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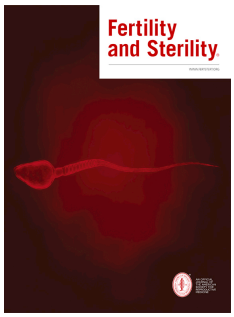

Donor Identity in Aotearoa New Zealand: a survey of parents regarding disclosure of donor conception to their donor-conceived children

Karyn Anderson, MBChB MPH, Sonja Goedeke, MA (Clinical Psychology) PhD, Solene Bertrand, MA, Rebecca Hamilton, J.D.MPP, Jeanne Snelling, LLB PhD, Annabel Ahuriri-Driscoll, PhD, Sarah Wakeman, MBChB, Cynthia Farquhar, MBChB MD (research)

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Running title: Disclosure of donor conception in New Zealand

Authors: Karyn Anderson[1]*, MBChB MPH; Sonja Goedeke [2], MA (Clinical Psychology) PhD; Solene Bertrand[1], MA; Rebecca Hamilton[3], J.D. MPP; Jeanne.Snelling[4], LLB PhD; Annabel.Ahuriri-Driscoll[5], PhD; Sarah Wakeman[6], MBChB & Cynthia Farquhar[1,7], MBChB MD (research).

Author affiliations and addresses:

[1] Department of Obstetrics & Gynaecology, University of Auckland, Auckland, New Zealand

[2] Department of Psychology and Neuroscience, Auckland University of Technology, Auckland, New Zealand.

[3] American University, Washington College of Law, Washington D.C., U.S.A.

[4] Faculty of Law, University of Otago, Dunedin, New Zealand

[5] School of Health Sciences, University of Canterbury, Christchurch, New Zealand

[6]Fertility Associates, Christchurch, New Zealand

[7] Fertility Plus, Te Toka Tumai | Auckland, Te Whatu Ora | Health New Zealand, Auckland, New Zealand

Corresponding Author:

Author Name: Dr Karyn Anderson,

Academic Affiliation: Research Fellow, University of Auckland

Mailing Address: Private Bag 92019, Auckland 1142, New Zealand

Phone: 0064277287119

Email: Karyn.anderson@auckland.ac.nz

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CRediT Authorship Contribution Statement:

CF and SG conceptualised the study aims, design and method, with CF acquiring funding for the study. SG led the literature review and supervised KA, who with the assistance of SB, led survey development, ethics application, recruitment, and data analysis. SG, AAD, JS, RH, and SW assisted with survey development and review of results. KA and SG drafted the manuscript, with all authors involved in review and approval of the final manuscript.

Attestation statements:

- Data regarding any of the subjects in the study has not been previously published unless specified.
- Data will be made available to the editors of the journal pre and/or post publication for review or query upon request.
- The appropriate checklist for this study design (STROBE Statement for cross sectional studies) was followed.

Data sharing statement: The data underlying this article will be shared on reasonable request to the corresponding author.

Word count: Abstract 350, main text 3,664

Capsule: Acknowledging the responder bias, this cross-sectional survey of New Zealand parents with a donor conceived child finds incomplete disclosure of donor conception to their children.

Structured Abstract:

Objective: To study whether parents are disclosing donor conception to their children and what their experiences of disclosure are.

Design: Cross sectional survey, inclusive of all parents of donor-conceived children born 2006-2016 following clinic-based sperm, egg, or embryo donation in New Zealand, conducted over 6 weeks from June 2024.

Subjects: Parents with a donor conceived child aged 7-18 years were invited to complete an anonymous, online survey. Parents with more than one donor conceived child, were sent a single invitation and asked to complete the survey with reference to their eldest eligible child.

Exposure: Parents with a donor conceived child born following the introduction of legislation in 2005 mandating donors be identifiable.

Main Outcome Measures: The survey included questions about disclosure decisions and experiences, including familiarity with legislation and support services accessed; Quantitative data were statistically analysed using Stata 17BE. Qualitative data were analysed drawing on Braun and Clarke's thematic analysis steps.

