihood of action in women, subgrouped into 'potential donors', 'doubtful' and 'non-donors', after reading a recruiting advertisement in the morning paper^a

Would you...	Reply	Potential donors (<i>n</i> = 118) % (Md ^b)	Doubtful (<i>n</i> = 298) % (Md ^b)	Non-donors (<i>n</i> = 271) % (Md ^b)	<i>P</i>
...surf to the clinic's website to get information?	Likely	71	35	14	<0.001 ^{c,d,e}
	Neutral	6	7	4	
	Not likely	21	57	79	
	Cannot form an opinion	1	1	2	
...contact the clinic for more information?	Likely	45	15	6	<0.001 ^{c,d,e}
	Neutral	19	10	3	
	Not likely	34	73	87	
	Cannot form an opinion	2	2	2	
...contact the clinic with the intention of donating oocytes?	Likely	37	4	4	<0.001 ^{c,d,e}
	Neutral	23	9	1	
	Not likely	41	87	95	
	Cannot form an opinion	9	7	3	
.....attend an information meeting?	Likely	39	8	4	<0.001 ^{c,d,e}
	Neutral	14	10	2	
	Not likely	47	82	94	
	Cannot form an opinion	3	2	3	

^aThere was an internal drop-out of 1–3% for each item.

^bMedian values were calculated on original data (five-step scale) for each item.

^cPotential donors compared with the doubtful group.

^d Potential donors compared with the non-donors.

^eThe doubtful group compared with the non-donors.

between the three groups (Table V). Among potential donors, a majority would 'surf' to the infertility clinic's website for more information, and about one-third would attend an information meeting or contact the infertility clinic.

Perceptions by potential donors

Perceived consequences of oocyte donation

Almost all of the potential donors indicated that they would be happy about helping another couple by donating oocytes, and looked upon this as a contribution made to a fellow human being (Table VI). Almost half of the potential donors answered that they would not want any information regarding the well-being of the child, and one-third stated that they would not appreciate it if their biological child at a mature age tried to contact them. Twenty-two percent of the potential donors thought that they would brood about the donation for the rest of their lives.

Evaluation of the act of donation

Potential donors' overall evaluation of the act of oocyte donation was positive (subscale Md 4). The majority of women indicated that they would feel that the act of donation was good (90%), sensible (72%) and important (75%). Fifteen percent of the potential donors thought that oocyte donation would be problematic.

Perceived support and perceived control over the behaviour

The persons/groups of persons whom potential donors most frequently reported that they would consult about the donation

was the partner/husband (*n* = 103, 86%), the staff at the infertility clinic (*n* = 92, 77%) and friends (*n* = 67, 56%). Among those who reported that they would consult their partner/husband, almost all (91%) stated they would comply with the husband's/partner's wishes. The advice of the infertility clinic would influence the majority (86%) of the women consulting them. Of those consulting friends, only 43% would follow their friend's advice on this issue. While most potential donors (*n* = 96, 80%) believed that the important people in their lives would support their decision to donate oocytes, a majority (*n* = 89, 74%) stated that it was entirely up to them whether or not they would donate oocytes,

Circumstances that would induce more women to donate

Almost half of the respondents reported that they would be more likely to become oocyte donors if they were able to speak to women who had already donated oocytes, if they could undergo the procedure at a hospital in their area, and if they already had children of their own (Table VII). Other factors of importance were the possibility of receiving professional counselling, being given more information about what it is like to be infertile, and having complete anonymity and a shorter treatment period.

Discussion

Willingness to donate in relation to parenthood

A considerable proportion of the participating women reported that they would consider donating oocytes anonymously in the

Table VI. The attitudes of the potential donors towards different aspects of donation^a

