Attitudes and motives of semen donors and non-donors

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This study surveyed the views of three groups of men in relation to the situation of semen donation. In all, 97 childless student semen donors, 56 childless non-donor students and 44 mature non-donor fathers completed a questionnaire designed to explore possible motives for donating semen and preferences for involvement with recipients and offspring. Results showed the three groups could be discriminated with respect to their views about motivation and involvement in a number of ways. The major findings were: (i) relatively more donors than non-donors endorsed the importance of financial incentives for donating; (ii) non-donors, who were also fathers, favoured involvement with recipients and offspring more often than did non-fathers (donors and non-donor students); (iii) all groups expressed the importance of confidentiality and guaranteed anonymity. These results are discussed in relation to strategies for donor recruitment.

Key words: attitudes/fathers non-donors/semen donors/students non-donors

Introduction

This paper addresses two broad issues which are central to the situation of donor insemination (DI). The first concerns semen donors' motives for donating and their attitudes toward openness/involvement with respect to their donation. The second is about selection criteria for semen donors. The two issues are not unrelated because, although currently donor screening focuses only on identifying genetic and sexually transmitted diseases [American Fertility Society (AFS), 1990; British Andrology Society (BAS), 1993], arguments can be made that some psychological dimensions such as donors' motives should be considered.

In 1990 the Human Fertilization and Embryology Act required all donors to register their name, date of birth, personal interests and physical characteristics with the Human Fertilisation and Embryology Authority (HFEA). Since the implementation of the Act in 1991, many centres have reported a shortage in the supply of semen donors (Golombok and Cook, 1994), arguably because potential donors fear that their identities may be discovered. It was against this background that we embarked on a series of studies, the first phase of which was a survey of semen donors’ attitudes toward openness/involvement with recipients and offspring and also their motives for donating (Lui et al., 1995).

The present study focuses on comparisons between semen donors and two non-donor groups in relation to these same motives and attitudes. Non-donating students constitute an interesting group for such purposes because most semen donors in the UK are students (Barratt, 1993; Golombok and Cook, 1995). Comparative information from these two student groups would help to elucidate the issues that differentiate donors from non-donors. Fathers comprise the second group of non-donors in this investigation. Recently there has been some shift towards recruiting married men with children (rather than students) for semen donation, possibly due to Holme's (1993) research finding that non-father students do not understand the full implications of DI and fatherhood and hence their recruitment may be unethical. At a more pragmatic level, fathers have demonstrated potency and, provided they are in stable relationships, are less likely to be infected with sexually transmitted diseases. However, recruitment of this type of donor has been difficult (Chauhan et al., 1988), although radio advertising directed at this group in Sheffield has met with some success (Cooke, 1993). If men with these characteristics are to be recruited in large numbers, then information is needed about how they view the issues which are central to the situation of semen donation. For example, one issue of particular interest would be whether fathers, who already have a committed relationship to at least one child, would find the donation situation problematic in terms of the degree of detachment required from their DI offspring.

The HFEA's code of practice (HFEA, 1993) states that the attitudes of semen donors should be examined, but does not specify the relevant attitudes. Little research has been undertaken on this subject in the UK, interest being restricted to issues relating to donors' payment and anonymity. This is likely to be because the major concern of most clinics is to attract and retain donors in order to offer a cost effective DI service (Golombok and Cook, 1994).

Donors' motives may be complex and dependent upon a number of individual and cultural factors. Our first study (Lui et al., 1995) found that whilst most donors said they would not donate if payment was discontinued, they also reported 'helping infertile couples' as the most rewarding aspect of donation. Many reports have shown the importance of financial incentives for semen donors (Kovacs et al., 1983; Nicholas and Tyler, 1983; Handelsman et al., 1985; Fiddell et al., 1989; Sauer et al., 1989; Schover et al., 1992; Golombok and Cook, 1995). Other studies have found altruism to be the primary motive for non-student donors (Handelsman et al., 1985;
Daniels, 1989; Novaes, 1989). Concern arises that restricting donor recruitment to the purely altruistically motivated may restrict the pool of prospective donors. Possibly the total withdrawal of payments may be experienced as a financial penalty by current donors, leading them to discontinue their involvement with semen donation and place those currently receiving payment at an economic disadvantage. Furthermore, Nijs et al. (1980) advocated payment on the grounds that this may help to 'neutralize' the donors' emotional reaction to the situation.

