

Sperm donors describe the experience of contact with their donor-conceived offspring

R. HERTZ¹, M.K. NELSON², W. KRAMER³

¹*Department of Sociology and Women's and Gender Studies, Wellesley College, Wellesley, MA 02481, USA.*

²*Department of Sociology, Middlebury College, Middlebury, VT 05753, USA.*

³*Donor Sibling Registry, Box 1571, Nederland, CO 80466, USA.*

Correspondence at: mnelson@middlebury.edu

Abstract

This study explores the attitudes and experiences of 57 sperm donors who responded to a survey posted online in the United States and indicated that they had had contact with their donor-conceived offspring or the parents of their donor-conceived offspring. On average, 18 years had elapsed since the respondents donated sperm.

In the interim between donating and having contact with offspring, most had become curious about their offspring. Most made contact through a bank or online registry. Most respondents had communicated with at least one offspring at least once and most had exchanged photos with offspring. Approximately two-thirds had met in person once; the same proportion had communicated over email or text. Other forms of communication were less common. Almost half of the respondents now considered their donor-conceived offspring to be like a family member. At the same time, donors are respectful of the integrity of the family in which their offspring were raised. Donors with contact are open to having their partners and children know their donor-conceived offspring.

Although contact is generally positive, donors report that establishing boundaries and defining the relationship can be very difficult. Some donors also urge those who are thinking of donating to consider the consequences and some suggest avoiding anonymity. There were no significant differences in attitudes and experiences between those who donated anonymously and those who had been identity-release for their offspring when they turned 18.

Key words: Anonymity, assisted reproduction, donor-conceived offspring, offspring, sperm donors.

Introduction

As the culture surrounding donor insemination evolves, the issues of whether donors are open to being identified to, and having contact with, donor-conceived (DC) offspring have become central. Anonymity, once an unquestioned aspect of gamete donation, is no longer presumed, as several countries now require that donors be willing to be identified when offspring come of age (Blyth and Landau, 2004; Blyth and Frith, 2009; Allan, 2012).

Until recently the movement to end anonymity has primarily rested on arguments concerning the interests of DC offspring and their parents although it has also been argued that donors should be granted a right to at least some information about the offspring conceived as a result of their donations (Raes et al., 2013). Aside from abstract arguments

about rights, the voices of gamete donors have rarely been heard (Daniels et al., 2012). In general, research shows that donors are less interested than are DC offspring and recipients of donor gametes in knowing the identity of, providing information to, and making contact with the other (Purewal and van den Akker, 2009; Rodino et al., 2011; Van den Broeck et al., 2013). Not surprisingly, then, studies suggest that gamete donors are neither uniformly in favor of recipients having access to information about them (Broderick and Walker, 2001; Hammarberg et al., 2014) nor uniformly interested in meeting DC offspring (Daniels et al., 2005; Riggs and Russell, 2011). There also appear to be differences between oocyte and sperm donors with the latter demonstrating a higher level of interest in, and potential sense of responsibility for DC offspring (Lampic et al., 2014).

Research by van den Akker et al. (2014) indicates that sperm donors may search out DC offspring for a variety of reasons. Only a very few studies have examined the actual experience of contact between donors and offspring. Drawing on a small sample recruited through the Donor Sibling Registry (DSR), a U.S.-based world-wide registry that helps DC individuals search for and establish mutual consent contact with their donor and donor siblings (i.e. half-siblings), Jadva et al. (2011) reported positive and regular contact among donors who had contact with their offspring. Subsequently Daniels et al. (2012) reported on data collected from 164 semen donors also recruited through the DSR. Although initially anonymous donors, almost all were now open to, or had already had contact with offspring. At the time of the study the 33 donors with contact reported that they felt “close” to the offspring and especially so if they had met them. They also reported that what had been most challenging was “the adjustment to the relationship and issues within the donor’s own family” (Daniels et al., 2012). More recently, Kirkman et al. (2014) found that among 10 formerly anonymous donors in Australia the experience of contact ranged widely from no relationship to a close personal relationship.

