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Potential sperm donors', recipients' and their partners' opinions towards the release of identifying information in Western Australia

Kate M.Godman[1,2], Katherine Sanders[1], Michael Rosenberg[2] and Peter Burton[3,4]

[1]School of Anatomy and Human Biology and [2]School of Population Health, The University of Western Australia, Nedlands and [3]Concept Fertility Centre, King Edward Memorial Hospital, Subiaco, Western Australia, Australia

[4]To whom correspondence should be addressed at: Concept Fertility Centre, King Edward Memorial Hospital, 374 Bagot Road, Subiaco, Western Australia 6008, Australia. E-mail: pete@conceptfert.com.au

BACKGROUND: The aim of this study was to examine Western Australian potential sperm donors' and recipients' opinions towards the release of identifying information and their intentions to disclose. METHODS: Forty-five potential sperm donors, 33 recipients and 12 partners completed an anonymous questionnaire regarding their opinions on the release of identifying information, whether a child should be told about the manner of their conception, the level of expected contact of donor with future donor offspring and the importance of anonymity in their decision to donate. RESULTS: Slightly less than one-half (48.9%) of potential donors indicated that they would still donate if their identity was revealed to future offspring. When asked whether they would consider contact with offspring, 80% responded positively, with 42% favouring one-off contact. The majority of recipients (82%) and partners (92%) were planning to inform their offspring about the manner of their conception, with 69% of recipients believing that the offspring should receive identifying information about the donor. Recipients were ambivalent about the level of contact between their offspring and the donor. CONCLUSION: These results suggest that the move to an open-identity donor system in Western Australia will benefit the majority of recipient parents who are intending to disclose; however, it also suggests a 50% decline in the number of potential sperm donors.

Key words: anonymity/disclosure/recipient/recruitment/sperm donors

Introduction

Recent amendments to the *Human Reproductive Technology Act 1991* (WA) permitted the right of mature donor offspring to obtain identifying information about their donors and effectively removed donor anonymity for gametes/embryos used after December 2004. Where similar legislation has been enacted in other countries, concern has been raised over donor recruitment (Brewaeys *et al*., 2005; Janssens *et al*., 2006; Paul *et al*., 2006). Over the last 10 years, the total number of sperm donors in Western Australia has halved and the recruitment of new donors declined by ~32% (Reproductive Technology Council, 2004). A similar decline has been reported in the Britain (Paul *et al*., 2006) and the Netherlands (Janssens *et al*., 2006). The pool of potential future donors is likely to be further reduced by the requirement that an upper age limit be applied to donor recruitment (Fertility Society of Australia, 2005). Although an actual age has not been specified, the British Andrology Society recommends that sperm donors should be <40 years old (McLaughlin, 1999), because advanced paternal age has been linked with increased fetal aneuploidy rates (Asada *et al*., 2000).

Although there has been a decline in the number of potential sperm donors, the number of individuals requesting access to donor sperm has remained stable in Western Australia (Reproductive Technology Council, 2004). Therefore, the changes to the *Human Reproductive Technology Act* (WA) may have mixed consequences for potential recipients of donor sperm. A decrease in donor availability may limit access to sperm and therefore the chance of pregnancy for some women and couples, whereas access to donor information may benefit those recipients who intend to disclose to their offspring the nature of their conception.

Historically, sperm donation and conception have remained secretive. However, in recent years, there has been a growing international trend encouraging openness (Daniels *et al*., 1995; Golombok *et al*., 2004; Lycett *et al*., 2005), which is thought to be in the best interest of the child (van den Akker, 2006). Initially, the majority using donor sperm were heterosexual couples with severe male factor infertility, but this use has declined in Western Australia since the introduction of ICSI in 1994 (Reproductive Technology Council, 2004). In recent years, single women and women in single-sex relationships represent the major proportion of individuals seeking pregnancy

with donor sperm in Western Australia (S. Junk and S. Watson, personal communication). Studies suggest that the absence of a male partner facilitates disclosure (Scheib *et al*., 2003; Murray and Golombok, 2005).