Results: 381 responses from 1317 invitations; 7 were not eligible and 374 responses were included in data analysis (response rate 28.4%). Overall, 86% of parents had disclosed, while 12% had not yet told but planned to. No differences in disclosure were found across donor (clinic/family/friend), donation type, or having current access to donor identifying

information. While most parents felt comfortable with disclosure, 23% had at least some concerns about disclosure/use of donor conception, and 25% reported receiving a mixed or negative reaction from their child. Most parents (71%) had not had professional support to disclose. Qualitatively, themes highlighted belief in the rights of children to access their genetic information, concerns around stigma and the impact of donor conception on parent:child relationships, and the absence of support post-donation.

Conclusion: Although most parents who answered the survey had disclosed, these results represent incomplete disclosure of donor conception among parents of donor conceived children in New Zealand. Results may not be representative given that parents who are open about donor conception may be more likely to participate in research on disclosure. Counselling services should be made available beyond those provided in the fertility treatment period to support parents in disclosing.

Keywords

donor conception, disclosure, identity release, linking, support

Introduction

While non-directed (previously termed anonymous) donation continues to be practised in many jurisdictions internationally, in 2004 the Human Assisted Reproductive Technology (HART) Act established a central register and mandated all donors be identifiable in Aotearoa New Zealand (1). Open-identity donation in the New Zealand context refers to the release of identifying information about the donor to donor-conceived person/s (DCP) at age eighteen, although both parents, and DCP with parental consent, can apply to access information prior to this age.

Factors influencing the shift to open-identity donation legislation in New Zealand included: increasing recognition of the negative consequences arising from closed adoption practices; increasing consideration of the worldview of Māori, the indigenous peoples of New Zealand, for whom unrestrained access to whakapapa (or line of descent from one's ancestors; knowledge of origins) is essential for cultural identity; awareness that as a country with a small population the risk of unknown consanguinity was not insignificant; and lastly, research suggesting that for DCP, knowledge of their genetic background may be essential for identity formation, psychological wellbeing and family functioning (2-5).

Research suggests that early disclosure, where DCP are aware of their donor conception (DC) from a young age, may be associated with more positive experiences including a greater ability to integrate this knowledge into one's identity and less stigma, whereas those told during adulthood are more likely to report negative experiences and feeling distressed, angry, resentful and a sense of betrayal (6-13). However, research also suggests that disclosure of DC by itself may be insufficient, and that DCP may need access to their genetic information, including the donors' identifying details, and may be interested in contact (14-18).

New Zealand legislation is based on a presumption of parental disclosure of DC but stops short of mandating parents to disclose. Consequently, DCP can access their donors' identifying information only if they are aware of their DC. To date, research in New Zealand has focused mainly on experiences of DCP born prior to the HART Act and has highlighted the negative psychosocial consequences of both non-directed donation and non-disclosure (18, 19). While a recent systematic review (20) notes a general international trend towards disclosure with most parents disclosing to their children before the age of 10 years, it is unclear to what extent the HART Act in New Zealand has had the intended effect of promoting DCPs access to information, and the extent to which parents have disclosed to their donor conceived children (DCC). Although access to identifying information may be one factor related to disclosure, research also suggests that disclosure may be difficult for parents (20, 21).

The first DCP born after the HART Act register was established became 18 in 2024. It is thus timely to explore the extent to which parents have disclosed DC to their children and how such disclosure has been experienced by DCP, their parents and their families. No previous surveys of parents of DCC have been undertaken in New Zealand.

Materials and methods

Eligibility and recruitment:

Parents with a child over the age of 7 years (i.e. born during, or before, 2016) whose details are on the register (i.e. conceived after August 2005) were eligible to participate. An invitation to the anonymous survey was emailed/mailed by all New Zealand fertility clinics (who maintain records of DC births and forward this to the register) to parents who have had a child conceived through DC (including egg, sperm, or embryo donation) during the study period. Where parents had more than one DCC born during the study period, a single

invitation was sent, and they were asked to complete the questions with reference to their oldest child. Parents were encouraged to complete the survey together. A sample size calculation for this cross-sectional survey indicated that based on an eligible population of 1528 parents, and a precision of +/- 5%, a minimum of 308 responses would be required, given that the proportion of parents who disclosed DC to their children was unknown (prevalence of 50% used in calculations) (22).