Despite DI being a long established method of treating infertility, it is surrounded by secrecy. There are at least two possible reasons for this. First, semen donation may convey a negative image, for example, sperm vendors (Annas, 1980). Second, the secrecy issue may possibly reflect society's uncertainty about the nature of fatherhood. Perhaps the reluctance of DI recipients to tell their offspring about their origins (Kovacs et al., 1993; Schover et al., 1994) reflects an implicit fear that the biological rather than the social father will be perceived as the 'true' father (Bielawaska-Batorwicz, 1993)? If so, then donors may naturally be concerned about their moral and legal liability in relation to their DI offspring and the possible disruption to their family life in the future (Daniels and Taylor, 1993). Hence, the secrecy surrounding DI may serve to protect donors in several ways. Therefore, it is not surprising that two studies report that donors would not donate without the protection of anonymity (Robinson et al., 1991; Golombok and Cook, 1995). Similarly, the great majority of donors in our previous study (Lui et al., 1995) wished for no present or future involvement with either recipients or offspring, although some were curious about recipients. Interestingly, this requirement for secrecy (both on the part of donors and recipients) runs counter to recent trends in adoption procedures in the UK which favour openness and allow for some degree of contact between the natural and adoptive parents and the child.

Understanding the attitudes and motives of donors is important both in relation to recruitment strategies and also for ensuring that donors' needs and concerns are properly considered. The purpose of this study was to investigate the attitudes of semen donors, non-donor students and married non-donating fathers towards three aspects of the donation situation: involvement with the donating process per se and with recipients and offspring. It might be expected that the fathers would respond differently with respect to their wishes for involvement, since their personal experiences of fatherhood may work against a detached view of the recipients and offspring. Motivation to donate semen was also explored. In our previous study (Lui et al., 1995), donors endorsed the importance of financial incentives and anonymity, but it is not known whether the other two groups in this study would express similar views.

Materials and methods

Participants
A total of 259 men took part. All were volunteers and represented one of the three groups described below.

Semen donors
A total of 104 donors, who were nearly all students, were recruited from licensed semen donor clinics in Hull, Eastbourne, Leeds and Oxford (Lui et al., 1995). All were childless. Seven were removed due to incomplete questionnaires, leaving 97 participants in this group. There were no refusals to participate. The ages of donor participants ranged from 18 to 38 years (mean age = 22.7 years).

Non-donor students
Participants in this group were recruited from a range of sites on the University of Hull campus. In all, 101 students were invited to take part in the study. A total of 95 students accepted questionnaires, of which 75 were returned (total response rate of 78.95%). Of these, six were married with children and, because they were comparable in age with the 'fathers', they were added to the fathers' group. Thirteen individuals were removed due to incomplete questionnaires, leaving 56 in this group. Ages ranged from 18 to 32 years (mean age = 21.3 years).

Non-donor fathers
These participants were all employees of a large branch of a bank in the North of England (except for the six student non-donors described above). This group was recruited from a single employment site partly for logistic reasons but also because this enabled better control of the data collection procedures. Bank employees were chosen because these men were all employed in white collar, administrative positions which would be comparable to the likely future occupational status of student participants. After two refusals, 48 questionnaires were distributed and returned (total response rate of 96%). Four were removed because they were incomplete, leaving 44 in this group. The final sample ranged from 24 to 54 years (mean age = 38.3 years).