In the light of the recent amendments to the 1991 legislation in Western Australia, the aim of the present study was to explore opinions towards the release of identifying information amongst Western Australian potential sperm donors and recipients, and recipients' intention to disclose.

Subjects and methods

Forty-five potential sperm donors responding to an advertisement placed in the Western Australian *Sunday Times* newspaper attended Concept Fertility Centre for a routine recruitment interview between 20 July 2004 and 10 September 2004. The advertisement was worded: 'Sperm donors urgently required between 18 and 40 years of age. You will be reimbursed $50 for your donation. Your contribution can bring happiness to some infertile couples. All approaches will be kept strictly confidential'. On arrival at the centre, the potential donors were invited to participate in the study and asked to complete a questionnaire. They were informed that their participation in the study would not influence the selection process. No men declined. The questionnaire was completed before counselling about donor issues.

Fifty-three women undergoing donor insemination or IVF with donor sperm at Concept Fertility Centre between 20 July 2004 and 1 December 2005 were invited to participate in the study and were presented with a questionnaire and information sheet. Recipients completed the questionnaire whilst in the waiting room, or at home, and returned it to the centre in a prepaid self-addressed envelope. If the recipient had a partner, they were also invited to participate and given a questionnaire to complete independently.

The anonymous donor questionnaire consisted of two parts. Part 1 sought opinions on releasing identifying information, the level of contact with future donor offspring and the importance of anonymity in the decision to donate. Questions were adapted from a previous study by Lui *et al.* (1995). Most questions were answered on a 5-point Likert scale ranging from strongly disagree to strongly agree. Respondents were given the opportunity to provide comments after each block of questions. Part 2 sought information about a range of demographic characteristics including marital status, age, occupation and religious belief.

The recipient and partner questionnaires were similarly structured. Recipients and partners were asked their opinion on the release of identifying information about the donor, their intention to inform their child about the manner of their conception and the level of contact they would want between their offspring and the donor.

Responses to items were tabulated, and frequencies are presented. For the opinion statements, responses were collapsed into three categories (strongly agree/agree; neutral; and disagree/strongly disagree). Chi-square analysis was used to test whether the opinions of potential donors differed across different groupings of demographic characteristics, including age (<33/≥34), marital status (single/in a relationship), occupation (professionals/trades and labour/students/other), having children (yes/no) and having a religious belief (yes/no). Chi-square test was also used to compare potential donor's, recipient's and partner's responses in relation to the level of expected contact between the donor and offspring.

Approval for this research was granted by the King Edward Memorial Hospital Institutional Ethics committee.

Results

Donors

The age of the 45 potential sperm donors ranged from 18 to 43 with a mean of 30.7 years (SD 7.8). The majority of men did not have a partner (60%) and did not have children (75.6%). Students made up the largest occupational category (28.9%), followed by professionals (20%) and trades and labour (15.6%). The majority (60%) had no religious beliefs.

Almost one-half (48.9%) of potential donors agreed that children born as a result of sperm donation should be informed about the manner of their conception, with 42.2% expressing neutral feelings on the issue (Table I). Seventy-eight per cent of potential donors did not mind if donor offspring were given details of their physical characteristics, attitudes and personal interests, and 44.5% agreed that donor offspring should be permitted access to identifying information at the age of 18. By comparison, 33.3% of donors thought that offspring should have full access to detailed records. When responses were compared amongst demographic features, 61.5% (8/13) of students and 88.9% (8/9) of professionals agreed that a child born from sperm donation should be informed about the manner of their conception, compared with 14.3% (1/7) of men in the trades and labour industry and 31.3% (5/16) of men in other (e.g. retail and hospitality) occupations ($\chi^2 = 15.129$, $df = 6$, $P = 0.019$). Other demographic features were not related to donors' opinions.