Survey design:

The survey was undertaken using Qualtrics software, Version Qualtrics XM© (23), taking between fifteen and twenty minutes to complete (Appendix S1). Most questions were asked as multiple choice, with some allowing free-text responses. Conditional logic was used to guide parents through a series of questions about whether they had disclosed, the experience of disclosure, access to identifying information, support services received, and awareness of legislative provisions. Questions were also asked about contact between the parents/DCP and donors and siblings. Given the focus of the current article on disclosure, these are not analysed here.

Participants were also asked about their age, gender, relationship status, sexual orientation, family type, ethnicity, religious affiliation and number of children. Questions were developed through review of relevant literature and related surveys, and piloted with a small group of respondents including parents, fertility counsellors and researchers, following which amendments were made to questions and display logic. The survey remained open for 6 weeks with a repeat invitation sent 2 weeks following the initial invitation..

Analysis:

Statistical analyses were conducted using Stata 17 BE©. Chi-squared tests were used to test for differences in variables between groups. *P* values < 0.05 indicated that a difference was

statistically significant. For qualitative text responses, the second author used Braun and Clarke's (2006) thematic analytical steps, including data familiarization; coding of text; identification, revision and naming of themes (24). The first author reviewed the identified themes, and a final report was produced, illustrating the themes with data extracts.

Ethics approval:

Ethics approval for this study was granted by the Auckland Health Research Ethics Committee (AHREC) [Project ID: AH26445, 14/09/2023], and the Auckland University of Technology Ethics Committee (AUTEC) [Project ID: 23/290, 21/09/2023].

Results

There were 1528 births on the HART Act register within the study period. Thirteen hundred and seventeen survey invitations were sent as 211 individuals/families had more than one DCC. Three hundred and eighty-one survey responses were received; 5 were not eligible as they were not completed by a DCC parent born within the study period; 2 were surrogates rather than parents. Three hundred and seventy-four responses were thus eligible for inclusion, with a response rate of 28.4%.

The demographic characteristics of respondents are summarized in Table 1. Most respondents were two-parent heterosexual families (54.8%), 25.4% were single parents, 14.4% were two-parent lesbian families, and 0.5% were two parent gay families. The majority had DCC through sperm donation (63.7%). Half (50.5%) had used a clinic-recruited donor, 21.7% used a friend and 15.8% a family member. A similar proportion of two-parent heterosexual couples and two-parent gay or lesbian couples used a clinic donor or family member/friend, however, among single parents, use of a clinic donor was more common (Table 2).

Disclosure:

Eighty-six percent of parents had disclosed DC to their child, and a further 11.5% indicated that they planned to tell. Only 0.8% planned not to tell and 1.6% were unsure. The average age of the child at disclosure was 6.6 years (s.d. ±4.35), and the median age was 8 years (IQR 1-10). The average age of the DCC at the time of the survey was older among families who had disclosed compared to those who have not (11yrs compared to 9 yrs).

Significant differences in disclosure by family makeup were found, with two-parent gay/lesbian families disclosing at highest rates – 96.3%, followed by single parents at 89.4% and two-parent heterosexual couples at 82% (Chi2 = 12.516, df = 4, p value = 0.014) (Table 3). However, no statistically significant differences were found across respondent ethnicity or donor type (clinic donors versus family/friend).

Of those who had disclosed , 85.4% had told their DCC that the donor was identifiable (94.0% if the donor was family member or friend) although there was no significant difference between those parents who who had identifying information and those who did not. Only 1.8% planned not to reveal that donor was identifiable or were uncertain, and 12.1% had not yet told but planned to.

Most (81.6%) parents agreed with each other regarding disclosure, and most parents had disclosed to others, with only 4.3% not having told anyone. However, of those who had not disclosed to their child, 86.3% had told others that their child is DC, including family members (97%), friends (90.5%), and others (48.5%).

The main reasons cited by parents for disclosure included that the child has a right to know (93.2%), a desire to be open and honest (87.8%) and that knowledge of genetic background is important for identity and wellbeing (78.9%). Only a small number (7.3%) were concerned that DNA testing might reveal DC to their child, or that others might tell the child (9.5%). Reasons for not telling included being worried about the effect on the child (34.6%) or on the

parent:child relationship (26.9%) and not being sure how to tell (26.9%). Only a small number did not see a reason to tell (9.6%) or thought the information was private (3.8%).