If you were to donate oocytes, you would.....	Reply	n = 118 (%)
...be happy about helping a couple unable to have children by other means.	Most likely/rather likely	98
	Neutral	0
	Rather unlikely/most unlikely	0
	Cannot form an opinion	0
...feel as though you had made a contribution to your fellow human beings.	Most likely/rather likely	95
	Neutral	1
	Rather unlikely/most unlikely	0
	Cannot form an opinion	1
...be content for the rest of your life.	Most likely/rather likely	80
	Neutral	11
	Rather unlikely/most unlikely	4
	Cannot form an opinion	2
...be glad that perhaps your biological child might try to find you after 18 years.	Most likely/rather likely	38
	Neutral	17
	Rather unlikely/most unlikely	31
	Cannot form an opinion	11
...want information regarding the well-being of the child, if any.	Most likely/rather likely	24
	Neutral	14
	Rather unlikely/most unlikely	48
	Cannot form an opinion	12
...brood about it for the rest of your life.	Most likely/rather likely	22
	Neutral	14
	Rather unlikely/most unlikely	50
	Cannot form an opinion	10
...be happy that your genes were being passed on.	Most likely/rather likely	20
	Neutral	42
	Rather unlikely/most unlikely	31
	Cannot form an opinion	4

^aThere was an internal drop-out of 0–3% for each item.

future. The potential donors did not have more positive attitudes towards parenthood than the other two groups. In a previous study (Kalfoglou and Geller, 2000b), motives for donation were the donors' own love of motherhood and the thought that they would have been devastated if they had been unable to have children. In addition, a donor's motivation might be the gratification of maternal desires (Raoul-Duval *et al.*, 1992). On the other hand, it has been reported that many donors regarded their oocytes as a monthly loss, and that they made a distinction between the oocyte donated and the child born afterwards (Baetens *et al.*, 2000). A more unconventional motive among a minority of donors may be that oocyte donation provides them with an opportunity to pass on their own genes (Kalfoglou and Geller, 2000b), which was confirmed in our study. Respondents of the present study stated that already having a child of their own would increase the likelihood of their donating. These findings may indicate a belief that women with children of their own would probably feel less afraid of ending up as a donor with offspring raised by other families but no children of her own. Interestingly, this finding was contrasted by the fact that the group with the largest proportion of mothers was the non-donor group. While this finding is not in line with previous reports suggesting that the typical anonymous donor has one or two children (Kan

et al., 1998), it suggests that motherhood may also be associated with a reluctance towards oocyte donation.

Motives of potential donors

The potential donors were generally more positive towards oocyte donation and regarded the genetic link between the parent and child to be of less importance compared with non-donors and the doubtful group, which is to be expected in women who are willing to donate oocytes. Among the potential donors, a higher proportion had experience of donating blood, indicating that there may be altruistic motives for donation, as suggested in a number of previous reports (Sauer *et al.*, 1994; Söderström-Anttila, 1995). However, according to our results, there is not necessarily an association between negative attitudes towards oocyte donation and negative attitudes towards the willingness to be a donor oneself. Even though women in the doubtful group and non-donor group hesitated or did not want to be donors themselves, positive attitudes were expressed towards oocyte donation as a method for helping infertile couples. In a follow-up study among oocyte donors (Kalfoglou and Geller, 2000b), it was reported that half of the participants studied knew someone who had struggled or was currently struggling with infertility. This was also true for the majority of respondents in the present study, and there were

Table VII. Factors that would make women more likely to donate oocytes

Would you be more likely to donate if...	Reply	Potential donors (<i>n</i> = 118) %	Doubtful (<i>n</i> = 298) %	Non-donors (<i>n</i> = 271) %	Of all women asked (<i>n</i> = 687) % in total (%)
...you could talk to women who had already donated oocytes?	Definitely	39	23	5	18
	Probably	37	42	15	30 (48)
...you could undergo the procedure in a hospital in your area?	Definitely	46	22	4	19
	Probably	36	39	9	26 (45)
...you already have children of your own?	Definitely	34	22	8	19
	Probably	34	38	10	26 (45)
...you could get counselling?	Definitely	34	19	4	16
	Probably	35	35	9	25 (41)
...you had more information about what it is like to be infertile?	Definitely	16	7	1	6
	Probably	31	49	12	31 (37)
...as a donor you could be completely anonymous: that is, neither the couple nor the child would ever find out your identity?	Definitely	30	16	5	14
	Probably	20	29	11	20 (34)
...the treatment period prior to the donation procedure was shorter?	Definitely	18	7	3	7
	Probably	44	37	7	26 (33)
...you knew the couple to whom your oocytes were being donated?	Definitely	11	11	3	8
	Probably	9	17	14	15 (23)
...you could have information about how the child is doing in the future?	Definitely	7	10	3	7
	Probably	13	21	8	14 (21)
...you were asked at a routine gynaecological examination?	Definitely	9	3	1	3
	Probably	31	24	4	17 (20)
...you received substantial financial compensation (in addition to your actual costs)?	Definitely	10	6	2	6
	Probably	18	21	4	14 (20)
...the procedure was carried out at an unfamiliar hospital?	Definitely	7	3	2	3
	Probably	4	9	4	6 (9)