Responses of potential donors varied with respect to contact with future offspring. Thirty-six per cent of men disagreed with the opinion statement 'I would like to meet a child conceived using my semen'. Forty-two per cent disagreed with the

Table I. Donors' opinions

Potential semen donors' opinions	Strongly agree/agree (%)	Neutral (%)	Strongly disagree/disagree (%)
A child born from sperm donation should be informed about the manner of his/her conception	48.9	42.2	8.9
I don't think that offspring should ever be told that they were conceived with donated semen	11.1	24.4	64.4
A child born from donated sperm should have the right to receive identifying information about the donor at the age of 18	44.5	31.1	24.4
I think that offspring should have full access to detailed records concerning donors	33.3	24.4	42.2
I would not mind if donor offspring were given details of my physical characteristics, attitudes and personal interests	77.8	13.3	8.9
I would like to meet a child conceived using my donated semen	22.3	42.2	35.5
I have no desire ever to meet a child conceived with my semen	24.5	33.3	42.2
I would not donate semen without a guarantee of anonymity	37.8	15.6	46.7

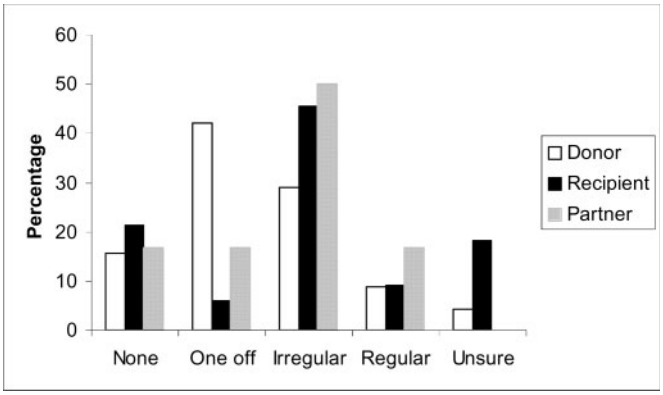

Figure 1. Potential donors', recipients' and partners' attitudes to future contact with donor offspring.

statement 'I have no desire ever to meet children conceived with my semen' with a significant difference between donors with children (9.1% agreed, 63.6% neutral and 27.3% disagreed) and donors without children (29.4% agreed, 23.5% neutral and 47.1% disagreed) ($\chi^2 = 6.185$, $df = 2$, $P = 0.045$). When asked directly whether they would meet the child if their identity was released, 80% responded positively, although the majority (42.2%) would only consider one-off contact to answer questions about family origin and history (Figure 1). There was a trend for single donors to consider more contact (7.4% regular, 44.4% irregular, 37.0% one-off, 7.4% none and 3.7% unsure) compared with donors in a relationship (11.1% regular, 5.6% irregular, 50.0% one-off, 27.8% none and 5.6% unsure) ($\chi^2 = 9.215$, $df = 5$, $P = 0.056$).

Table I shows that 46.7% of potential donors disagreed with the opinion statement 'I would not donate semen without a guarantee of anonymity'. When asked directly whether they would still consider becoming a donor if their identity was revealed to future donor offspring, 48.9% responded positively, 6.7% negatively and 42.2% were unsure. When cross-tabulated with demographic features, 70.6% of men with religious beliefs would still consider becoming a donor if their identity was released and the remainder were unsure. By comparison, only 33.3% of men without religious beliefs responded positively about becoming a donor if their identity was released, 55.6% were unsure and 11.1% stated that they would not consider being a donor ($\chi^2 = 6.491$, $df = 2$, $P = 0.039$).

Recipients

The majority (79%) of recipients were aged between 33 and 42 years. Sixteen (48.5%) women were single, nine (27.3%) were in a same-sex relationship and eight (24.2%) were in a heterosexual relationship. Ten recipients (30.3%) had children.

Table II summarizes recipients' responses to the opinion statements. The majority of recipients (84.4%) believed that a child should be informed about the manner of their conception. However, responses varied between relationship status. When asked directly whether they were going to tell their future offspring about the manner of their conception, 87.5% ($n = 14$) of single women, 88.9% ($n = 8$) of lesbian women and 62.5% ($n = 5$) of women in a heterosexual relationship responded positively. The majority of women (57.6%) felt that 0–5 years was the most appropriate age to disclose information to their offspring, whereas five (15.2%) favoured 6–10 years of age, two (6.1%) 11–15 years and three (9.1%) 16–20 years. The remainder were unsure or did not intend to disclose to their offspring.