Process of disclosure:

Most parents (77.9%) disclosed via a conversation with their child, with 33.3% also using books. For just under half of respondents (48.9%), conversations were initiated by a combination of parents and DCC. Around a third of parents (29.9%) reported that the topic of DC came up less than once every 6 months although 53.3% reported that the topic came up more frequently.

Impact of disclosure:

While most parents had no concerns about their decision to disclose, 22.5% had 'some' and 33.3% had 'many' concerns. Furthermore, while 75.4% of those who had disclosed were very comfortable or positive about the process of disclosure and 16.5% were somewhat comfortable or positive, 14.4% had mixed feelings, and 0.9 % were uncomfortable or distressed. Thirty-one percent reported that their children reacted positively to disclosure, 43% that their children reacted neutrally, 7.8% that the children were ambivalent and 18.1% that their children reacted negatively. Child age at disclosure was not significantly associated with negative reaction.

Professional support – for disclosure:

Of those who had told their child they were DC, 71% had not received professional support but 82.6% also felt that they did not such support. Of those who received support, 81.7% had accessed support from a clinic counsellor, with most (79.12%) accessing support prior to conception (rather than prior or subsequent to disclosure). Most parents (78.8%) reported that counsellors had at least 'somewhat' emphasised the importance of disclosure, and 88.9%

238 reported the counselling had at least 'somewhat' influenced their decision to disclose. Books
239 and websites were commonly referenced as disclosure aids.

240 Donor identifying information:

241 37.5% of parents used known (directed, identified) donors, 26.6% of parents using clinic
242 donors had met their donor prior to donation, and a further 22.4% who did not have
243 identifying information prior to the donation, accessed this via the HART Act subsequent to
244 donation. Having the identifying information of the donor was however not related to
245 disclosure nor whether parents shared the identity of the donor with their DCC.

246 Awareness of and attitudes towards the HART Act:

247 Most parents (84.5%) were aware of the HART Act principles, although 15% were unaware
248 or unsure about the principles. Of those who did not currently have identifying information
249 about the donor, 33.3% were not aware and 26% unsure of where to access this information.
250 18.7% were also not aware and 13% unsure of when this information could be accessed.

251 Most parents (93.8%) felt that it was important for the DCC to have access to identifying
252 information.

253 Thematic analysis:

254 Data from free-text questions were aggregated and thematically analysed with reference to
255 disclosure decisions, parents' experiences of disclosure, DCP reactions, and support needs.
256 Three key themes were identified:

257 1. The right thing to do - Disclosure is a right and identity need

258 Participants overwhelmingly indicated that children 'had every right to know their origins'
259 [45], 'it's a part of who they are' [193] and 'should know their identity' [46]. Knowledge was
260 regarded as important for wellbeing, e.g., 'for my child's sense of peace and knowledge of

themselves' [363], and for 'health concerns, cultural knowledge, "why I am the way I am."' [81].

Openness and honesty were seen as critical for family relationships:

> 'Transparency is important from an early age to build that trust' [97]

> 'I always knew it would be in my children's best interest to be open and honest' [211]

2. The kids are alright but….stigma, parent: child relationships, parental confidence

While most parents felt DC would have positive outcomes, they also expressed concern about how, 'There's still a lot of stigma in New Zealand about donation. People see it as a creepy thing' [242] and 'other children have said many cruel things' [195]. Parents were concerned about the impact of stigma:

> 'It can be an isolating experience for my child. I think she does not talk about it much partly because she is aware and possibly sensitive to the fact she is the 'odd one out'' [195]

> 'My son feels different and he wants so badly to be the same' [81]

While most parents were confident in their decision to use DC, some expressed uncertainty:

> 'I would love to feel more confident and not worry about what others might think!' [103]

> 'It's a difficult topic and I still feel emotional about it' [304]

Some also worried about the impact on parent:child relationships, with parents expressing feeling 'anxious' [253], worried about 'losing a bit of our connection' [363], that 'he will see his mother(me) as not his real mother' [85], and 'that she will treat me differently and not love me as much' [217]. Some also worried about family cohesion, such as that 'my children

will feel distant from our family' [45] or 'the risk of losing the closeness of our family unit.'[244]

3. The need for post donation support

Although most parents did not feel they needed professional support for disclosure, they also indicated that ongoing support was not offered or accessible:

> 'We haven't had any contact from the clinic since both children were conceived. We haven't had any offers of help or counselling' [29]

> 'Once you are pregnant, that was the end of communication' [165]

Parents called for support that goes beyond disclosure:

> 'It would be really nice to have check in points along the way. This experience is a roller coaster' [165]

> 'Support in processing what it means … as she hits teenage years' [381]

> 'Would be helpful if there was something from a kid's point of view' [13]

Discussion

Most parents had disclosed DC to their child and had done so "early" with only a small percentage planning not to tell or unsure. While this aligns with research highlighting the benefits of early disclosure (4, 6, 8-10, 13, 25), results may not be representative as parents open about DC may have been more likely to participate and those intending to keep DC a secret may be particularly hard to recruit. Furthermore, although 12% planned to disclose later, international research suggests that delayed disclosure can lead to non-disclosure (20). Disclosure in New Zealand thus remains incomplete, and more support is needed to help parents navigate this process. For example, from 2028, Victoria, Australia, will add an

addendum to birth certificates noting DC (26), and South Australia will include this information directly on birth certificates from February 2025 (27).

Most parents had used clinic donors followed by known (directed, identified) donors such as family or friends, with few turning to online sources or advertising. This contrasts with international trends suggesting increasing use of online forums to recruit donors, even for clinic-based donations (28). The preference for clinic donors may reflect the period when participants were seeking donors before online recruitment became common and suggests clinics' reluctance to work with online-recruited donors. In New Zealand, private home insemination with online donors is becoming more common (29). Future research could explore whether intending parents are now turning to online forums for clinic-based treatment and how this impacts disclosure practises.

Interestingly no association was found between disclosure rates and whether parents knew their donor (either family members, friends or online recruited) and/or had access to identifying information, nor whether they shared the donors' identity with the child. This contrasts with research suggesting that knowing the donors' identity increases the likelihood of disclosure (20), although it is possible that those *without* access to identifying information may still be less likely to tell. However, similarly, disclosure was more common among single parent families and same sex two parent families.

Parents mainly chose to disclose DC out of a belief in the rights of the child to know and the benefits of disclosure. Reassuringly, only a few cited the risk of accidental discovery e.g. through DNA testing, as a reason, suggesting that disclosure was driven by the child's perceived best interests rather than external pressures. Similarly, non-disclosure was based on values-based decision making in relation to concern for child wellbeing e.g. the impact on the child of finding out they are DC, concern about the parent child relationships and

329 uncertainty regarding how to disclose. These concerns may be addressed in counselling by
330 sharing research suggesting positive outcomes for DCP and their families where disclosure
331 has occurred and DCP have had contact with their donors (30, 31), as well as by providing
332 practical resources to support and promote parents' confidence in disclosing. Most parents
333 reported positive reactions from DCC and suggested no concerns regarding disclosure,
334 potentially reflecting parents' comfort with DC. Most parents had also disclosed to others
335 although a substantial percentage of those who had not disclosed had shared this information
336 with others, risking inadvertent disclosure. Research suggests that learning about DC through
337 others rather than directly from parents may have detrimental effects on DCP and family
338 wellbeing (32).

339 While overall findings in relation to disclosure were positive, a number of parents expressed
340 concerns around their disclosure decision and process. These included negative reactions
341 from their child, a finding not associated with age of disclosure and contrasting with other
342 research suggesting that when told early children tend to respond neutrally or with curiosity
343 (7, 11, 33). This discrepancy warrants further exploration. Negative reactions may be related
344 to issues around identity and making sense of sibling networks (34) or the concerns of
345 parents and DCP (as observed by parents) regarding discrimination and stigma, as signalled
346 in free-text responses. While DC may be becoming more common and the stigma identified
347 in earlier research (35) may be reducing, Duff and Goedeke's (2024) review has similarly
348 highlighted the role of perceived stigma in social and school environments as presenting
349 challenges for disclosure (20).