Questionnaires
The attitudes and motives survey
This instrument was developed by Lui et al. (1995). Participants were asked to 'agree' or 'disagree' with a number of statements tapping four issues: (i) donors' motives were conceptualized in terms of financial and altruistic rewards, demonstrating potency, embarrassment (a disincentive), unease about DI as a treatment (a disincentive) and confirmation of reproductive health; (ii) donors' involvement with/ detachment from the process of donation tapped respondents' wishes for more information through counselling, desires for anonymity, and the degree to which individuals dwell on the consequences of their donating semen; (iii) donors' involvement with/detachment from recipients concerned individuals' wishes for contact with or information about recipients; and (iv) donors' involvement with/detachment from offspring considered respondents' wishes for contact with future children and opinions about openness in relation to DI. The non-donors' questionnaire was modified so that each statement was prefaced with the words 'If I were a donor . . . ' and the wording was adjusted accordingly. Non-donors were asked to project themselves into the situation of being semen donors, even though they had not personally donated. Presumably, the decision to become a semen donor or not involves similar questions about one's expected feelings. The instrument contained 37 statements to which participants indicated their agreement or disagreement.

Procedure
All potential participants were individually approached and presented with a written explanation of the aims of the research. Semen donors were presented with and completed the questionnaires in the donor clinics (see Lui et al., 1995). Non-donor students received their questionnaires over a period of 6 months on the University campus and the majority returned them (in sealed envelopes) to the researcher on completion. A small number returned their questionnaires by post.
Table I. Items differentiating donors and non-donors in questionnaires (a) Items endorsed more frequently by donors (b) Items endorsed more frequently by non-donors

(a)

<table>
<thead>
<tr>
<th>Item</th>
<th>% endorsing</th>
<th>Donors (n = 97)</th>
<th>Non-donors (n = 56)</th>
<th>Fathers (n = 44)</th>
<th>P &lt; *</th>
</tr>
</thead>
<tbody>
<tr>
<td>It would not disturb me greatly to find out that I was conceived by DI</td>
<td>55.7</td>
<td>33.9</td>
<td>47.7</td>
<td>0.05</td>
<td></td>
</tr>
<tr>
<td>If I were not paid, I would not donate</td>
<td>70.1</td>
<td>44.6</td>
<td>25</td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td>Semen donors should be paid much more</td>
<td>52.6</td>
<td>23.2</td>
<td>27.3</td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td>I would feel quite comfortable discussing the fact I am a donor with my wife or partner and friends</td>
<td>81.4</td>
<td>66.1</td>
<td>63.6</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>I would not mind if recipients were given details of my physical characteristics, attitudes and personal interests</td>
<td>82.5</td>
<td>66.1</td>
<td>56.8</td>
<td>0.005</td>
<td></td>
</tr>
<tr>
<td>I have no desire ever to meet children conceived with my semen</td>
<td>81.4</td>
<td>60.7</td>
<td>70.5</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>I would not mind if my donor offspring were given my physical characteristics, attitudes and personal interests</td>
<td>84.5</td>
<td>60.7</td>
<td>63.6</td>
<td>0.001</td>
<td></td>
</tr>
</tbody>
</table>

*df = 1

(b)

<table>
<thead>
<tr>
<th>Item</th>
<th>% endorsing</th>
<th>Donors (n = 97)</th>
<th>Non-donors (n = 56)</th>
<th>Fathers (n = 44)</th>
<th>P &lt; *</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would welcome counselling that increased my awareness of the implications of donating semen</td>
<td>32.3</td>
<td>60.7</td>
<td>63.6</td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td>If I found out for certain that I had become a father, the idea would play heavily on my mind</td>
<td>17.5</td>
<td>44.6</td>
<td>40.9</td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td>I am curious about women that might receive my semen</td>
<td>33</td>
<td>64.3</td>
<td>45.5</td>
<td>0.005</td>
<td></td>
</tr>
<tr>
<td>I would like to have a say in the selection of recipients</td>
<td>5.2</td>
<td>30.4</td>
<td>13.4</td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td>I would like to be given a written description of recipients</td>
<td>11.3</td>
<td>23.2</td>
<td>29.5</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>I would prefer that my semen was not made available to single women</td>
<td>25.8</td>
<td>37.5</td>
<td>59.1</td>
<td>0.005</td>
<td></td>
</tr>
</tbody>
</table>

*df = 1

Non-donor fathers were given their questionnaires in their place of work and returned them in self addressed envelopes to a central collection point from which they were retrieved by the researcher 2 days later. Instructions to all participants emphasized the importance of completing the questionnaires in privacy and without consultation with others. The data from the two non-donor groups were collected over two weeks, six months after the donor groups.