This study expands on these prior studies by exploring more fully the experience of contact among semen donors who have had some form of contact with DC offspring. In the United States, where this study was conducted, contact happens in a variety of different ways. Most sperm banks now offer identity-release sperm. The Sperm Bank of California (TSBC) started this practice in 1983 (Scheib, 2003). Donors at TSBC (and at other banks with similar programs) can sign a contract that authorizes the bank to reveal their identity only to a DC individual who is at least 18 year old and has requested the donor’s identifying information in writing. Even then, the information is not automatically released: the donor is requested to fill out an updated profile and to specify his preferred form of contact. If donors cannot be found, no contact will be initiated. Donors and offspring (or their parents) may also sign up voluntarily on matching websites such as the DSR; neither the donors nor the offspring can be assured that the other party will respond to their offer of contact. Finally, stakeholders may engage in a variety of sleuthing practices through DNA testing relying on ancestry companies such as Family Tree DNA (<https://www.familytreedna.com/>) and 23andMe (<https://www.23andme.com>). These growing opportunities make it more important to understand what happens when there is contact, especially since

not all occasions of contact are sought after, or mutually desired, by both sides.

Methods

Data Collection

The survey from which these data come was online, hosted by WorldApp’s KeySurvey, from May 12, 2014 to August 15, 2014. Invitations to the survey for gamete donors were sent via email to all members of the Donor Sibling Registry as well as to a variety of other organizations and details of the study were available on the DSR website on an open-access Webpage. Information about the survey was also posted on Craigslist in four large urban areas as well as on several other websites and several Facebook groups asked people to participate. Ethical approval for this study was obtained from the Institutional Review Boards at both Middlebury College and Wellesley College.

It is impossible to calculate a response rate for this survey because it was made available at so many different locations. The DSR recorded how many of those who received the email invitation actually opened it; the “open” rate was approximately 36%. Among all gamete donors, 96% of those who opened the email clicked on to the survey and of those 91% actually completed the survey. Web surveys generally have relatively low response rates (Couper, 2000; Monroe and Adams, 2012; Wright, 2005) and concerns about response rates have to be weighed against the advantages of trying to reach a generally hard to reach population such as gamete donors (Freeman et al., 2009).

Participants

This study draws initially on the 145 sperm donors who responded to the survey and who indicated that they had an interest in contact with their donor-conceived offspring or had already had that contact. Eighty-three percent of these donors received the survey through the DSR. There were no statistically significant differences between the respondents who came through the DSR and those who came through some other route in key demographic variables such as current age, percent living with a partner of the other sex, and percent who were Caucasian. Nor were there any statistically significant differences between these two groups of respondents in terms of variables related to donating such as number of years they donated, percent offered a choice about what kind of donor to be, and percent who were anonymous donors at the time of donation.

Thirty-nine percent (n = 47) of the respondents from the DSR invitation had had contact with offspring or their parents as had 38% (n = 10) of the other respondents. These 57 respondents are the focus of the analysis that follows. Just over half (51%) were married and living with a partner of the other sex; 56% had their own children; and 81% reported their sexual identity as heterosexual. Overall, the donors are well educated with over half (53%) having more than a B.A. The vast majority (93%) is Caucasian.

Measures

The questionnaire was pretested to ensure face and content validity; several questions had been used by the third author already in two previous studies of sperm donors undertaken by the DSR (Jadva et al., 2011; Daniels et al., 2012). This new study asked for more information than had previous studies about attitudes toward the experience of contact with donor offspring. It was also made available in more places. Both multiple choice questions and open-ended questions were used, as appropriate. With the help of research assistants, the first two authors developed codes for open-ended responses. Each item was coded by two people; when there were disagreements, responses were coded as “other.” SPSS was used for all data analyses.

Results

Characteristics at the Time of Donation

Five of the donors had been known to the recipients from conception either because they were family members or friends, or because they donated through a website that allowed for contact at the time of donation. Among the remaining respondents, only a quarter (23%) said that they had been given a choice of what type of donor to be. Among those given a choice, 67% chose to be identity-release. Among those not given a choice, 78% were

anonymous. Overall there were 5 “known” donors, 35 originally anonymous donors, and 17 originally identity-release donors. Because there are so few “known” donors and their situation is so different from the other two groups of donors, with the exception of the demographic data we report next, throughout the analysis we report on the entire group of donors and, when making comparisons within the group, compare only the anonymous and identity-release donors.