350 Although most parents reported not accessing nor needing professional support to disclose,
351 they may benefit from support related to the impact of disclosure, especially given the
352 number of children reported to have reacted negatively and the concerns about DC expressed
353 by some parents. Psychoeducational workshops, support groups and tools such as the

Empower Parental Telling and Talking (TELL Tool) may be valuable resources (21, 36). Furthermore, free-text responses indicated a lack of access to or awareness of support post-donation, and a need for support beyond the disclosure process itself, for example, to help parents and children process the ongoing implications of donor conception – a point which has also been raised in previous research (e.g. Indekeu & Lampic, 2021 (37)). Particularly as DC becomes more complex, including through cross border reproductive care, the increase in direct-to-consumer DNA testing, and the use of online platforms and out-of-clinic settings to recruit donors, health care practitioners, both in and outside of the fertility sector, have a duty of care to ensure that ongoing psychosocial support is available to all parties affected by DC (38, 39).

Finally, the majority of parents were aware of the HART Act provisions for open-identity donation and supported having an identifiable donor. However, a substantial number were not aware of these provisions, and unsure of when and how to access information. This suggests that more work needs to be done in terms of making this information available and easily accessible to parents pre and post donation.

Limitations:

The survey response rate of 28% suggests that results could be biased, given that non-disclosing parents may be less likely to participate in research exploring disclosure decisions. For example, fewer than anticipated Asian participants, given the number of Asian people accessing donor treatment in New Zealand, responded – possibly reflecting cultural norms discouraging disclosure due to the emphasis on genetic ties in conferring kinship (40). The results may thus not be representative of the New Zealand population of parents of DCC, and not necessarily generalisable to parents in other open-identity donation contexts. Further, this survey focused only on DCC conceived through licensed fertility clinics, and there is likely a

significant proportion of DC that occurs outside of clinics. While these donations are more likely to occur among same-sex couples and single parents - groups shown to have higher disclosure rates – little is known about disclosure and support needs in this context. Finally, the cross-sectional study design and inferential statistics used limit the ability to identify causal relationships between variables, indicating association only. Future research could explore the effect of additional variables, such as having other, non DCC, on disclosure rates, as well as the effect of accessing donors through out-of-clinic settings. Nonetheless, the current research provides insights into disclosure practices and experiences of disclosure, with possible implications for practice and counselling.

Conclusion

Donor conception is far more than an individual treatment of medical or social infertility. Rather, it is a form of family building which has lifespan implications for the individuals and families involved. Psychosocial support to educate parents about the importance of disclosure and to assist them in the process is needed to help parents build their families in a way which promotes wellbeing. As at the time of disclosure, parents are often no longer engaged with fertility clinics, the fertility field needs to strengthen collaboration with adjacent healthcare sectors to provide continued support for these families across the broader medical community.

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Table 1: Demographic characteristics of survey respondents

		N	%
Relationship status			
	Married	214	57.2
	Divorced/separated	32	8.6
	Single	74	19.8
	In a relationship – living together	45	12.0
	In a relationship – not living together	9	2.4
Age range			
	< 30	0	0
	30-34	2	0.5
	35-39	20	5.0
	40-44	58	15.5
	45-49	110	29.4
	50-54	112	29.9
	55-59	43	11.5
	60+	11	2.9
	Did not answer	18	4.8
Had more than one donor conceived children born after 2006**		165	44.1
	Used the same donor	*148*	*89.7*
	Used a different donor	*17*	*10.3*
Gender identity			
	Male	7	1.9
	Female	363	97.1
	Non-binary	1	0.3
	Prefer not to say	2	0.5
	Did not answer	1	0.3

		N	%
Respondents prioritised ethnicity*			
	Māori	28	7.5
	Pacific Island	2	0.5
	Asian	7	1.9
	MELAA	3	0.8
	NZ European/other European	334	89.3
Partners prioritised ethnicity * (N=267)			
	Māori	22	8.2
	Pacific Island	1	0.4
	Asian	5	1.9
	MELAA	4	1.5
	NZ European/other European	235	88.0
Religious Identity			
	Christian	94	25.1
	Muslim	0	0
	Hindu	1	0.5
	Buddhist	1	0.5
	Other	14	3.7
	Non/atheist/agnostic	259	69.3
	Did not answer	5	1.3
Highest education level			
	Secondary school or lower	42	11.2
	Technical college/Institute	64	17.1
	University undergraduate	125	33.4
	University postgraduate	124	33.2
	Other	19	5.1

* By Level 1 by HISO ethnicity reporting protocols. MELAA is a composite ethnicity grouping including Middle Eastern, Latin American, and African ethnicities.