The majority of recipients (68.8%) agreed that a child born from donated sperm should have the right to receive identifying information about the donor upon maturity. When responses were compared across relationship status, 80% of single women agreed compared with 67% of lesbian women and 50% of heterosexual women. Approximately 40% of recipients would like their child to meet the donor.

Partners

Of 17 recipients in a relationship, 12 (70.6%) partners completed and returned the questionnaire. Of these, eight were in a same-sex relationship and four were heterosexual. Partners' responses to the relevant items are summarized in Table II. In general, partner's responses reflected those of the recipient with the exception that no partners agreed with the statement 'I would like my child to meet the donor'. The majority of partners (66.6%) preferred early (0–5 years) disclosure to their offspring, two (16.7%) favoured 6–10 years, one 11–15 years and one >16 years. No partner indicated that they did not intend to disclose.

Figure I shows potential donors', recipients' and partners' responses in relation to the level of expected contact between the donor and offspring. There was a significant difference ($\chi^2 = 18.34$, $df = 8$, $P = 0.019$) between recipients, partners and potential donors in the desired level of expected contact. Approximately 42% of potential donors compared with 6.1% of recipients and 16.7% of partners would consider one-off contact appropriate, whereas 28.9% of donors, 45.5% of recipients and 50.0% of partners favoured irregular contact. Eighteen per cent of recipients were unsure compared with 4.4% of donors. Comments made by the recipients suggested that they found this question difficult to answer at this point in time.

Discussion

The present study provides an insight into the opinions of potential donors, recipients and their partners in Western Australia. It revealed that the majority of recipients (82%) and their partners (92%) were planning to disclose to their offspring and will do so at an early age. Consistent with this, a high proportion of potential donors would consider some form of contact with future donor offspring; however, our study suggests a possible 50% decline in the number of potential donors. These results suggest that both positive and negative consequences could result from the amendment to the *Human Reproductive Technology Act 1991* (WA).

The amendment to the act now requires open-identity donors so that donor offspring can have access to identifying information about the donor on reaching maturity. The high intended disclosure rates seen in this study suggest that the change to an open-identity programme will create a culture in which parents feel able to tell their child about the nature of their conception.

Table II. Recipients' and partners' opinions

Recipients' opinions	Strongly agree/agree (%)	Neutral (%)	Strongly disagree/disagree (%)
A child born from semen donation should be informed about the manner of his/her conception	84.4	6.2	9.4
I don't think that offspring should ever be told that they were conceived with donated semen	6.2	6.2	87.5
A child born from donated sperm should have the right to receive identifying information about the donor at the age of 18	68.8	18.7	12.5
I think that offspring should have full access to detailed records concerning donors	68.8	21.9	9.4
I would like my child to meet the donor	40.6	43.8	15.6
I have no desire ever for my child to meet the donor	16.1	35.5	48.4
Partners' opinions			
A child born from semen donation should be informed about the manner of his/her conception	91.7	8.3	0
I don't think that offspring should ever be told that they were conceived with donated semen	0	9.1	90.9
A child born from donated sperm should have the right to receive identifying information about the donor at the age of 18	66.7	33.3	0
I think that offspring should have full access to detailed records concerning donors	54.5	36.4	9.1
I would like my child to meet the donor	0	90.9	9.1
I have no desire ever for my child to meet the donor	27.3	54.5	18.2

Having access to identifying information about the donor gives parents the choice and reassurance that all questions could be answered about the donor and he could be contacted if necessary. In New Zealand where disclosure is strongly encouraged (Daniels *et al*., 1995), a recent study has shown that 30% of 181 donor families had disclosed to their children and that 77% of the remaining parents intended to do so (Rumball and Adair, 1999). The high intended disclosure rates, however, do not necessarily mean that recipients will disclose, as some studies have revealed considerable differences in the extent of planned disclosure to actual disclosure (Brewaeys, 1996; van Berkel *et al*., 1999; Golombok *et al*., 2002). Furthermore, actual disclosure rates may reduce once the child is born (van Berkel *et al*., 1999). In the present study, 94% of recipients were either waiting for treatment or currently receiving treatment that could account for the high intention to disclose. Existing literature has also shown that the absence of a male partner increases the likelihood of disclosure (Scheib *et al*., 2003; Murray and Golombok, 2005). In our study, 76% of recipients were either single or in a single-sex relationship and intended disclosure rates were 88 and 89%, respectively.