As shown in Table I, the donors who had contact with offspring had donated for an average of almost six years, starting when they were approximately 27 and stopping when they were approximately 33. On average, 18 years had elapsed since the respondents with contact had last donated sperm. The three groups of donors differ on these variables: the known donors are the youngest and the shortest interval has elapsed since their last donation. The anonymous donors are the oldest and they donated for the most years.

Curiosity During the Interim

Two-thirds (65%) of the respondents wondered whether their donations led to conceptions. Fifty-nine percent of the anonymous donors and 73% of the identity-release donors contacted the clinic to find out how many children had been born from their donations at some point in the interim between donating and responding to the survey. During that same period, the vast majority of donors (97% of those who were anonymous and 100% of those who were identity-release) indicated that they had thought about the offspring who might have resulted from their donations. Among the 45 respondents who chose to elaborate on that response, 52% indicated that they had “always” or “often” wondered about those children. Another 18% did not really explain whether they had wondered in the past but indicated that being in contact meant that they thought about them now. Nine respondents indicated that they had not really wondered until some event

Table I. — Characteristics of donors.

	Known Donor		Anonymous Donor		Identity-Release Donor		All Donors	
	Mean	N	Mean	N	Mean	N	Mean	N
Number of Years donated	6.3	3	7.1	34	4.3	16	6.2	53
Number of Years since last donating	2.1	3	20.5	34	15.9	16	17.9	53
Current Age	39.6	4	52.5	35	50.6	16	50.6	55
Age when started donating	28.5	4	25.0	35	30.4	16	26.8	55
Age when stopped donating	35.7	3	32.1	34	34.7	16	33.1	53

created awareness. For four of these respondents, that event was hearing about the possibility of contact through the media. For three respondents that event was the birth of their own children:

After I had my own child at the age of 35, I started thinking about all the potential children that I might have conceived. When I saw how much of myself was in my daughter, I began to think that any donor children of mine would want to know about me.

For two respondents that event was a notification of a child's existence:

I've thought a lot about them since being notified [by the DSR] about their existence.

After I was contacted I did think about the resulting child off and on....And now I know that there are many children ... so I do think about them regularly.

The vast majority of respondents (80% of those who were anonymous and 94% of those who were identity-release) had also wondered if their donor-conceived offspring thought about them. Among the 44 respondents who elaborated on this issue, the most common response (44%) was some version of a statement that the respondent assumed anyone would be curious about the donor: "Any child who knew they were donor conceived would think about who their biological parent was". Four respondents added that they wondered if their offspring even knew that they were donor conceived:

Who wouldn't be curious about where they came from? But it was another time, and it's likely that kids born in the 1970s might not know there was a donor involved.

Making Contact

Eighty-four percent of the respondents who were not already known to the families of their offspring found those offspring through a bank, the DSR, or some other registry. Twelve percent (n = 6) were found by the offspring themselves. One respondent, without indicating how he felt about having been found did note that there had been a breach of contract and that he had not sought contact: "[The] clinic revealed what was supposed to be confidential info[rmation]". One respondent engaged in his own independent sleuthing when the DSR did not produce contact:

I used the user name of one offspring/parent and searched for the user name on the internet and found a match on eBay.

Half (52%) of the respondents had connected with only one or two offspring; the highest number of

offspring respondents had connected with was 25, the average was 4.3. Among those who had connected with at least one donor offspring, 16% did not stay in touch with any of them. Among the 37 respondents who stayed in touch with at least one donor offspring, 62% stayed in touch with all their donor offspring.

Table II shows more detail about the kinds of contact respondents had with their offspring. In some cases, contact is entirely mediated by the parents, but most respondents (86%) have communicated with at least one offspring at least once and most have exchanged photos with offspring. The six respondents who explicitly indicated that they had been found by offspring appear to have less intense contact than do those who initiated contact (with the exception of helping with finances).