** Twins considered as one child

Table 2: Distribution of donation types, donor types, and family make ups

	Donation type	Two parent heterosexual N = 207 (%)	Single parent N = 94 (%)	Two parent gay or lesbian N = 54 (%)	Other family make up[1] N = 18 (%)	**Total N = 372[2] (%)**	
Known donor (family/friend)	Egg	67 (32.4)	6 (6.4)	1 (1.8)	2 (11.1)	**141 (37.9)**	**76 (53.9)**
	Sperm	25 (12.1)	8 (8.5)	23 (41.8)	5 (27.8)		**61 (43.3)**
	Embryo	3 (1.4)	1 (1.1)	0	0		**4 (2.8)**
Clinic donor	Egg	21 (10.1)	1 (1.1)	0	0	**188 (50.5)**	**22 (11.7)**
	Sperm	60 (29.0)	68 (72.3)	25 (45.5)	9 (50.0)		**162 (86.2)**
	Embryo	3 (1.4)	0	0	1 (5.6)		**4 (2.1)**
Other donor source[3]	Egg	24 (11.6)	2 (2.1)	0	1 (5.6)	**43 (11.6)**	**27 (62.7)**
	Sperm	1 (0.4)	8 (8.5)	5 (9.1)	0		**14 (32.6)**
	Embryo	2 (1.0)	0	0	0		**2 (4.7)**
N (%)	**Egg**	**112 (54.1)**	**9 (9.6)**	**1 (1.8)**	**3 (16.7)**	**125 (33.6)**	
	Sperm	**86 (41.5)**	**84 (89.4)**	**53 (98.1)**	**14 (77.8)**	**237 (63.7)**	
	Embryo	**8 (3.9)**	**1 (1.1)**	**0**	**1 (5.6)**	**10 (2.7)**	

[1] Other family make up category includes parents who did not identify with the other family categories.

[2] Two participants did not answer questions relating to type of donor or donation type.

[3] Other donor sources included advertising, online forums, and other ways of finding a donor not listed.

Table 3: Proportion of parents who have disclosed to their child that they are donor conceived by donation type, type of donor, and family make up

	Donation type	Two parent heterosexual N = 169/207 (%)	Single parent N = 84/94 (%)	Two parent gay or lesbian N = 52/54 (%)	Other family make up[1] N = 17/18 (%)	**Total N = 322/372[2] (%)**	
Known donor (family/friend)	Egg	55/67 (82.1)	6/6 (100)	1/1 (100)	1/2 (50.0)	**119/141 (84.4)**	**63/76 (82.9)**
	Sperm	19/25 (76.0)	8/8 (100)	21/23 (91.3)	5/5 (100)		**53/61 (86.9)**
	Embryo	2/3 (66.7)	1/1 (100)	0	0		**3/4 (75.0)**
Clinic donor	Egg	19/21 (90.5)	1/1 (100)	0	0	**163/188 (86.7)**	**19/22 (86.4)**
	Sperm	49/60 (81.7)	59/68 (86.8)	25/25 (100)	8/9 (88.9)		**141/162 (87.0)**
	Embryo	2/3 (66.7)	0	0	1/1 (100)		**3/4 (75.0)**
Other donor source[3]	Egg	20/24 (83.3)	2/2 (100)	0	1/1 (100)	**39/43 (90.7)**	**23/27 (85.2)**
	Sperm	1/1 (100)	8/8 (100)	5/5 (100)	0		**14/14 (100)**
	Embryo	2/2 (100)	0	0	0		**2/2 (100)**
N (%)	**Egg**	**94/112 (83.9)**	**9/9 (100)**	**1/1 (100)**	**2/3 (66.7)**	**106/125 (84.8)**	
	Sperm	**69/86 (80.2)**	**75/84 (89.3)**	**51/53 (96.2)**	**13/14 (92.9)**	**208/237 (87.8)**	
	Embryo	**6/8 (75.0)**	**1/1 (100)**	**0**	**1/1 (100)**	**8/10 (80.0)**	

[1] Other family make up category includes parents who did not identify with the other family categories.

[2] Two participants did not answer questions relating to type of donor or donation type.

[3] Other donor sources included advertising, online forums, and other ways of finding a donor not listed.