Results

In order to obtain an overview of the results, the frequencies of agree/disagree responses for each questionnaire item were subjected to 2 (response) x 3 (group) Chi-square ($\chi^2$) analyses. Of the original 37 questionnaire items, 18 showed a significant effect. Hence the three groups could not be differentiated with respect to their views for roughly half of the items. Those items that were significant were subjected to further 2 x 2 contingency analyses in order to determine the exact nature of the group differences. In order to facilitate an understanding of the variables of interest, the original three subject groups were reclassified into two larger groups: donors versus non-donors and fathers versus non-fathers. Tables I–III present these results. The donor group's responses to all items can be found in Lui et al. (1995)

Table I indicates there were significant group differences. More donors than non-donors said that they would not donate unless paid and also felt that semen donors should be paid more ($\chi^2 = 22.98; 1$ d.f.; $P < 0.001$ and $\chi^2 = 15.89; 1$ d.f.; $P < 0.001$). In general, donors appeared to be more at ease with the situation of semen donation. As a group they were more likely to indicate that they would be comfortable about telling others that they were semen donors ($\chi^2 = 6.77; 1$ d.f.; $P < 0.01$) and also to be prepared to provide non-identifying information to recipients ($\chi^2 = 10.26; 1$ d.f.; $P < 0.005$) and offspring ($\chi^2 = 12.72; 1$ d.f.; $P < 0.001$). Donors were less likely to endorse a need for counselling ($\chi^2 = 17.83; 1$ d.f.; $P < 0.001$) or to be troubled by the idea of DI fatherhood ($\chi^2 = 15.09; 1$ d.f.; $P < 0.001$). Furthermore, they were less likely to anticipate being distressed if they discovered they were conceived by DI ($\chi^2 = 4.85; 1$ d.f.; $P < 0.05$).

In relation to the issue of involvement, the data revealed a tendency for the two non-donor groups to prefer a higher level of involvement with recipients, both at a personal level i.e. wishing to have a written description of recipients ($\chi^2 = 6.94$;
Table II. Items endorsed differently by fathers and non-fathers in questionnaires. (a) Items endorsed more frequently by fathers (b) Items endorsed more frequently by non-fathers
(a)

<table>
<thead>
<tr>
<th>Item</th>
<th>% endorsing item</th>
<th>Fathers (n = 44)</th>
<th>Non-donors (n = 56)</th>
<th>P &lt; *</th>
</tr>
</thead>
<tbody>
<tr>
<td>I think that it would be a good idea for donors and recipients to meet and develop a rapport before fertilization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would like to meet recipients</td>
<td>41</td>
<td>107</td>
<td>273</td>
<td>0.001</td>
</tr>
<tr>
<td>I would like to regularly meet a child conceived using my donated semen</td>
<td>62</td>
<td>107</td>
<td>205</td>
<td>0.025</td>
</tr>
<tr>
<td>I would like to play a full part in bringing up my donor offspring</td>
<td>31</td>
<td>54</td>
<td>182</td>
<td>0.005</td>
</tr>
<tr>
<td>I would prefer that my semen was not made available to single women</td>
<td>41</td>
<td>54</td>
<td>159</td>
<td>0.01</td>
</tr>
</tbody>
</table>

*df. = 1.

(b)

<table>
<thead>
<tr>
<th>Item</th>
<th>% endorsing item</th>
<th>Fathers (n = 44)</th>
<th>Non-donors (n = 56)</th>
<th>P &lt; *</th>
</tr>
</thead>
<tbody>
<tr>
<td>I don't think that offspring should ever be told they were conceived with donated semen</td>
<td>71.1</td>
<td>66.1</td>
<td>47.7</td>
<td>0.01</td>
</tr>
<tr>
<td>If I were not paid, I would not donate</td>
<td>70.1</td>
<td>44.6</td>
<td>25.0</td>
<td>0.001</td>
</tr>
</tbody>
</table>

*df. = 1.