Table II additionally shows levels of contact separately for those who were originally anonymous and those who were identity-release. Although in general the latter group has higher levels of contact than do the former, none of these differences rise to statistical significance at the .05 level.

Finally, Table II indicates what kind of contact was desired by the 88 respondents who had wanted to have contact with offspring but did not achieve that contact. Although it is impossible to know what level of contact the respondents with contact had wanted before they had achieved contact, the data show that more of those without contact wanted each type of interaction than those with contact actually achieved.

Respondents were asked to discuss more fully the relationship they had with the donor offspring to whom they felt closest (Table III). A fifth responded that that person was like a son or daughter and 16% said that the person was like some other close relative. The donors who gave other answers said that the donor-conceived offspring was like a friend (11%), acquaintance (9%), distant relative (7%) or stranger (4%). A third of the respondents added other comments or simply said that the relationship was too hard to describe. Identity release donors were most likely to say that the offspring were like a son or daughter; anonymous donors had the most difficulty responding to the fixed categories.

Forty-three respondents expanded on the meaning of these responses. Some respondents described more fully how they thought of their offspring as their children:

I am very close with a couple of the children who I have met, and they really do seem like a son and a daughter.

Table II. — Percent of respondents who has and who want various forms of contact with donor-conceived offspring.

Form of Contact	Donors with Contact Who Sought Contact (N = 51)	Donors with Contact found by Offspring (N = 6)	Donors who were originally anonymous (N = 35)	Donors who were originally identity-release (N = 17)	Donors without Contact (N = 88)
Offspring has looked/would look at profile	65%	67%	63%	77%	93%
Offspring has communicated/would communicate at least once	86%	83%	89%	82%	97%
Offspring has sent/would send photo	82%	67%	77%	94%	94%
Donor has sent/would send photo	80%	50%	80%	77%	94%
Donor and offspring have communicated/would communicate over email or text	71%	50%	67%	82%	94%
Donor and offspring have communicated/would communicate through the DSR	53%	17%	54%	53%	88%
Donor and offspring have phoned/would phone or Skype	53%	17%	46%	59%	91%
Donor and offspring have met/would meet in person once	71%	33%	63%	77%	94%
Donor and offspring have spent time/would continue to spend time together	47%	33%	40%	59%	88%
Donor has been/would be part of offspring's daily life	20%	0%	14%	24%	38%
Donor has helped/would help offspring make decisions	12%	17%	11%	18%	37%
Donor has helped/would help offspring with finances	14%	50%	14%	24%	28%

I met [my donor daughter] a couple of years ago at her home in Maine along with [her sister], her Mother, and Grandmother.... I feel she is my daughter and am sorry I didn't get to watch her grow up.

Four respondents explained that although they felt the child was important to them, they distinguished between their role in the child's life and that of a "real" parent:

I liken our relationship like an Uncle to a Niece, or like a Godfather to a Godchild.. I'll never really be their parent because I didn't raise them.

[She is] like a daughter but I am aware that I showed up late in her life, and she has her own family, and I would not be much of a parent if real parenting were needed. I get along well with them all, and love the grandkids born since I have known her. But her own family comes first.

Six respondents explained that their relationships with their offspring varied. One respondent simply said, "Some I like. Some I don't connect with". Other respondents provided more detail about the variation. One of these suggested that the age at

which he had met his offspring mattered in the relationship:

I met four offspring when they were very young (ages 4 to 7). Those four call me dad and we are very close. The others I met when they were teenagers – we enjoy each other's company and there is a deep, not-easy-to-describe connection, but it feels more like "the favorite uncle".

Whether or not donors come to view their offspring as family, after contact most come to have a greater sense of responsibility for them (Table IV). Among those who were identity-release donors the growth in the sense of responsibility is especially great in the category of "some" responsibility (from 28% to 59%); among those who were anonymous the growth in the sense of responsibility is greatest in the "a lot" category (from 6% to 23%).

Family Issues

As Table V shows, the vast majority of sperm donors who had contact with offspring responded that they did not feel displaced by the male parent of their offspring. These data suggest that the donors

Table III. — Relationship to donor offspring.