In our study, the majority of both recipients and partners felt that ≤5 years is an appropriate age range to begin to disclose information to their child about the nature of their conception. Recipients often provided additional comments, with explanations that they would like to tell their offspring enough information at each age group to understand. Giving information at a young age may be advantageous, as young children cognitively process the information in a factual, non-emotional way (Rumball and Adair, 1999). Indeed, studies have found that most adolescents who were told of their donor conception at a young age reported feeling comfortable about their origins (Scheib *et al*., 2003; Scheib *et al*., 2005).

Owing to the changes in legislation, it is important to explore the donors' interest in the donor offspring and vice versa. Literature has revealed that most donors are interested in knowing the outcome of their donation (Rowland, 1983; Daniels, 1998); however, the majority do not want any contact with their donor offspring (Lui *et al*., 1995). Fortescue (2003) raised the concern that by providing personal information about the donor, a perceived emotional link between the child and donor could be created. This may cause a significant problem if the majority of sperm donors do not wish to have contact with recipients or any involvement with biological offspring born as a result of their donation (Lui *et al*., 1995). We found that donors and recipients differed in the level of contact they expected with donors favouring one-off contact, whereas recipients found it difficult to settle on a desired level of contact between the donor and their child. Recipients' comments centred on the compatibility of the donor with recipients' values and the potential influence contact with the donor may have on the child. For example, 'I would have to meet him first. If I thought he would be a good influence on my child, I may contemplate irregular contact'. Our study has not examined the wishes of the child, which are paramount in any relationship with the donor.

One negative aspect of the change in the Western Australian legislation is the possible reduction in the number of men considering sperm donation which, in turn, may lead to a reduction in the number of actual donors. Overall, a reduction in new donors has already been noted in Western Australia over the last 10 years. This could, in part, be because of the 1999 review of the *Human Reproductive Technology Act 1991* (WA), after which time units were directed by the Reproductive Technology Council to inform potential donors of the possibility of a change in legislation allowing the release of their identifying information. This may have contributed to the decline in actual donors, although other factors such as recruitment effort by clinics cannot be ruled out. Similar concerns have been raised in other countries where the removal of anonymity has occurred [e.g. in Britain (Paul *et al*., 2006) and the Netherlands (Brewaeys *et al*., 2005; Janssens *et al*., 2006)] although the real impact on actual donor numbers will not be known for some time.

To compensate for the potential decline in sperm donors, clinics may have to adopt more vigorous recruitment strategies. Identifying appropriate demographic groups to target should be a priority (Daniels and Hall, 1997; Daniels *et al*., 2005). We attempted to identify differences in opinions of potential donors based on demographic features, but few reached statistical significance. Of interest, potential donors with religious

beliefs were twice as likely to agree to donate if their identity was known compared with donors without religious beliefs. Written comments suggested that potential donors with religious beliefs donated with the motivation of increasing their number of descendants. Janssens *et al*. (2006) argued that donors who are motivated by procreation are more likely to donate under an open-identity system because they not only want to know whether their donation resulted in offspring but also make their acquaintance. However, problems could arise in the future if donors' expectations exceed those of the offspring. We also found that potential donors in a relationship and those who have children desire less contact with donor offspring, suggesting that they are uncertain about the future consequences of combining their own family and donor offspring.

Overall, the results from the present study provide an insight into the opinions of potential donors, recipients and their partners in Western Australia. These results suggest that the new open-identity donor system will benefit the majority of parents who are intending to disclose. The results, however, also suggest a 50% decline in the number of potential donors which could severely limit the availability of donor sperm in Western Australia. Further research is required to identify the appropriate demographic characteristics of donors who are willing to be identified.

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