Table III. Items of particular interest which all groups endorsed in questionnaires

<table>
<thead>
<tr>
<th>Item</th>
<th>% endorsing item</th>
<th>Donors (n = 97)</th>
<th>Non-donors (n = 56)</th>
<th>Students (n = 56)</th>
<th>Fathers (n = 44)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel sorry for infertile couples</td>
<td>95.9</td>
<td>94.6</td>
<td>86.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would not donate semen without a guarantee of anonymity</td>
<td>79.4</td>
<td>80.4</td>
<td>84.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 d.f.; P < 0.01) and being curious about recipients ($\chi^2 = 10.55$; 1 d.f.; P < 0.005) and at the stage of selection ($\chi^2 = 20.80$; 1 d.f.; P < 0.001). In particular, fewer non-donors than donors would wish their semen to be used for treating single women ($\chi^2 = 9.57$; 1 d.f.; P < 0.005). With respect to offspring, donors were more likely not to desire future contact ($\chi^2 = 6.77$; 1 d.f.; P < 0.01).

Of the 37 questionnaire items, 12 showed significant differences between the two groups of students (donors and non-donors). The results of these discrete comparisons between the student groups parallel those shown in Table I, with one exception. Donor and non-donor students were not significantly different from each other regarding the last item on the list, the treatment of single women.

As Table II shows, fathers as a group more frequently wished for personal contact with the recipients and progeny. Specifically they were more likely to want to meet and to establish a rapport with recipients ($\chi^2 = 5.71$; 1 d.f.; P < 0.025 and $\chi^2 = 12.80$; 1 d.f.; P < 0.001 respectively) and to wish to meet offspring regularly ($\chi^2 = 10.53$; 1 d.f.; P < 0.005) and to have a parenting relationship with them ($\chi^2 = 6.65$; 1 d.f.; P < 0.01). In general, however, relatively few participants in any of the groups endorsed these statements. Non-fathers more frequently endorsed the view that offspring should not be told about their origins ($\chi^2 = 6.93$; 1 d.f.; P < 0.01). They also were more likely to demand payment for donating ($\chi^2 = 17.56$; 1 d.f.; P < 0.001). On the other hand, more fathers would be against DI for single women ($\chi^2 = 12.41$; 1 d.f.; P < 0.001).

Two particular issues of interest to this study are the attitudes toward infertile couples and preferences for anonymity (see Table III). Virtually all participants had sympathy for the infertile couples. Secondly, anonymity with respect to donation was important for all groups.

Discussion

The purpose of this study was to investigate what, if any, motives and attitudes differentiate semen donors from non-
Motives of semen donors

donors in order to inform recruitment strategies and assess the likely implications of changes in the current policy for donor selection. The data show that the three groups of men surveyed were comparable in relation to two crucial issues. The vast majority felt compassion for infertile couples, but would not donate without guaranteed anonymity. However, with respect to motives for donating and the issues of involvement/detachment, there were notable group differences.

Donors were most likely and fathers were least likely to demand financial reimbursement as a condition for donation. This is not surprising given that the fathers in this study were all employed and hence more economically secure. These results do suggest that, if payment is discontinued, as the French experience has shown (Navaes, 1989), it is likely that fathers, being less interested in the financial incentive, would be more represented in the future donor population. However, a drop in the number of established donors could be expected, making DI services extremely difficult at least in the short term. The removal of payment however would address the ethical concerns that paid donors are in fact ‘vendors’ (Annas, 1980) and eliminate the possibility of the financially stressed participating in DI for a short-term financial benefit without full consideration of the long-term implications of their participation.