Relationship:	Known	Anonymous	Identity-Release	All Donors
Like a son or daughter	25%	17%	31%	22%
Like a close relative	25%	11%	25%	16%
Like a distant relative	0%	6%	13%	7%
Like a friend	25%	11%	6%	11%
Like and acquaintance	0%	9%	13%	9%
Like a stranger	0%	6%	0%	4%
Hard to Describe/Other	25%	40%	13%	31%
Total	100%	100%	100%	100%
N =	4	35	16	55

believe in the integrity of the social family of their offspring. This is consistent with the responses discussed above that described relationships with donor offspring in language of respect for the families that raised their offspring (e.g., “her own family comes first”; “I’ll never really be their parent because I didn’t raise them”). Careful as these donors appear to be, over half believe that they might be thought of as posing a threat to the male parents of their offspring. In their open-ended comments on this issue, some respondents indicated that they had concrete experiences of being viewed as a threat: “I know for a fact that male parents have trouble, since I’ve met with many”. Another indicated that although he had contact with some of his offspring, in at least one family the father prevented contact by concealing the donor conception: “I know of one situation where the male parent of my genetic progeny has wanted to prevent his children from ever knowing that he’s not their biological father”. Other kinds of difficulties might also ensue: 14% of the respondents said that contact had caused conflict with the parent(s) of their DC offspring.

Introducing DC Offspring to their Own Families

Donors believe that DC offspring should not be concealed from their own families (Table V). The vast majority of those with contact have told a partner (if they have them) about their donation. The majority of the donors with contact report that their partners are open to the donor having contact with offspring and three-quarters suggest that their partners themselves are open to connecting with the offspring. There is some indication that the partners of respondents who were originally anonymous might be more reluctant than the partners of identity-release donors to have contact with the DC offspring of their partners. Among those donors with children, almost three-quarters of those who have had contact with offspring say that the children they are raising know about their donations and almost all indicate that those children have already met or are interested in meeting at least one of their donor-conceived offspring.

Additional questions assessed how donors felt about the integration of donor-conceived offspring into their lives. One set of questions asked whether

Table IV. — Feeling of responsibility for donor offspring among donors with contact.

Feeling of responsibility	At the Time of Donation	At the Time of Responding	Anonymous	Identity release	Anonymous	Identity release
			At the time of donation		At the Time of Responding	
None	68%	33%	70%	59%	40%	24%
Some	25%	35%	23%	28%	29%	59%
A lot	5%	23%	6%	12%	23%	12%
Don’t Know	2%	1%	1%	1%	1%	1%
Total	100%	100%	100%	100%	100%	100%
N =	57	57	35	17	35	17

donors considered their offspring and the parents of their offspring to be members of their nuclear and extended families (Table V). Not surprisingly, given other responses already reported, the majority does not consider either their donor offspring or the parents of those offspring to be members of their nuclear families. However, a full two-thirds view donor offspring as part of their extended family and almost half feel the same way about the parents of their donor offspring. These sentiments of inclusion are stronger among those who were identity release at the time they donated.

Another set of questions asked respondents whether they would share a piece of good news with donor offspring or the parents of donor offspring and whether they would invite them to a special

event (such as a wedding) (Table V). Donors with contact were more likely to respond inclusively with respect to DC offspring than they are to the parents of their offspring. Donors who were identity release respond more inclusively to DC offspring and (especially) their parents than do those who were originally anonymous.

General Attitudes toward Contact

Respondents were asked about the best part of contact with offspring. Among the 44 respondents who offered a response to this open-ended question, 30% indicated simply that what was best was connecting with their offspring and even the children of their offspring: “I went from zero to grandfather

Table V. — Family issues.