similar numbers in the three groups. This indicates that there was no relationship between knowing persons with infertility problems and the intention to donate. As in previous follow-up reports of oocyte donors (Fielding *et al.*, 1998; Klock *et al.*, 1998; Partrick *et al.*, 2001), almost all potential donors indicated that they would be happy about helping another couple. The fact that a considerable proportion of this group also reported that they would always brood about the donation and that they would consider it problematic stresses the complexity of the decision to donate oocytes.

Disclosure to offspring

The question of the offspring's right to know about their origin has generated worldwide discussion (Leiblum and Aviv, 1997; Nachtigall *et al.*, 1997; Golombok *et al.*, 1999; Rumball and Adair, 1999; Gottlieb *et al.*, 2000; Lindblad *et al.*, 2000). Disclosure to offspring seems to have two major components, namely the right to know about the circumstances of the conception and the right to obtain identifying information

about the donor. Previous studies have shown that the majority of parents by gamete donation do not inform their children about the donation (Brewaeys *et al.*, 1997; Söderström-Anttila *et al.*, 1998; Gottlieb *et al.*, 2000); however, more parents by oocyte donation compared with sperm donors intend to inform the child (Golombok *et al.*, 1999). For this reason, the authors of a study concerning donor insemination in Sweden (Gottlieb *et al.*, 2000) raised the question of compliance with Swedish law. In practice, a child may only exercise her/his legal right to obtain identifying information of the donor if the parents' inform her/him of the circumstances of the conception (Shenfield and Steele, 1997). In the present study, one-third of potential donors were negative towards the idea of disclosing the donor's identity to the offspring. It is known from previous research that when attempts were made to recruit women for oocyte donation programmes, about two-thirds who initially were interested withdraw voluntarily prior to donation (Gorrill *et al.*, 2001). Since children conceived by oocyte donation in Sweden have the legal right to obtain information

about the donor's identity, initially interested women opposed to disclosing the donor's identity to the offspring may not be willing to donate their oocytes. If this proves to be the case, the proportion of potential oocyte donors will be smaller than indicated by our results. A common objection to becoming a donor seems to be the preferences among some women to remain anonymous all their lives, as also has been reported previously (Westlander *et al.*, 1998). A crucial finding among the group of potential donors in our survey was that one-third stated that they would not want the child to try to contact them when the child reached a mature age. However, whereas most countries continue to support anonymous donation, there are indications that more donors are willing to be identified and that public attitudes towards gamete donation are changing (Fasioliotis and Schenker, 1999; Greenfield, 2002). In addition, information about the outcome of the donation may influence the way in which donors interpret their experience. Finally, it should be noted that half of the potential donors were positive towards offspring obtaining identifying information about the donor, and that one-third would be glad if the offspring tried to contact them in the future.

Recruitment of oocyte donors

A typical oocyte donor is described as a married mother in her late twenties with altruistic ideas, who acts out of feminine solidarity and feels good about donating a gift to another woman (Sauer *et al.*, 1994; Söderström-Anttila, 1995). An interesting question is how to recruit such women, and many clinics place advertisements in magazines and newspapers. It was found in a previous report that tabloids were more effective than broadsheets in reaching potential donors (Kan *et al.*, 1998). The respondents in our study were instructed to read a hypothetical advertisement in a daily morning newspaper and were then asked how likely it was that they would react in certain proposed ways. While potential donors were most likely to engage in actions for gaining more information about the donation programme, one-third of the doubtful group reported that they would visit the recruiting clinic's website. This suggests that the Internet is a good way of reaching women who want to obtain more information about oocyte donation without disclosing their identity. The Internet has already provided a forum for oocyte donors to interact both with each other and with infertility clinics (Kalfoglou and Geller, 2000a). In our study, a considerable number of potential donors stated that they would not respond to the advertisement in any of the proposed ways. One possible explanation for this is that they needed more time for consideration or that they would consider donation at some future date. It has been concluded that improved donor satisfaction is likely to improve donor recruitment (Kalfoglou and Geller, 2000b). Previous reports have pointed out different donor motivations (Greenfield *et al.*, 1995; Klock *et al.*, 1998). In the present study, financial compensation and future information about how the child is getting on were generally not among the priorities of respondents. Almost half of the respondents considered it important to talk to women who had already donated oocytes, supporting earlier findings (Partrick *et al.*, 2001). Communicating with other women who have donated