However, this view of the financial incentive may be oversimplistic. Interestingly, student non-donors did not strongly endorse the financial motive for semen donation. Fewer than half these men felt payment to be essential for donation and less than 25% felt donors should be paid more. In this respect non-donor students were more similar to the fathers in this study than to their peers. Clearly economic status is not the sole factor determining men’s views about this issue. However, it should also be recognized that none of the donors in this study received payments in excess of £10. Having had actual experience of semen donation, donors possibly are in a better position than non-donors to appraise the real ‘costs’ of their participation. The donors may see the monetary element less in terms of an incentive payment than as a reasonable reimbursement for genuine costs incurred (e.g. travelling time and expenses, unpleasant screening procedures). If this is the case then the possible withdrawal of payment would be seen as a financial penalty and would naturally provoke a negative reaction. Furthermore, as previously mentioned by Nijs et al. (1980), receiving payment may help to ‘neutralize’ the donors’ emotional reaction to the situation. The psychological meaning of these payments needs to be more systematically explored.

In general, non-donors expressed less detached attitudes about most aspects of the donation situation, including the use of their donated semen for treating single women. This was especially the case for fathers, a higher proportion of whom would favour actual contact with both recipients and offspring. Fathers were also relatively more in favour of children being told about their DI origins. A minority of these men (16%) would wish to play a full part in the upbringing of their DI child. Presumably, these individuals would be unlikely to donate under the current legislation, since this would generate a high degree of personal conflict. Were the situation to change in the direction of more openness, this subgroup of fathers might well feel inclined to donate semen. Interestingly, a recent report by Daniels and Lalos (1995) found openness was not associated with a decline in donors in Sweden. We do not feel it would be safe to generalize this finding to men in the UK, as there may be cultural differences between the UK and Sweden. Currently, most recipients do not even want their offspring to know that they were born via DI treatment (Kovacs et al., 1993; Schover et al., 1994). In this situation, where legal and moral boundaries still need to be established, it may be unwise to recruit highly ‘involved’ individuals who may later experience conflict about their participation in DI. Attitude screening could be beneficial for identifying such individuals and deterring them from becoming donors.

Results showed that the majority of the three groups (but donors in particular) would feel comfortable in telling others that they were semen donors. This is surprising given the secrecy which traditionally surrounds DI (Daniels and Taylor, 1993). Also, the majority in all groups were in favour of divulging non-identifying information to the recipients and to their offspring. However, non-donors were least comfortable with this. It is possible that non-donors do not know what type of information is currently revealed to patients and recorded by the HFEA, which could be a factor in discouraging them from donation. This possibility should be explored. Golombok and Cook (1995) suggested that an increase in the public awareness of the role of the donor and his rights, specifically the protection of current and past donors’ identity under the HFE Act (1990), is of vital importance, as the great majority of all three groups would not donate without a guarantee of anonymity.

In general, non-donors confirmed that there is a need for counselling. At present, counselling for donors is usually available only on an ad hoc basis. Typically, donors are given information about the donation process but no long-term implication counselling is included. In our view counselling should be comprehensive, especially when considering the rather young age of most current semen donors. It is arguable that these individuals with no experience of fatherhood, can reasonably assess what their future feelings in relation to any DI offspring are likely to be. Clinics should ensure that donors are not defensively denying emotional conflicts about their participation, a possibility that has been discussed elsewhere (Lui et al., 1995), and that their worries and concerns are adequately addressed. In some cases, for example where inappropriate wishes for involvement are discovered, individuals may be counselled against donating.

In conclusion, the current procedures for semen donor recruitment appear to be satisfactory in that a group semen donors appear well adapted to the donor situation, i.e. they indicate relatively little intra-personal conflict about the possible implications of DI and remain emotionally detached towards recipients and offspring (compared to non-donors). These qualities are desirable to clinics running DI services and to recipients. In some ways the present donors are preferable to the fathers in this study, as a larger proportion of the latter group expressed wishes for an inappropriate degree of involvement with recipients and offspring. However, the design of this study cannot separate the possible contribution
of maturity, marital status and economic security from those of fatherhood per se in these results. Furthermore, the sexual orientation of donors has not been explored and this may be a contributing factor in the motivation to donate semen. The situation concerning payment of donors is more problematic. Non-donors appear less motivated by monetary payment for donation, but the reasons for this are not entirely clear and appear not to depend wholly on economic factors. Further research is needed which addresses in more depth the psychological meaning that semen donation conveys to different subgroups in the potential donor population. DI recipients' views about these issues should also be sought and utilized to inform policy-making in this area.

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