A. Attitudes toward Offspring Family	All Donors with Contact	Anonymous Donors	Identity-Release Donors
Percent who feel displaced by male parent	6% (52)	9% (34)	0% (17)
Percent who believe male parent might be threatened by them	54% (54)	53% (34)	44% (16)
B. Integration with own family			
Percent whose partner knows about donation (among those with a partner)	95% (41)	96% (25)	91% (11)
Percent with partners open to his contact with offspring	84% (38)	83% (23)	90% (10)
Percent with partners open to their own contact with offspring	75% (36)	65% (23)	88% (8)
Percent whose children know parent was a donor (among those with children)	72% (32)	84% (19)	57% (7)
Percent of children who met who have met or want to meet donor siblings	95% (23)	100% (16)	75% (4)
C. Inclusion in Own Family			
Percent who say offspring are part of their nuclear family	25% (44)	24% (25)	31% (16)
Percent who say the parents of their offspring are part of their nuclear family	12% (42)	16% (25)	7% (14)
Percent who say offspring are part of their extended family	66% (47)	55% (29)	79% (11)
Percent who say the parents of their offspring are part of their extended family	46% (44)	32% (28)	62% (13)
D. Measures of Inclusion			
Percent who would share good news with donor offspring	42% (57)	40% (35)	47% (17)
Percent who would share good news with parents of donor offspring	26% (57)	26% (35)	29% (17)
Percent who would invite donor offspring to a special occasion	46% (57)	40% (35)	53% (17)
Percent who would invite parents of donor offspring to a special occasion	26% (57)	17% (35)	41% (17)

faster than anyone ever, and I really enjoy the grand kids. I feel like I hit the jackpot and didn't earn it". Another 18% said that the best part was knowing that their offspring were in good situations: "[The best part is] knowing that I have another child, and that she seems to be happy and well adjusted. Made me feel much better about donating in the first place". Thirteen percent spoke about their feeling of accomplishment and pleasure in "knowing that they existed" or "just seeing what [their] donations did to bring happiness to folks". Eleven percent indicated that what was best for them was observing genetic similarities. Twenty-three percent of these respondents gave a broad range of other responses.

Thirty-eight respondents also gave responses to a question asking what was hardest about meeting donor offspring. Among these, 34% responded that it was difficult to judge the appropriate way to develop the relationship: "Becoming more curious about them, but not wanting to intrude into their lives by asking too much"; "Didn't want to appear overly enthusiastic". Fear of not being liked or of disappointing offspring was the second most common response offered by 24%: "Having them see that I'm just an ordinary, plain person with flaws and defects". Some respondents (11%) said that it was hard not to be able to see their offspring enough or to control the relationship and 8% said that they did not like their offspring. A quarter of these respondents gave a broad range of responses about what was most difficult about meeting DC offspring.

At the end of the survey all respondents were asked if there were anything they would want to add that they would like potential donors to know. Three quarters of those with contact responded. Thirty-eight percent were positive about donating. As one said, "Do it." Some respondents are positive because they can now reflect on how being a donor has changed their life for the better. For example, one respondent said, "My having been a donor has led to my having a fuller, richer, happier life". A fifth (20%) of respondents were reflective about the importance of what they have done and they urged that people think through the consequences of their action before donating. One respondent phrased this sentiment very clearly: "I think potential donors should know that many of the children that result will be interested in knowing some of the details of their life, and should have contact with them". Another significant group (13%) coming entirely from the respondents who had been anonymous originally urged donors to avoid anonymity. A substantial proportion of the responses (28%) did not fit neatly into any single category. The one respondent whose identity had been revealed by mistake wrote a response that reflected his

experience: "Clinics have revealed confidential information and that despite what the clinic told you about remaining anonymous and protecting your privacy, do not be surprised if you are contacted by a sperm recipient". Only one respondent was entirely negative.

Discussion

The data reported here come from a small group of sperm donors. We have no way of knowing whether donors who were unaware of the survey, or those who were aware of it but chose not to respond, would have the same attitudes or experiences of contact with offspring. The conclusions of this study must be evaluated with these concerns about the size and representativeness of the sample in mind.

Most sperm donors who have contact with their donor-conceived offspring indicate that prior to that contact they were curious about their offspring. In all likelihood, that curiosity provided the incentive to make efforts to achieve contact with donor-conceived offspring (e.g., by signing up on a registry). Among the respondents who had not initiated contact, only one appeared to be quite angry about the violation of his anonymity. The other five all gave responses throughout the survey that indicated that they derived great pleasure from the contact. Indeed, one commented that the only thing tough about the experience was "that it took so long to happen".