oocytes may give the potential donor a neutral and realistic view of oocyte donation, and such communication could easily be arranged by the infertility clinic. Proximity to the infertility clinic was regarded as another important factor, a finding in line with results of previous qualitative follow-up studies of donors, which indicated that several practical improvements, including absence of transportation problems, would attract potential donors (Kalfoglou and Geller, 2000b). The potential donors and the doubtful group gave considerable priority to some additional factors such as accessible counselling, more information about infertility, shorter treatment before donating oocytes and complete anonymity as a donor. More information about the struggle of couples to conceive, and learning more about the great demand for donated oocytes may make some women feel empathy and increase their motivation to donate, as has been suggested previously (Kalfoglou and Geller, 2000a). In one study, stated reasons why women did not go through with the donation included the distance involved, the drug regime and fear of complications (Kan *et al.*, 1998). In Sweden, we should probably add to the above reasons the fear of a potential child contacting the donor.

The most important person that the potential donors said they would consult about the donation was the partner/husband, and almost all of the women indicated that they would comply with their partner's/husband's wishes. However, the great majority of potential donors said that they believed that the important people in their lives would support their decision to donate oocytes. In the case of donor insemination, the support of the semen provider's partner has previously been found to be important (Lalos *et al.*, 2003). Also, it has been reported that many oocyte donors have been encouraged by their partners to participate in an oocyte donation programme (Söderström-Anttila, 1995). Among randomly selected men in Sweden, a majority said that they would support their wives or girlfriends if they wanted to donate oocytes in the future (Skoog Svanberg *et al.*, 2003). Hopefully, there is a tendency for interested potential donors to have partners who do not object to, but rather support the woman's decision to become a donor. The staff of the infertility clinic were regarded as the second most important group of people to consult about the donation, emphasizing the need for careful professional counselling at these clinics.

Methodological considerations

In this report, we present data concerning attitudes towards oocyte donation compiled from a large, randomized sample of the Swedish population. The main focus of the investigation was anonymous donation, as this is the preferred way of donating according to the Swedish Council's directive to the infertility clinics. Considering the topic of the present study, we expected a fairly high response rate among women. There were indications of response bias with respect to educational level, place of residence and ethnic background (for instance, there was a large proportion of foreign names among the non-respondents). Separate analyses (data not shown) indicated that respondents born outside Sweden were significantly less positive towards oocyte donation in general and disclosure to the child than were respondents born in Sweden. However,

there was no group difference with regard to women's willingness to donate oocytes. The questionnaire was constructed specifically for this survey in order that the questions formulated would be appropriate for the current legal circumstances. The use of non-standardized questions, however, limits the possibilities of validating the questionnaire and the generalizability of the results. The results regarding women's willingness to donate oocytes should be regarded with caution, since one can expect a discrepancy between an individual's report of what they consider doing in the future and how they will actually behave. In the present study, the likelihood of such a discrepancy is increased by the fact that oocyte donation was not yet legalized in Sweden at the time of the survey. For this reason, the study results should be regarded as trends among the Swedish public.

Conclusion

Seventeen percent among a subset of the Swedish population stated that they would consider donating oocytes anonymously in the future. These potential donors had a more positive attitude towards oocyte donation and felt that the genetic link was of little importance. One-third of the potential donors indicated that they would not appreciate it if the child contacted them later in life. Factors that might increase the likelihood of women becoming oocyte donors were talking to women with experience of donating oocytes, proximity to the clinic, having children of their own and accessibility of counselling. In an environment where oocyte donors are probably difficult to recruit, the well-being of the donor is important. Our results suggest that for women who are interested in donating oocytes, the information about consequences of donation and the care provided by the infertility clinic are of great importance. This could have implications for the way in which clinics should develop a programme to attract potential donors.

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