Although most respondents have been in some form of direct contact with their offspring and half of them spend time with their offspring, very few are part of the daily lives of their offspring. Without further research it is impossible to know if these findings are the result of choice or some other factor (e.g., distance). The content of the relationships between donors and offspring range from that of being like strangers to being like close family; almost half place their offspring somewhere within the category of "like" family.

Over half the sperm donors in this study were aware that their presence in the life of their offspring could be seen as a threat to the parents (especially the social fathers) of those offspring. In addition, even as they are concerned about respecting the integrity of the family into which their offspring were born, as others have shown, they are open to enlarging the boundaries of their own families to include offspring and their parents. In contrast to what Daniels et al. (2012) found, integrating donor offspring into their ongoing families was not a major problem or even, for most respondents, an issue of concern. A question that had not been asked

on previous surveys resulted in the finding that once donors have had contact with offspring the majority think about their offspring as being members of their extended family and almost two-fifths include the parents in that same category. Of course it is hard to know just what this inclusion would mean for daily life, but almost half of the respondents with contact say that they would invite DC offspring to an important event or share good news with them and a quarter say that they would invite the parents of DC offspring to an important event or share good news with them. These data suggest that strong ties can develop between donors and DC offspring, confirming the assumption on the part of donors who believed that they would have a different sense of family if they were “linked” to donor-conceived offspring (van den Akker et al., 2014).

Finally, as others have found, many donors report that contact with offspring is positive (Jadva et al., 2011; Daniels et al., 2012). At the same time, this study provides more evidence than previous ones that contact has complications and carries the possibility of both disappointment and conflict. Indeed, the evidence suggests that respondents have less contact than they might have desired. The evidence suggests as well that occasionally interaction with offspring can produce conflict with the parents of those offspring. Moreover, even if these relationships result in neither disappointment nor conflict, a third of the respondents said that it was difficult to find the right balance for the relationship and a quarter said they had been anxious about how their offspring would respond to them.

This last set of issues is one that in-depth research might pursue in order to discover the factors that produce positive – or negative – experiences of interaction. Future research should also continue to explore whether offspring and their parents feel the same way donors do about the importance and experience of contact. Although some research has looked into such topics as how family type shapes the search for, and attitudes toward, sperm donors and donor siblings (Beeson et al., 2011; Hertz et al., 2013) and how families create boundaries when they use egg and sperm donations (Orobitg and Salazar, 2005; Johnson, 2013), changing social norms are likely to alter attitudes of all those affected by gamete conceptions.

Most of the donors in this study had originally been anonymous and only five had been known donors from the start. There were many subtle differences between the anonymous donors and those who were identity release with respect to many of the questions asked, especially around the intensity of contact with DC offspring, characterizing the relationship to DC offspring and their parents,

and sense of responsibility to DC offspring. Because of the small sample size, none of these differences rose to the level of statistical significance. Future research should look at comparisons among all three kinds of donors in order to understand more about early motivations and the experience of contact with DC offspring. In addition, because this phenomenon is likely to become more frequent, future research might delve into the experiences of donors who are found by offspring when the donors have not indicated that they are open to that contact. Findings about all of these issues could help in the creation of policy that would better support parents, offspring, and donors.

Acknowledgements

We would like to thank Jacqueline McGrath, Gabby Hartman and Toby Israel for assistance in coding the data. Data analysis was supported by NSF SES-1355726 (Margaret K. Nelson) and by NSF SES-1355740 (Rosanna Hertz).

References

- Allan S. A Cross-Jurisdictional Study of Regulatory Requirements and Practice Regarding the Recording of Donor Information and Its Release to Donor Conceived People. Available SSRN Electronic Journal. 2012;2160-627.
- Beeson DR, Jennings PK, Kramer W. Offspring searching for their sperm donors: how family type shapes the process. *Hum Reprod.* 2011;26:2415-24.
- Blyth E, Frith L. Donor-Conceived People’s Access to Genetic and Biographical History: An Analysis of Provisions in Different Jurisdictions Permitting Disclosure of Donor Identity. *Int J Law Policy Fam.* 2009;23:174-91.
- Blyth E, Landau R. *Third Party Assisted Conception Across Cultures: Social, Legal and Ethical Perspectives.* 2004; London and New York: Jessica Kingsley Publishers.
- Broderick P, Walker I. Donor gametes and embryos: who wants to know what about whom, and why? *Polit Life Sci.* 2001; 20:29-42.
- Couper M. Review: Web Surveys: A Review of Issues and Approaches. *Public Opin Q.* 2000; 64:464-94.
- Daniels K, Lalos A, Gottlieb C et al. Semen Providers and their three families. *J Psychosom. Obstet Gynecol.* 2005;26:15-22.
- Daniels KR, Kramer W, Perez-y-Perez MV. Semen donors who are open to contact with their offspring: issues and implications for them and their families. *Reprod Biomed Online.* 2012; 25:670-7.
- Freeman T, Jadva V, Kramer W et al. Gamete donation: parents’ experiences of searching for their child’s donor siblings and donor. *Hum Reprod.* 2009;24:505-16.
- Hammarberg K, Johnson L, Bourne K et al. Proposed legislative change mandating retrospective release of identifying information: consultation with donors and Government response. *Hum Reprod.* 2014; 29:286-92.
- Hertz R, Nelson MK, Kramer W. Donor Conceived Offspring Conceive of the Donor: The Relevance of Age Awareness, and Family Form. *Soc Sci Med.* 2013;86:52-65.
- Jadva V, Freeman T, Kramer W et al. Sperm and oocyte donors’ experiences of anonymous donation and subsequent contact with their donor offspring. *Hum Reprod.* 2001;26:638-45.

- Johnson KM. Making families: Organizational boundary work in US egg and sperm donation. *Soc Sci Med.* 2013;99:64-71.
- Kirkman M, Bourne K, Fisher J et al. Gamete donors' expectations and experiences of contact with their donor offspring. *Hum Reprod.* 2014;29:731-8.
- Lampic C, Skoog Svanberg A, Sydsjo G. Attitudes towards disclosure and relationship to donor offspring among a national cohort of identity-release oocyte and sperm donors. *Hum Reprod.* 2014;29:1978-86.
- Monroe MC, Adams DC. Increasing Response Rates to Web-Based Surveys. *J Ext.* 2012;50:6:Article Number 6T0T7.
- Orobitg G, Salazar C. The gift of motherhood: Egg donation in a Barcelona infertility clinic. *Ethnos.* 2005;70:31-52.
- Purewal S, van den Akker OBA. Systematic review of oocyte donation: investigating attitudes, motivations and experiences. *Hum Reprod Update.* 2009;15:499-515.
- Raes I, Ravelingien A, Pennings G. The Right of the donor to information about children conceived from his or her gametes. *Hum Reprod.* 2013;28:560-5.
- Riggs DW, Russell L. Characteristics of men willing to act as sperm donors in the context of identity-release legislation. *Hum Reprod.* 2011;26:266-72.
- Rodino IS, Burton PJ, Sanders KA. Donor information considered important to donors, recipients and offspring: an Australian perspective. *Reprod Biomed Online.* 2011;22:303-11.
- Scheib JE. Choosing identity-release sperm donors: the parents' perspective 13-18 years later. *Hum Reprod.* 2003;18:1115-27.
- van den Akker OBA, Crawshaw MA, Blyth ED et al. Expectations and experiences of gamete donors and donor-conceived adults searching for genetic relatives using DNA linking through a voluntary register. *Hum Reprod.* 2014;30:111-21.
- Van den Broeck U, Vandermeeren M, Vanderschueren D et al. A systematic review of sperm donors: demographic characteristics, attitudes, motives and experiences of the process of sperm donation. *Hum Reprod Update.* 2013;19:37-51. doi: 10.1093/humupd/dms039.
- Wright KB. Researching Internet-Based Populations: Advantages and Disadvantages of Online Survey Research, Online Questionnaire Authoring Software Packages, and Web Survey Services. *J Comput.-Mediat Commun.* 2005. doi: 10.1111/j.1083-6101.2005.tb00259.